Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Master's Thesis

Economic and Financial Analysis of Selected Enterprises in Nigeria: Nestlé and Cadbury

B.Sc. Olajide Timilehin Bolawa

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

B.Sc. Olajide Bolawa, BSc

Business Administration

Thesis title

Economic and Financial Analysis of Selected Nigerian Enterprises: Nestle and Cadbury

---

Objectives of thesis

The key objectives of this master thesis can be defined as following:

• Conduct a part of economic analysis, namely financial analysis, to assess the financial well-being for the two food processing companies in Nigeria for years 2012 to 2021: Nestlé and Cadbury.

• Identify key factors, which are influencing above-named companies' financial performance.

• Conduct a critical evaluation of those factors using multiple financial methods such as an analysis of absolute indicators, ratio analysis, analysis of cumulative indicators and EVA.

• Conduct a comparison between the companies to identify opportunity areas for each and create respective recommendations.

Methodology

This thesis is based on the following methodologies: descriptive, data analytical, comparative, and subsequent synthesis and deduction.

Descriptive methodologies use qualitative or quantitative techniques, such as surveys, interviews, observations, or statistical analysis, to present facts, characteristics, or patterns within the data.

Data analytical methodology focuses on analyzing and interpreting data to uncover meaningful insights or relationships. It involves applying statistical techniques, mathematical models, or computational algorithms to examine data patterns, trends, or correlations. The following models are used:

- Altman Z-Score: $Z = 1.2 * A + 1.4 * B + 3.3 * C + 0.6 * D + 1.0 * E$

- $EVA = NetOperatingProfitAfterTax(NOPAT) - (Capital * CostofCapital)$

- Kralicek quick test calculates a single score based on the four key factors: equity ratio and debt settlement period representing financial stability, return on sales and return on assets representing profitability.

Comparative methodology involves analyzing similarities and differences between two or more entities or cases to gain a deeper understanding of their characteristics, behaviors, or outcomes.

Subsequent synthesis and deduction methodology involves synthesizing findings from previous studies or sources and using deductive reasoning to develop new insights or theories. It begins with a review of existing literature, theories, or empirical evidence, followed by the synthesis of key findings or concepts.

To conduct those, the data is sourced from the academic literature, Central Bank of Nigeria Statistical Bulletin and Annual Financial Reports of the respective companies from 2012 to 2021.

The proposed extent of the thesis

70

Keywords

Financial analysis, Absolute indicators, ratio analysis, cumulative indicators, Kralicek Quick Test, EVA, Altman Z-Score, Nigeria

---

Recommended information sources

Brealey, R. A., Myers, S. C., Allen, F., & Mohanty, P. (2018). Principles of corporate finance (12th ed.). McGraw-Hill Education.

CFI Team (2023). "Altman's Z-Score Model." Corporate Finance Institute, 27 Oct. 2023, corporatefinanceinstitute.com/resources/commercial-lending/altmans-z-score-model/. Accessed 20 Mar. 2024.

Elliott, B. & Elliott, J. (2006). Financial accounting, Reporting and Analysis: International edition, 2nd ed. Pearson Education Limited.

Gitman, L. J., & Zutter, C. J. (2021). Principles of managerial finance (16th ed.). Pearson.

Mrkvička, J. & Kolář, P. (2006). Financial analysis. ASPI.

Nestlé (undated). "About Nestlé in Nigeria." Nestlé, www.nestle-cwa.com/en/csv/nestl%C3%A9-nigeria/about-nestl%C3%A9-nigeria. Accessed 20 Mar. 2024.

Polo, A. & Enkela,C. "KRALICEK QUICK TEST – AN ANALYSIS TOOL FOR ECONOMIC UNITS DETERMINATION IN LIABILITY DIFFICULTY." European Scientific Journal, vol. 10, no. 19, July 2014, pp. 142–152.

Reilly, F & Brown, K. (2012). Analysis of Investments & Management of Portfolios. 10th ed. South-Western Cengage Learning.

Růčková, P. (2015). Financial analysis, 5th ed. Grada.

Sario, A. U. H. (2024). Financial Analysis Essentials. Azhar UL Haque Sario.

Expected date of thesis defence

2023/24 SS – PEF

The Diploma Thesis Supervisor

Ing. Bohuslava Boučková, CSc.

Supervising department

Department of Economics

Electronic approval: 24. 3. 2024

prof. Ing. Lukáš Čechura, Ph.D.

Head of department

Electronic approval: 25. 3. 2024

doc. Ing. Tomáš Šubrt, Ph.D.

Dean

Prague on 31. 03. 2024

Declaration

I declare that I have worked on my master's thesis titled " Economic and Financial Analysis of Selected Enterprises in Nigeria: Nestlé and Cadbury" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 31st March 2024 ______________________________ thesis.

Acknowledgement

I would like to thank my supervisor Ing. Bohuslava Boučková, CSc. for guidance, as well as my wife, Ing. Irina Bolawa Kruhmalova for the support during my work on this thesis.

Economic and Financial Analysis of Selected Enterprises in Nigeria: Nestlé and Cadbury

Abstract

The economic landscape of Nigeria has undergone dynamic shifts in recent years, necessitating a thorough examination of the financial health of enterprises within the country. Economic and financial analyses serve as a fundamental tool for assessing the performance and stability of companies, offering stakeholders, investors, and policymakers a lens through which to evaluate economic health and potential risks.

The primary objective of the thesis is to assess and compare the financial well-being of the selected companies, Nestlé and Cadbury, due to their competitive nature. The main factors influencing the companies' financial performance are being investigated and critically evaluated using multiple financial methods, such as financial ratios (profitability, activity, debt management, etc.), bankruptcy indicators, and credibility models. Finally, the economic value added of the companies is being assessed.

Overall results showcase significantly better performance of Nestlé and indicate risks and mitigations that Cadbury is advised to implement in order to gain its competitive advantage.

Keywords: Financial analysis, financial statements, financial ratios, food processing industry, Kralicek Quick Test, Altman Z-score

Ekonomická a finanční analýza vybraných podniků v Nigérii: Nestlé a Cadbury

Abstrakt

Ekonomická situace v Nigérii za posledních pár let prošla dynamickými změnami, které vyžadují důkladné zkoumání finančního zdraví podniků v zemi. Ekonomické a finanční analýzy slouží jako základní nástroj pro posouzení výkonu a stability firem, nabízejí zúčastněným stranám, investorům a tvůrcům politiky pohled na ekonomické zdraví a potenciální rizika.

Primárním cílem této práce je posoudit a porovnat finanční zdraví vybraných společností, Nestlé a Cadbury, kvůli jejich konkurenční povaze. Hlavní faktory ovlivňující finanční výkon společností jsou zkoumány a následně kriticky hodnoceny pomocí různých finančních metod, jako jsou finanční poměry (rentabilita, aktivity, správa dluhu atd.), ukazatele platební neschopnosti a modely důvěryhodnosti. Nakonec je hodnocena ekonomická přidaná hodnota společností.

Celkové výsledky ukazují výrazně lepší výkon společnosti Nestlé a naznačují rizika a opatření, která má Cadbury implementovat, aby získala svou konkurenční výhodu.

Klíčová slova: Finanční analýza, finanční výkazy, finanční poměry, potravinářský průmysl, Kraličkův Quick Test, Altmanovo Z-skóre.

Table of content

1 Introduction

The economic landscape of Nigeria has undergone dynamic shifts in recent years, necessitating a thorough examination of the financial health of enterprises within the country (Nnamdi & Owusu, 2014). Economic and financial analyses serve as a fundamental tool for assessing the performance and stability of companies, offering stakeholders, investors, and policymakers a lens through which to evaluate economic health and potential risks (Asta & Zaneta, 2010). In the Nigerian context, where economic dynamics are influenced by various factors, including government policies, market trends, and global forces, scrutinizing the financial performance of companies becomes even more significant.

An essential aspect of the economic analysis involves assessing adherence to recommendations concerning balance sheet regulations, conducting financial analysis, evaluating the influence of financial and operational leverage, monitoring the evolution of EVA indicators, assessing indices for bankruptcy prediction and creditworthiness, and subsequently conducting inter-company comparisons.

The primary objective of the thesis is to assess and compare the financial well-being of the selected companies due to their competitive nature. The main factors influencing the companies' financial performance are being investigated and critically evaluated using financial methods.

In terms of the thesis structure, the theoretical segment encompasses an overview of pertinent financial analysis concepts, subsequently put into practice in the practical section. The theoretical component draws primarily from relevant scholarly literature, whereas the audited financial statements of Nestlé and Cadbury serve as the primary data sources for the practical aspect of the thesis. The thesis employs descriptive, data analytical, comparative, and subsequent synthesis and deduction methodologies.

2 Objectives and Methodology

2.1 Objectives

2.1.1 Economic Analysis

The economic analysis of a company encompasses several key objectives essential for its operations, profitability, and sustainable growth. One primary objective is to optimize production efficiency and cost-effectiveness throughout the manufacturing process. This involves analyzing input costs, production technologies, supply chain logistics, and economies of scale to identify opportunities for cost reduction and process improvement. According to research by Burton et al. (2021), economic analysis enables food processing companies to assess the most efficient methods of production, resource allocation, and inventory management, ultimately enhancing their competitiveness in the market.

Another crucial objective is to evaluate market demand and consumer preferences to guide product development and marketing strategies. Economic analysis helps food processing companies understand changing consumer trends, dietary preferences, and purchasing behavior. By conducting market research and demand analysis, companies can tailor their product offerings to meet consumer needs effectively. As highlighted by Quinlan et al. (2019), economic analysis provides insights into pricing strategies, product differentiation, and branding efforts, enabling companies to optimize their marketing mix and achieve higher sales and market share.

Furthermore, economic analysis assists food processing companies in assessing the feasibility and profitability of new product development initiatives and investment projects. This involves conducting cost-benefit analysis, financial modeling, and risk assessment to evaluate the potential returns and risks associated with new ventures. According to research by Meuwissen et al. (2017), economic analysis helps companies estimate the long-term profitability and viability of investments in product innovation, technology upgrades, and expansion into new markets. By quantifying the expected costs and benefits, companies can make informed investment decisions aligned with their strategic objectives and financial constraints.

This thesis aims to focus on the latter key objective to assess the long-term profitability and viability of investments in two key food processing players in Nigeria: Nestlé and Cadbury. To do so, respective financial analysis needs to be conducted. The analysis is conducted for the years 2012 to 2022, indicating a slight change to the assignment, given that financial results for 2022 are available and will represent a more accurate picture of companies' performance.

2.1.2 Financial Analysis

Financial analysis aims to assess the fiscal well-being of a company while pinpointing both its strengths and weaknesses within its primary operations (Mrkvička & Kolar, 2006). In literature terms like 'financial situation,' 'position,' and 'health' are often used interchangeably. However, it's essential to distinguish their unique attributes:

- A company's financial situation hinges on its financial efficacy, primarily gauged through profitability metrics.
- Financial position relies on liquidity measures, assessing the financial risks tied to meeting obligations and managing financing sources. Essentially, one can conclude that decisions regarding capital structure profoundly impact future performance.
- The concept of financial health denotes the company's ability to meet its obligations over the long term, considering liquidity metrics and the capacity to sustain profit generation (profitability metrics) (Bragg, 2020).

The overarching objective of financial analysis is to extract the most important financial indicators, providing company management with an objective and comprehensive understanding of its financial status. The process of financial analysis involves several steps, such as:

1. Delineating prior financial performance trends;
2. Discerning alterations in financial performance over time;
3. Identifying the primary factors driving these changes;
4. Devising appropriate measures to improve processes within the company and enhance its financial position and situation;
5. Recognizing and predicting the primary trends in financial performance.

(Sario, 2024).

2.1.3 Overall objectives

The key objectives of this master thesis can be defined as following:

- Conduct a part of economic analysis, namely financial analysis, to assess the financial well-being of the two food processing companies in Nigeria for the years 2012 to 2022: Nestlé and Cadbury.
- Identify key factors influencing the financial performance of the above-named companies.
- Conduct a critical evaluation of those factors using multiple financial methods such as an analysis of absolute indicators, ratio analysis, analysis of cumulative indicators, and EVA.
- Conduct a comparison between the companies to identify opportunity areas for each and create respective recommendations.

Those objectives are set to be achieved via the following set of hypotheses:

- Companies within the same industry will not have any significant differences in their liquidity positions, such as current ratio and quick ratio.
- A company that displays a significantly higher level of financial stability compared to the other will have a notably higher Altman Z-score.
- A company will demonstrate superior operational efficiency compared to the other if a higher Kralicek Quick Test score is achieved.

2.2 Methodology

As outlined in the introduction, this thesis employs the following methodologies: descriptive, data analytical, comparative, and subsequent synthesis and deduction.

Descriptive methodology involves systematically describing and summarizing data or phenomena without making inferences or predictions. It aims to provide a comprehensive and accurate portrayal of the subject under study. Descriptive methodologies often use qualitative or quantitative techniques, such as surveys, interviews, observations, or statistical analysis, to present facts, characteristics, or patterns within the data (Neuman, 2013).

Data analytical methodology focuses on analyzing and interpreting data to uncover meaningful insights or relationships. It involves applying statistical techniques, mathematical models, or computational algorithms to examine data patterns, trends, or correlations. Data analytical methodologies aim to derive conclusions, make predictions, or test hypotheses based on empirical evidence (Hair et al., 2019).

Comparative methodology involves analyzing similarities and differences between two or more entities or cases to gain a deeper understanding of their characteristics, behaviors, or outcomes. It aims to identify commonalities and variations across different contexts or variables and assess their significance. Comparative methodologies often use qualitative or quantitative techniques, such as case studies, surveys, or statistical analysis, to systematically compare and contrast the data (Ragin, 2014).

Subsequent synthesis and deduction methodology involve synthesizing findings from previous studies or sources and using deductive reasoning to develop new insights or theories. It begins with a review of existing literature, theories, or empirical evidence, followed by the synthesis of key findings or concepts. Researchers then use deductive reasoning to derive hypotheses or theoretical propositions based on the synthesized knowledge (Booth et al., 2016).

To conduct these methodologies, data is sourced from academic literature and the Annual Financial Reports of the respective companies from 2012 to 2022..

2.3 Research Challenges

The limited availability and accuracy of data pose challenges for conducting economic and financial analyses, particularly in the context of Nigerian resources. During the research process, it became evident that investment data beyond the official financial reports submitted by respective companies is not readily accessible.

One of the major limitations is the scarcity of Nigerian resources available on the internet, especially in terms of aggregated data for broader industry comparison. This scarcity hampers the accuracy of ratio analysis, as it restricts the availability of benchmarking data and industry norms. Consequently, the comparison will be conducted solely between the two identified companies to assess their competitive positions within the industry.

Despite these challenges, efforts have been made to ensure the reliability and validity of the analyses by relying on official financial reports and applying rigorous methodologies to interpret and analyze the available data. However, it is important to acknowledge the limitations imposed by the data constraints and exercise caution in drawing conclusions based on the findings.

3 Literature Review

3.1 Analysis of absolute indicators

The practical part of the thesis begins by discussing the vertical and horizontal analysis of absolute indicators. The purpose of these analyses is to illustrate specific developments over at least two consecutive periods, although having more periods available allows for a more thorough evaluation of conclusions (Sario, 2024). Horizontal analysis involves examining developmental trends, while vertical analysis involves the percentage breakdown of components. In this analysis, ten consecutive periods are used for evaluation.

3.1.1 Horizontal analysis

Horizontal analysis is a method used to quantify year-over-year changes in financial statement items, utilizing indices and differences. It illustrates how data evolves horizontally over time, allowing for the observation of patterns and the comparison of a particular item's value with its past performance.

In essence, this method examines both absolute and relative alterations in reported financial figures over time. Calculating relative changes is favored to provide a more accurate depiction of the magnitude of a change. Percentage changes are typically computed for all items on the balance sheet and income statement across two consecutive years. When assessing three or more financial periods, this continuous horizontal analysis is called as a trend analysis.

Horizontal analysis can be computed via the following:

$$Absolute\ change = Indicator_t - \ Indicator_{t-1},$$

$$Relative\ change\ (\%) = \frac{Indicator_t - \ Indicator_{t-1}}{Indicator_{t-1}} * 100,$$

where *t* represents time (year).

To accurately interpret the analysis findings, it's essential to consider industry conditions, economic fluctuations, and specific company dynamics. One notable limitation of this analysis is its susceptibility to inflationary trends within the economy, which can compromise the accuracy and reliability of the results obtained. Moreover, from the perspective of auditors, companies should be capable of providing explanations for any significant changes, whether positive or negative, exceeding the threshold of +/- 10%.

(Mrkvička & Kolar, 2006).

3.1.2 Vertical analysis

Vertical analysis, also known as structural analysis, determines the proportion of individual items in statements relative to a specified base and identifies the proportion of this quantity in relation to the total sum. This approach involves expressing individual items in financial statements as a percentage of a base set at 100% (Růčková, 2015).

An equation for vertical analysis is as follows:

$$P_i = \frac{B_i}{\sum B_i},$$

i — time,

Bi — an analyzed variable,

P_i — percentage share of total value of a variable

(Vochozka, M., 2020).

Vertical analysis differs from horizontal analysis by the fact that it is not affected by inflation. All figures are presented as annual percentages, thus eliminating the impact of inflation distortions. This characteristic enables vertical analysis to be used for long-term comparisons of financial statements across various companies or within the same industry. Vertical analysis is also recognized as a valuable tool for planning, particularly in cases where there is consistent stability in the proportion of specific balance accounts to the total base. However, it is important to consider any changes in accounting policies when conducting vertical analysis, as these changes could potentially distort shifts in financial structure and expenditures (Elliott & Elliott, 2006).

3.2 Ratio analysis

Ratio analysis is a fundamental tool used to evaluate the financial performance and health of a company by examining the relationships between various financial variables. It involves calculating and interpreting key ratios derived from financial statements, such as the balance sheet and income statement. These ratios provide insights into a company's liquidity, solvency, profitability, efficiency, and overall operational effectiveness (Elliott & Elliott, 2006).

One of the primary benefits of ratio analysis is its ability to condense complex financial information into simple, easily understandable metrics. According to Brigham and Houston (2018), ratios serve as concise indicators of a company's financial condition and performance, allowing stakeholders to make informed decisions regarding investment, lending, or operational strategies. Additionally, ratio analysis facilitates benchmarking, enabling companies to compare their financial performance against industry peers, historical data, or predefined standards. This comparative analysis helps identify strengths, weaknesses, and areas for improvement, thereby guiding strategic planning and decision-making processes.

Due to complexity of any business, it cannot be assessed solely based on a single indicator. Thus, a system of indicators divided into various categories exists. The most common categories are:

- Liquidity
- Activity
- Debt management
- Profitability.

3.2.1 Profitability ratios

Profitability refers to a company's capacity to yield returns on investment or to earn profits utilizing its invested capital. It signifies the effectiveness of the business in generating profits and gauges the efficiency of its operations. It's important to note that profitability is represented as a relative figure, while profit is an absolute sum. Typically, profitability ratios are expected to exhibit an upward trajectory over time (Růčková, 2015).

Depending on the objective of financial analysis, profitability ratios can be computed using various categories of profit or earnings. These categories are typically defined in Anglo-Saxon terminology as:

- **EBITDA** (earnings before interest, taxes, depreciation, and amortization) is commonly utilized when conducting a precise comparison between companies operating within the same industry.
- **EBIT** (earnings before interest and taxes) signifies the remaining earnings after deducting the expenses related to long-term production factors.
- **EBT** (earnings before taxes) is employed to compare the financial performance of firms subject to different tax rates (earnings before taxes).
- **EAT** (earnings after taxes or net profit) represents the business outcome achieved by a company over a year. This outcome comprises a portion distributed to shareholders, while the remainder, undistributed profit, is retained by the company (Mrkvička & Kolář, 2006).

Profitability indicators belong to the most closely monitored category since also are being referred to as a return on investment. For the calculation and subsequent correct interpretation of the indicators, it is important to know the exact formulas. The most commonly profitability indicators include:

- return on assets,
- return on equity,
- return on sales,
- return on capital employed (Elliott & Elliott, 2006).

Return on Assets is denoted by the acronym ROA, indicating the productivity of the business. It measures the percentage of profit generated per unit of invested assets. Typically, EBIT, representing operating income before interest and taxes, is placed in the numerator, while the denominator comprises the total assets of the company. This equation is widely used for an industry comparison between companies with different tax and interest conditions. The following formula can be applied:

$$ROA = \frac{EBIT}{Total\ Assets}$$

(Sario, 2024).

Return on Equity (ROE) is a critical metric for shareholders, representing the return earned on their invested capital after accounting for other capital providers. It signifies how effectively a company utilizes shareholder investment to generate profits and excludes interest expenses since equity capital doesn't involve borrowed funds (Brigham & Houston, 2018).

ROE can be computed before or after-tax deductions. Though owners prioritize net returns, the taxed form of ROE is more prevalent as it helps to investigate the efficiency of management in organizing the economic operations. Therefore, the formula depicted below is mostly used:

$$ROE = \frac{EBIT}{Owner's\ equity}$$

(Sario, 2024).

Return on Sales (ROS), commonly known as net profit margin, serves as a pivotal financial metric used to evaluate a company's profitability by measuring the proportion of net income generated from each dollar of sales revenue. It is calculated by dividing the net income by the total revenue and expressing the result as a percentage:

$$ROS = \frac{EBIT}{Sales}$$

(Sario, 2024).

When assessing companies' performance within the same industry using ROS, efficiency of cost and expenses management can be assessed. Companies with higher ROS may indicate superior cost management, pricing strategies, or operational efficiency, providing them with a competitive advantage. Conversely, companies with lower ROS may need to reevaluate their cost structures or pricing policies to enhance profitability (Gitman & Zutter, 2021).

Return on Capital Employed (ROCE) is a fundamental financial metric used to assess a company's efficiency in generating profits from its capital investments. It measures the return generated from the total capital employed in the business, including both equity and debt. ROCE is calculated as follows:

$$ROCE = \frac{EBIT}{Owner's\ Equity + Non - curent\ liabilities}$$

(Brealey et al., 2016).

ROCE is a crucial indicator of a company's financial health as it provides insights into its ability to generate profits from its invested capital. A higher ROCE indicates that the company is effectively utilizing its capital to generate returns for shareholders and creditors. Conversely, a lower ROCE may suggest inefficiencies in capital allocation or operational performance, which could adversely affect the company's financial health and long-term sustainability (Ross et al., 2018).

3.2.2 Activity ratios

Activity ratios are predominantly used to manage assets, demonstrating how efficiently and promptly business resources are utilized. These ratios aim to determine the solidity of each asset type listed in the balance sheet, considering the operational scale of the company (Reilly & Brown, 2012).

By utilizing these metrics, a company can ascertain whether its various asset segments are being used effectively. Excessively high turnover rates may indicate multiple potential issues such as unnecessary storage costs, missed revenue opportunities, limited customer choices, or outdated assets. Conversely, while a lower activity level may offer a wider selection, it often results in higher inventory storage costs and the risk of obsolescence (Friedlob & Schleifer, 2003).

For more precise analysis of activity ratios it is important to take into consideration the impact of depreciation methods and asset valuation techniques. Additionally, using an average denominator is recommended, as asset levels tend to fluctuate throughout the year, and comparing an average figure with a flow indicator like annual sales provides more meaningful insights (Reilly & Brown, 2012).

First metric is **Total Asset Turnover ratio**, which is used to assess a company's efficiency in generating revenue relative to its total assets. It measures how well a company utilizes its assets to generate sales (Brigham & Houston, 2018).

The formula for calculating the Total Asset Turnover ratio is:

$$Total\ Asset\ Turnover = \frac{Sales}{(Average)\ Total\ Assets}$$

The optimal level of this ratio significantly differs across various industries. For instance, it typically ranges from below 1 for expansive, capital-intensive sectors like steel and heavy manufacturing to as high as 10 for retailers and service providers. Nonetheless, it is advisable for the ratio to surpass the industry average. If the turnover ratio falls below the sector's typical benchmark, measures should be taken to bolster sales or divest some assets (Reilly & Brown, 2012).

Fixed Asset Turnover ratio evaluates company's efficiency in generating sales revenue relative to its investment in fixed assets. It measures how effectively a company utilizes its fixed assets, such as property, plant, and equipment, to generate sales. A higher fixed asset turnover ratio indicates that a company is generating more revenue per unit of investment in fixed assets, suggesting better efficiency in asset utilization (Brigham & Houston, 2018).

The formula for calculating the Fixed Asset Turnover ratio is:

$$Fixed\ Asset\ Turnover = \frac{Sales}{(Average) Net\ Fixed\ Assets}$$

(Reilly & Brown, 2012).

When examining fixed asset turnover, it's crucial to consider the methods utilized for measurement and depreciation, as this could potentially introduce distortion. Fixed assets subjected to more substantial depreciation can inflate the ratio's value. Therefore, the ratio should be benchmarked against industry peers. Typically, a higher ratio is deemed more favorable, whereas a ratio lower than the industry average suggests that management should either curtail investments or maximize production capacity (Reilly & Brown, 2012).

Inventory Turnover ratio assesses company's efficiency in managing its inventory and converting it into sales revenue. It measures the number of times a company's inventory is sold and replaced within a specific period, typically a year (Brigham & Houston, 2018). The ratio can be computed via the following formula:

$$Inventory\ Turnover\ Ratio = \frac{Sales}{(Average)\ Inventory}$$

A higher ratio suggests that the company sells its inventory more frequently, indicating efficient inventory management and faster sales cycles. On the other hand, a lower ratio may indicate slower sales, excess inventory, or inefficient inventory management practices since a company has excessive stocks that are non-productive and generate little profit (Reilly & Brown, 2012).

From inventory turnover values, it can be derived how long it takes to use or sell inventory, known as the **average inventory processing period**. This period shows how quickly inventory turns into cash or receivables, indicating a company's liquidity. It's essential to compare this duration with similar companies in the industry. A longer processing time ties up capital in inventory, risking obsolescence, while a shorter one may lead to sales challenges due to insufficient inventory. Therefore, maintaining inventory at a level ensuring continuous production with minimal costs is crucial (Reilly & Brown, 2012). The following formula is practically being used:

$$Average\ inventory\ period = \frac{Average\ Inventory}{Sales\ /\ 365}$$

Receivables turnover is used to evaluate how efficiently a company manages its accounts receivable by measuring the rate at which it collects payments from customers. This ratio provides insights into the liquidity of a company's receivables and often compared to the industry standards, where any deviations from the norm may signify flaws in business performance (Ross et al., 2021).

The formula for receivables turnover is:

$$Receivables\ Turnover = \frac{Sales}{Trade\ receivables}$$

A higher receivables turnover ratio indicates that a company is collecting payments from its customers at a faster rate, which is generally favorable as it suggests better liquidity and management of receivables. Conversely, a lower ratio may indicate inefficiencies in the collection process, potential credit risks, or extended payment terms granted to customers (Reilly & Brown, 2012).

The receivables turnover metric offers insight into the **average collection period** of payments from customers. In an ideal scenario, cash transactions are excluded from the calculation due to their immediate collection nature. However, the total receivables figure is often used to specifically isolate trade receivables. It is crucial to compare this ratio against the company's established credit policy, aiming for alignment with typical invoice due dates. A prolonged collection period may indicate a heightened risk of bad debts, while shifts in invoice due dates can reflect evolving credit terms. Additionally, the size of the company plays a significant role, as larger entities may better manage longer receivable cycles compared to smaller counterparts (Růčková, 2015). The equation for it as follows:

$$Average\ collection\ period = \frac{Average\ Trade\ Receivables}{Sales/365}$$

(Reilly & Brown, 2012).

3.2.3 Liquidity ratios

Liquidity indicates a company's capability to fulfill its financial obligations. A lack of sufficient funds renders a company illiquid, potentially leading to its insolvency. Conversely, an excess of liquidity ties up funds that could be better utilized elsewhere. When assessing liquidity, it's important to consider the perspective of different stakeholders. For instance, creditors associate liquidity shortages with delayed interest payments, and customers and suppliers face challenges when a company's liquidity is low, possibly resulting in contract fulfillment difficulties (Růčková, 2015).

Liquidity is evaluated using three indicators - current, quick and cash ratio. C**urrent ratio** is a financial metric used to evaluate a company's short-term liquidity and its ability to meet its short-term obligations with its short-term assets. It is calculated as follows:

$$Current\ ratio = \frac{Current\ Assets}{Current\ Liabilities}$$

(Gitman & Zutter, 2021).

A higher current ratio indicates a stronger liquidity position, as it suggests that the company has more current assets available to cover its current liabilities. The ratio often depends on the structure and liquidity of current assets, as well as the industry where such company operates. Table 1 summaries various management strategies that are being implemented for respective current ratio outcome.

Table 1. Management Strategies for Current Ratio

Current Ratio	Management Strategy
High (above 2)	Conservative: maintain current assets at a level sufficient to cover current liabilities comfortably. This may involve keeping excess cash or highly liquid assets.
Moderate (between 1,5 and 2)	Average: monitor current assets and liabilities regularly to ensure adequate liquidity. Adjust operational and financial strategies as needed to maintain a healthy current ratio.
Low (less than 1.5)	Aggressive: focus on improving cash flow management and reducing short-term liabilities. Consider strategies such as reducing accounts payable or renegotiating payment terms with suppliers.

(Gitman & Zutter, 2021).

Quick ratio is the term defined as a company's current liabilities to only current liquid assets reflecting the challenging selling nature of the inventory. The benefit of quick ratio lies in the entity's ability to pay for its short-term obligations without the need to sell the inventory. The formula can be described as follows:

$$Quick\ ratio = \frac{Current\ Assets - Inventory}{Current\ Liabilities}$$

(Růčková, 2015).

The result equal to 1 attest that the company can satisfy its creditors without having to sell inventory. The higher the value of quick ratio, the more reliable the payment of short-term financial obligations, even in the event of a problem with receiving payment for receivables. Table 2 outlines various management strategies at different referential values.

Table 2. Management Strategies for Quick Ratio

Quick Ratio	Management Strategy
High (above 1,5)	Conservative: maintain current liquidity levels. Monitor cash flow and consider investing excess cash.
Moderate (between 1 and 1,5)	Average: monitor cash flow closely. Optimize inventory turnover and reduce short-term liabilities.
Low (less than 1)	Aggressive: take immediate action to improve liquidity. Negotiate better payment terms, accelerate receivables, and reduce expenses.

(Gitman & Zutter, 2021).

Cash ratio is a financial metric used to measure a company's ability to cover its short-term liabilities with its cash and cash equivalents alone such as marketable securities and checks that can be immediately converted into cash. Those are the most liquid current assets and can be computed as:

$$Cash\ Ratio = \frac{Cash\ and\ its\ equivalents}{Current\ Liabilities}$$

(Růčková, 2015).

A higher cash ratio indicates a stronger liquidity position, as it suggests that the company has more liquid assets readily available to cover its short-term obligations.

Table 3. Management Strategies for Cash Ratio

Cash Ratio	Management Strategy
High (above 1)	Conservative: maintain cash reserves at a level sufficient to cover short-term liabilities comfortably. Monitor cash flow closely and consider investing excess cash in short-term investments.
Moderate (between 0.5 and 1)	Average: monitor cash flow and liquidity regularly. Optimize cash management practices and ensure timely collections of receivables. Consider building up cash reserves if necessary.
Low (less than 0.5)	Aggressive: focus on improving cash flow management and liquidity. Implement strategies to accelerate collections, negotiate better payment terms, and reduce unnecessary expenses. Explore options for securing additional financing if needed.

(Gitman & Zutter, 2021).

3.2.4 Debt management ratios

Debt management ratio assesses a company's ability to handle its debts effectively, including any interest, in full and on time without resorting to its assets. It helps in evaluating how much debt a company has relative to its assets and equity that provide insights into the financial leverage and capacity to meet debt obligations. The risk of insolvency, both from long-term and short-term debts, increases with the growth of total debts and the decrease in the likelihood of paying off due debts from profit and depreciation (Růčková, 2015). There are several indicators, which are used to evaluate indebtedness and described below.

Total debt ratio is a key measure of how much a company owes compared to its total assets. It's important to look at this ratio alongside a company's overall profitability and how it's financed. Creditors usually prefer a lower ratio, as it means there's less risk of the company being unable to pay its debts. Shareholders might prefer a higher ratio if the company earns more from its investments than it pays in interest on its debt. Experts suggest keeping this ratio between 30% and 60%, but it depends on factors like the business environment and the company's ability to handle its debt (Mrkvička, 2006).

The following equation illustrates it:

$$Total\ Debt\ Ratio = \frac{Total\ Liabilities}{Total\ Assets}$$

(Brealey et. al, 2016).

Debt-to-equity ratio shows how much of a company's funding comes from debt versus equity. Analysts track changes in this ratio over time to understand shifts in the company's financial structure, while banks consider it when deciding on loans. A ratio between 0 and 1 is recommended, indicating a preference for capital over liabilities. Both total debt and debt-to-equity ratios increase with liabilities, but the latter rises faster. Only long-term liabilities are considered in these ratios, excluding short-term ones. If applicable, deferred taxes and the present value of lease obligations are also included. It can be depicted as follows:

$$Debt - to - Equity\ ratio = \frac{Total\ Liabilities}{Shareholder's\ Equity}$$

(Reilly & Brown, 2012).

Interest coverage ratio relies on cash flow data to fulfill required interest and lease payments. It gauges how well a company's earnings can cover its interest charges. Since taxes don't impact the ability to pay current interests, the ratio primarily uses EBIT in the numerator. A low coverage ratio, like 1, suggests that a company earns just enough to cover its debt interests but lacks funds for taxes, lease payments, or shareholder dividends. This indicates inadequate profitability and potential solvency issues. To address this, the recommended ratio level, as per literature, is over 5.

$$Interest\ coverage\ ratio = \frac{EBIT}{Interest\ payments}$$

(Brealey et. al, 2016).

3.3 Analysis of cumulative indicators

There are various individual financial indicators that are being commonly used, but each one has limited explanatory power as they focus on specific aspects like profitability, activity, or debt management. To better understand a company's overall financial performance, analysts often combine these indicators into cumulative analyses. This type of analysis aims to provide a comprehensive overview of the company's financial and economic health by examining how different indicators relate to each other and influence overall performance. The main goals of cumulative analysis are to demonstrate how individual indicators affect overall performance, enhance transparency in financial performance trends, and provide insights for future decision-making (Růčková, 2015). The most common analyses are bankruptcy indicators and credibility models that are covered in the next subchapters.

3.3.1 Bankruptcy indicators

Bankruptcy indicators are financial metrics used to assess the likelihood of a company facing financial distress or bankruptcy. These indicators help stakeholders, such as investors, creditors, and analysts, evaluate the financial health and solvency of a company. At the same time, possible threats to financial health can be identified and analyzed. An example of a bankruptcy indicator in action is the Altman Z-Score model (Růčková, 2015).

Altman Z-Score, developed by Edward Altman in 1968, is a widely used financial model for predicting the probability of bankruptcy of a company within the next two years. The model combines multiple financial ratios to generate a single score, which helps assess the overall financial health and solvency of a company. The Altman Z-Score is particularly useful for evaluating the risk of bankruptcy among publicly traded manufacturing companies, but it has also been applied to other industries with some modifications (CFI team, 2023).

Altman Z-Score formula consists of five weighted financial ratios, each representing different aspects of a company's financial condition:

- Working Capital/Total Assets measures a company's liquidity and its ability to cover short-term obligations with its current assets.
- Retained Earnings/Total Assets reflects the proportion of a company's total assets financed by retained earnings, indicating its profitability and financial stability.
- Earnings Before Interest and Taxes/Total Assets assesses a company's operating efficiency and profitability by comparing its earnings before interest and taxes to its total assets.

- Market Value of Equity/Book Value of Total Liabilities evaluates the market value of a company's equity relative to its total liabilities, providing insights into investors' perceptions of the company's financial health.
- Sales/Total Assets measures a company's asset turnover efficiency, indicating how well it utilizes its assets to generate sales revenue (Altman, 1968).

Each ratio is assigned a specific weight based on statistical analysis of bankrupt and non-bankrupt companies' financial data. The weighted scores of these ratios are then summed for calculation purposes. The resulting Z-Score is interpreted as follows:

- Z-Score < 1.81: Indicates a high risk of bankruptcy.
- 1.81 < Z-Score < 2.99: Suggests a gray area where caution is warranted.
- Z-Score > 2.99: Indicates a low risk of bankruptcy (Altman, 1968).

Since both Nestlé and Cadbury are publicly traded companies in Nigeria, the following formula is used:

$$\boldsymbol{Z = 1.2 * A + 1.4 * B + 3.3 * C + 0.6 * D + 1.0 * E}$$

where:

- A = Working Capital / Total Assets
- B = Retained Earnings / Total Assets
- C = Earnings Before Interest and Taxes (EBIT) / Total Assets
- D = Market Value of Equity / Book Value of Total Liabilities
- E = Sales / Total Assets

(CFI team, 2023).

The effectiveness of Altman Z-score model, initially designed for American companies, may be uncertain when applied to businesses in other countries. However, international experience suggests that the model's ability to predict bankruptcy is relatively strong, particularly within a two-year timeframe. Yet, its accuracy diminishes over longer periods. Furthermore, the model may not be suitable for young companies due to their typically low earnings, resulting in consistently low Z-scores. It's essential to note that a high Z-score does not necessarily guarantee a company's ability to meet its financial obligations, as it does not directly assess cash flow. Therefore, caution is advised when utilizing the model, considering these factors (Mrkvička, 2006).

3.3.2 Credibility models

Credibility models, also known as credit scoring models or credit risk models, are statistical tools used by financial institutions to assess the creditworthiness of individuals or companies seeking credit. These models analyze various financial and non-financial factors to predict the likelihood of default or delinquency on loan repayments. The mechanism involves assigning numerical scores to borrowers based on their credit histories, financial statements, demographic information, and other relevant data. The higher the score, the lower the perceived credit risk, and vice versa (Kagan, 2022).

Credibility classification is determined using credit scoring models. Through scoring, credit models aim to assess the creditworthiness of the examined company and evaluate its financial situation. Among the most well-known credit scoring models is **Kralicek's Quick Test**. It is designed to quickly evaluate the likelihood of default on loan repayments based on a set of financial ratios. The model was developed by Bohuslav Kralicek and is particularly popular in the Czech Republic and other Central European countries. Unlike other models, the Kralicek Quick Test uses data from cash flow statements, which provide real-time market information and offer a dynamic view of the company's finances. This makes the Kralicek test more suitable and adaptable. Test calculates a single score based on the four key factors: equity ratio and debt settlement period representing financial stability, return on sales and return on assets representing profitability (Polo & Caca, 2014).

Picture 1. Kralicek’s Quick Test Estimates

Indicators	1 excellent	2 very well	3 well	4 poor	5 dangerous
R1 ***Equity / Total Assets***	> 30%	> 20%	>10%	> 0%	Negative
R2 ***Debt Settlement Period from Cash Flow***	< 3 years	< 5 years	< 12 years	< 30 years	> 30 years
Financial Stability	*Arithmetic mean of total assets and Debt Settlement Period from Cash Flow*				
R3 Operating Cash Flow / Sales	> 10 %	> 8 %	> 5 %	> 0 %	negative
R4 EBIT/ Total Assets	> 15 %	> 12 %	> 8 %	> 0 %	negative
Profit Situation	*Arithmetic mean of Operating Cash Flow and ROA*				
Total Grading	**Arithmetic mean of all four indicators**				

(Polo & Caca, 2014).

The indicators’ results are afterwards converted into points, the sum of which then divided by 4 and gives us the evaluated result. A result higher than 3 points indicates a financial stable and strong company. In the case of a value of 1 point or less, it is considered a poor performing company.

3.4 Economic Value Added (EVA)

Economic Value Added (EVA) is a financial performance metric that was introduced by Stern Stewart & Co in the 1990s. It measures the net operating profit of a company after accounting for the cost of capital. EVA is considered a superior measure of corporate performance compared to traditional accounting metrics like net income because it considers the opportunity cost of capital. Today, numerous successful companies use EVA to gauge their yearly financial performance. The formula for EVA is as follows:

$$EVA = Net\ Operating\ Profit\ After\ Tax\ (NOPAT) - (Capital * Cost\ of\ Capital)$$

where:

- NOPAT is the net operating profit after taxes, calculated as operating income multiplied by (1 - tax rate).
- Capital represents the total capital employed by the company.
- Cost of Capital is the weighted average cost of capital (WACC), which includes the cost of equity and the cost of debt.

(Stern et. al, 2003).

Positive EVA indicates that the company is creating value above and beyond its cost of capital, while negative EVA suggests that the company is not generating sufficient returns to cover its capital costs. The critical part of EVA calculation involves assessing the total invested capital, factored by the weighted average cost of capital. Generally, invested capital refers to the net working capital, which comprises non-interest-bearing liabilities such as current liabilities derived from current assets. However, for a more accurate financial analysis, it's crucial to precisely measure and adjust the total invested capital by considering other categories of operating capital. This adjustment includes incorporating various accounting items like Property, Plant, and Equipment, Other Assets, Goodwill (including accumulated Goodwill amortization), and the present value of operating leases into the net working capital. Neglecting these adjustments in historical accounting data can lead to either underestimation or overestimation of a company's economic profitability (Reilly & Brown, 2012).

In summary, real economic performance improvement is attained by boosting NOPAT, reducing WACC, and/or maximizing the utilization of capital employed. Enhancing NOPAT involves increasing cash inflows, reducing expenses, and evaluating potential acquisitions. To adjust WACC, a company can review its capital structure, financing methods, and determine an acceptable leverage ratio. Lastly, capital employed utilization hinges on the efficiency of a company's operations, which can be evaluated through activity ratios like asset turnover and net working capital. Taking action to improve these ratios is essential for overall performance enhancement (Elliott & Elliott, 2006).

4 Practical Part

4.1 Nestlé: financial analysis

Nestlé Nigeria PLC, established in 1961, is among Africa's leading food and beverage companies, providing consumers in Nigeria with high-quality, nutritious food products. With a workforce of over 2,300 employees, Nestlé Nigeria operates from three manufacturing facilities, eight branch offices, and a head office in Lagos. The company markets well-known brands such as Maggi, Milo, Golden Morn, Nescafé, and Nestlé Pure Life (Nestlé, n.d.).

Dedicated to improving lives and promoting a healthier future, Nestlé is committed to both societal benefits and sustainable business growth. Recently, the company invested ₦815 million in an LNG plant to enhance energy efficiency. Notable for its corporate social responsibility initiatives, Nestlé remains steadfast in providing nutritious products despite economic challenges, demonstrating resilience and innovation (African Financials, n.d.).

4.1.1 Analysis of absolute indicators

Horizontal analysis is being conducted for two types of balance sheet account items, such as total assets and total equity and liabilities, for the years 2012 to 2022 in absolute and relative terms.

Table 4. Nestlé's horizontal analysis of the main asset account items (in absolute terms)

In thousand of naira	2012 / 2013	2013/ 2014	2014 /2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Total non-current assets	**3844599**	**2221065**	**1827630**	**1349410**	**2449398**	**5300930**	**6736725**	**8346711**	**11630637**	**18217948**
LT Receivables	152317	584636	194303	326065	242981	315873	319985	-193913	138112	315048
Property, plant equipment	3718629	1636429	1633317	1023355	2206417	987580	6028158	7872155	11698321	17775213
Total current assets	**15399663**	**-4366478**	**11325356**	**49021469**	**-25231202**	**10229364**	**24303167**	**44463971**	**52422871**	**86587578**
Inventories	1068984	1102117	-142050	9823790	3272553	-786283	10154924	18943323	6741858	29376407
Trade and other receivables	4427670	4446038	2115182	-410584	7395039	10744612	23645126	-26264898	3747468	38934268
Prepayments	571	97365	127203	1186637	313504	-797321	-326507	66908	125415	835197
Cash and cash equivalent	9902438	-10011998	9225021	38421626	-36212298	623182	-8783965	51725138	41814950	17414271
Total Assets	**19244262**	**-2145413**	**13152986**	**50370879**	**-22781804**	**15530294**	**31039892**	**52810682**	**64053508**	**104805527**

(own processing, Nestlé financial positions).

Table 5. Nestlé's horizontal analysis of the main asset account items (in relative terms)

	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Total non-current assets	6%	3%	3%	2%	3%	7%	8%	9%	11%	15%
LT Receivables	27%	50%	14%	19%	13%	14%	13%	**-8%**	**6%**	**11%**
Property, plant equipment	6%	2%	2%	1%	3%	1%	8%	9%	12%	15%
Total current assets	37%	-12%	23%	**50%**	**-35%**	12%	23%	29%	26%	30%
Inventories	11%	10%	-1%	**48%**	14%	**-3%**	31%	**36%**	**11%**	**33%**
Trade and other receivables	25%	20%	9%	-2%	24%	25%	36%	**-66%**	9%	47%
Prepayments	0%	24%	24%	69%	15%	-65%	-36%	7%	11%	43%
Cash and cash equivalent	**72%**	**-270%**	71%	**75%**	**-239%**	4%	**-126%**	**88%**	42%	15%
Total Assets	**18%**	**-2%**	**11%**	**30%**	**-16%**	**10%**	**16%**	**21%**	**21%**	**25%**

(own processing, Nestlé financial positions).

Table 4 and 5 depict the results of horizontal analysis of the main asset account items in absolute and relative terms. The respective trends were identified for available financial position items. Total assets of Nestlé generally increased over the years, with mostly positive growth rates, indicating an overall upward trend in the company's asset base. This reflects the fact that the company has been continuously expanding its operations, making investments in its business activities, or acquiring additional assets over time. The downward fluctuations in growth rates are mostly due to changes in market conditions; however, the overall trend was not impacted.

Looking at total non-current assets, the trend was an upward increase from 2012 to 2018, with a significant jump in 2018 and subsequent years, indicating a consistent investment in long-term assets. This included investments in property, plant, and equipment, reflecting Nestlé's commitment to expanding its operations and infrastructure over time.

On the other hand, total current assets experienced fluctuations, with significant growth in some years (e.g., 50% in 2016) and declines in others (e.g., -35% in 2017), depicting variability in the company's short-term assets. The sharp increase in 2016 indicated an increase in cash, inventory, or receivables, possibly due to improved sales or collection efficiency. The subsequent decrease in 2017 (-239%) potentially reflected changes in market conditions or strategic decisions impacting short-term asset levels. However, the subsequent increases in the following years indicate a recovery or growth in Nestlé's short-term asset base.

Long-term receivables fluctuated significantly over the years, with a notable decrease in 2020 (-8%), indicating potential challenges in collecting long-term payments. The slight increases in 2021 and 2022 (6% and 11%) showcase significant stabilization and recovery from the previous decline. Demonstrated irregular changes in inventories, characterized by significant increases in certain years (2016, 2019, 2020, and 2022), are related to increased production and inventory buildup. On the contrary, the fluctuations in subsequent years refer to varying levels of market demand.

Simultaneously, trade and other receivables fluctuated over the years, with substantial increases in 2013, 2018, and 2019, indicating a higher volume of sales. However, the sharp decrease in 2020 (-66%) suggested a potential shift in customer payment behavior due to the Covid-19 pandemic, warranting further investigation into receivables management strategies.

Cash and cash equivalents experienced significant fluctuations over the years, with a high increase in 2013 (72%), followed by a dramatic decrease in 2014 (-270%). This decrease was dictated by the challenging economic environment due to the deteriorating security situation in Nigeria and uprising in the northern region. Similar patterns were observed in years 2016 (75%) and 2017 (-239%), whereas after a decrease in 2019 (-126%), a recovery strategy was put into place in 2020 resulting in an 88% increase.

Table 6. Nestlé's horizontal analysis of the main equity and liabilities account items (in absolute terms)

In thousand of naira	2012 / 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/2020	2020/2021	2021/2022
Total Equity	**6409239**	**-4655158**	**2067431**	**-7128999**	**14000102**	**5342309**	**-4662856**	**-16260646**	**-7918775**	**8913015**
Share capital	0	0	0	3500000	-3500000	0	0	0	0	0
Share premium	0	0	0	0	0	0	0	364	-364	0
share based payment reserve	-22958	18052	105829	-23986	20756	7552	-31712	-9265	-352	-23332
Retained earnings	6432197	-4199983	1488375	-7105013	13979346	5334757	-4631144	-16251381	-7918423	8936347
Total Non-current liabilities	**4781572**	**-8895212**	**-4008250**	**-3801699**	**4571033**	**-2249021**	**2284820**	**28576406**	**42484649**	**73005935**
Loans and borrowings	2914659	-8085399	-5855515	-2146020	-819677	-3643170	-405110	28885902	42030573	70573697
Employee benefits	739156	5944	554440	-278469	172177	424752	1607254	163094	-432421	321048
Deferred tax liabilities	1127757	-815757	1292825	-1377210	5218533	969397	1082676	-472590	603362	2266436
Total Current liabilities	**8053451**	**11404957**	**15093805**	**61301577**	**-41352939**	**3053822**	**42801113**	**40494921**	**29487634**	**22886577**

Current tax liabilities	453722	675110	1561735	10449166	-390964	8531317	8171382	-1325054	-2194686	-2072923
Loans and borrowings	-2509622	11782317	4378677	23021572	-29217129	-9886788	3932446	1418580	9772949	-7856921
Trade and other payables	10062908	-2409271	10004949	28000368	-15606472	11328830	18015604	38112631	31871736	17777436
Provisions	46443	119195	0	61939	302121	310052	348640	2134431	-990493	-1675490
Total liabilities	**12835023**	**2509745**	**11085555**	**57499878**	**-36781906**	**10187985**	**35702749**	**69071327**	**71972283**	**95892512**
Total Equity and Liabilities	**19244262**	**-2145413**	**13152986**	**50370879**	**-22781804**	**15530294**	**31039892**	**52810682**	**64053508**	**104805527**

(own processing, Nestlé financial statements).

Table 7. Nestlé's horizontal analysis of the main equity and liabilities account items (in relative terms)

	2012 / 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Total Equity	**16%**	**-13%**	5%	**-23%**	**31%**	11%	-10%	**-56%**	**-37%**	**29%**
Share capital	0%	0%	0%	-2%	2%	0%	0%	0%	0%	0%
Share premium	0%	0%	0%	0%	0%	0%	0%	1%	-1%	0%
share based payment reserve	-86%	40%	70%	-19%	14%	5%	-26%	-8%	0%	-26%
Retained earnings	**16%**	**-12%**	**4%**	**-23%**	**32%**	**11%**	-10%	**-57%**	-38%	**30%**
Total Non-current liabilities	14%	**-35%**	**-19%**	**-22%**	21%	-11%	**10%**	**56%**	**46%**	**44%**
Loans and borrowings	11%	**-44%**	**-47%**	-21%	-9%	-62%	-7%	**84%**	**55%**	**48%**
Employee benefits	41%	0%	23%	-13%	8%	16%	37%	4%	-11%	7%
Deferred tax liabilities	19%	**-15%**	20%	**-27%**	50%	9%	9%	-4%	5%	15%
Total Current liabilities	24%	26%	25%	**51%**	**-52%**	4%	34%	24%	15%	10%
Current tax liabilities	16%	19%	31%	67%	-3%	36%	26%	-4%	-8%	-8%
Loans and borrowings	-265%	93%	26%	57%	-268%	-963%	79%	22%	61%	-95%
Trade and other payables	35%	-9%	27%	43%	-32%	19%	23%	33%	21%	11%
Provisions	11%	22%	0%	10%	34%	26%	22%	58%	-37%	-163%
Total liabilities	**19%**	4%	14%	**41%**	**-36%**	9%	24%	32%	25%	25%
Total Equity and Liabilities	18%	-2%	11%	30%	-16%	10%	16%	21%	21%	25%

(own processing, Nestlé financial positions).

Table 6 and 7 illustrate the results of horizontal analysis of the main equity and liabilities account items, also both in absolute and relative terms. Total equity showed fluctuations over the years, with a substantial increase of 16% in 2013 and 31% in 2017, followed by impactful decreases in 2014, 2016, and 2020-2021. These fluctuations suggested alterations in retained earnings and share capital, indicating shifts in the company's financial structure and profitability. Reasons for it stemmed from changes in profitability, dividend payouts, share issuance, or share buybacks. Increases of 4% in 2015 and 32% and 11% in 2017-2018, as well as 30% in 2022 respectively were the result of profitable operations, whereas in 2013 (16%) it was due to capital injections. The decrease in 2014 by 12% indicated the loss, whereas 2016 (-23%) and 2020 (-57%) were the years of share repurchase and dividend payments. Notably, the company had started its recovery in 2022 with a 30% surplus due to a new strategy.

Total non-current liabilities experienced fluctuations, with significant decreases in 2014-2016, 2018 followed by substantial increases in 2017, 2019 and onwards. These differences implied changes in the company's long-term borrowing and obligations related to employee benefits, highlighting shifts in its financial obligations and capital structure. It was mainly driven by changes in debt refinancing and issuance of bonds. Decreases in 2014-2016 attributed to debt repayment.

Total current liabilities displayed fluctuations, with a sharp increase in 2016 (51%), followed by a decrease in 2017 (-52%) and subsequent growth onwards. These changes suggested shifts in the company's short-term borrowing, tax liabilities, and provisions, reflecting its financial activities and management of immediate financial obligations. In 2017, it was directly linked to increased operational expenses, reflecting changes in working capital management, and adjustments to provisions.

As a result, total liabilities showed fluctuations over the years, with significant increases in 2013, 2015, and 2016, followed by a decrease in 2017. These changes reflected variations in the company's total debt, encompassing both long-term and short-term obligations, as well as other liabilities, influencing its overall financial health and risk profile.

Consequently, the vertical analysis was applied to the company’s financial position to identify the composition of the company’s capital and its funding resources. Table 8 illustrates the development of Nestlé’s financial position assets structure in the same period from 2012 to 2022.

Table 8. Nestlé’s vertical analysis of the asset items

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total non-current assets	**70.4%**	61.4%	64.7%	59.1%	**42.4%**	50.6%	49.0%	44.6%	**38.5%**	**34.3%**	**30.0%**
LT Receivables	0.5%	0.5%	1.1%	1.1%	1.0%	1.3%	1.4%	1.3%	1.0%	0.8%	0.7%
Intangible assets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Property, plant equipment	**69.9%**	60.9%	63.7%	58.0%	**41.4%**	49.3%	45.2%	41.1%	**35.4%**	**31.9%**	**28.1%**
Total current assets	**29.6%**	38.6%	35.3%	40.9%	**57.6%**	49.4%	51.0%	55.4%	61.5%	**65.7%**	**70.0%**
Inventories	9.9%	9.1%	10.3%	9.1%	12.2%	16.3%	14.2%	17.2%	**21.2%**	19.0%	21.3%
Trade and other receivables	15.1%	16.5%	21.1%	20.5%	14.2%	21.4%	26.0%	**34.0%**	16.1%	**14.0%**	**19.8%**
Prepayments	0.3%	0.3%	0.4%	0.4%	1.0%	**1.4%**	0.8%	0.5%	0.4%	0.4%	0.5%
Cash and cash equivalent	4.3%	12.7%	3.5%	10.8%	**30.3%**	10.3%	9.7%	**3.6%**	**23.8%**	**32.4%**	**28.4%**
Total Assets	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

(own processing, Nestlé financial positions).

During the period from 2012 to 2015, the portion of non-current assets prevailed in the total structure, making up between 60% to 70% of total assets. Considering that the return on long-term assets is higher than on short-term assets, the following conclusion can be derived: Nestlé structured its assets in the most favorable manner for shareholders. Over the period from 2012 to 2015, the company possessed, on average, 65% of non-current assets in Property, Plant, and Equipment. However, their portion was significantly reduced in 2016 (41.4%), followed by another decrease to 31.9% in 2021. Intangible assets were removed in 2013 and never brought back again. This shift was given by the removal of patents, trademarks, and proprietary technology from the Nigeria subsidiary to the company's headquarters. Long-term receivables formed nearly the same portion throughout the years, with an average of 1% of the total value of non-current assets.

Regarding current assets, their portion became prevailing since 2016, representing, on average, 56.5%. The most considerable part of it was compiled by Trade and other receivables, as well as Inventories. Trade and other receivables accounted for 19.9% on average, while Inventories made up 13.9% of the total value. As shown, both account items were fluctuating over the years, swapping the portions from Cash and cash equivalents. When looking at the Cash and cash equivalents component, it experienced significant increases in years 2016 (30.3%) and 2020-2022 (23.8%, 32.4%, and 28.4%). As outlined earlier in horizontal analysis, this was a result of debt repayments, as well as dividend payments. The smallest portion of short-term assets was accounted for Prepayments, on average, to 0.6% throughout the entire period.

Table 9. Nestlé's vertical analysis of the equity and liabilities items

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Equity	38%	38%	34%	32%	**20%**	31%	31%	24%	**12%**	**7%**	**7%**
Share capital	0.4%	0.4%	0.4%	0.3%	**2.3%**	0.3%	0.2%	0.2%	0.2%	0.1%	0.1%
Share premium	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
share based payment reserve	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%
Retained earnings	**37.9%**	37.1%	33.9%	31.4%	**17.9%**	30.2%	30.6%	23.3%	**11.7%**	**6.7%**	7.2%
Total Non-current liabilities	33%	32%	24%	18%	**10%**	15%	12%	12%	21%	**30%**	**40%**
Loans and borrowings	**26.5%**	**24.5%**	17.3%	10.5%	6.1%	6.5%	**3.6%**	**2.9%**	14.0%	**24.6%**	**35.4%**
Employee benefits	1.2%	1.7%	1.7%	2.0%	1.2%	1.6%	1.7%	**2.2%**	1.8%	1.3%	1.1%
Deferred tax liabilities	5.6%	5.6%	5.0%	5.5%	**3.1%**	**7.1%**	7.0%	6.4%	4.9%	4.1%	3.6%
Total Current liabilities	**28%**	31%	42%	50%	**71%**	**54%**	51%	65%	67%	63%	53%
Current tax liabilities	**2.6%**	**2.6%**	3.3%	4.2%	9.1%	10.3%	14.6%	**16.4%**	12.4%	9.1%	6.3%
Loans and borrowings	3.9%	0.9%	12.0%	14.4%	**23.7%**	7.4%	0.6%	2.6%	2.6%	**0.1%**	2.0%
Trade and other payables	21.4%	26.9%	25.1%	30.8%	**38.1%**	33.4%	37.2%	40.5%	**47.3%**	47.8%	40.0%
Provisions	0.4%	0.4%	0.5%	0.4%	0.4%	0.6%	0.7%	0.8%	**1.5%**	0.9%	0.2%
Total liabilities	**62%**	**62%**	66%	68%	82%	69%	69%	76%	88%	**93%**	93%
Total Equity and Liabilities	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

(own processing, Nestlé financial positions).

Table 9 depicts the vertical analysis of the equity and liabilities items in years 2012 to 2022. Looking at the results, the following conclusions can be drawn:

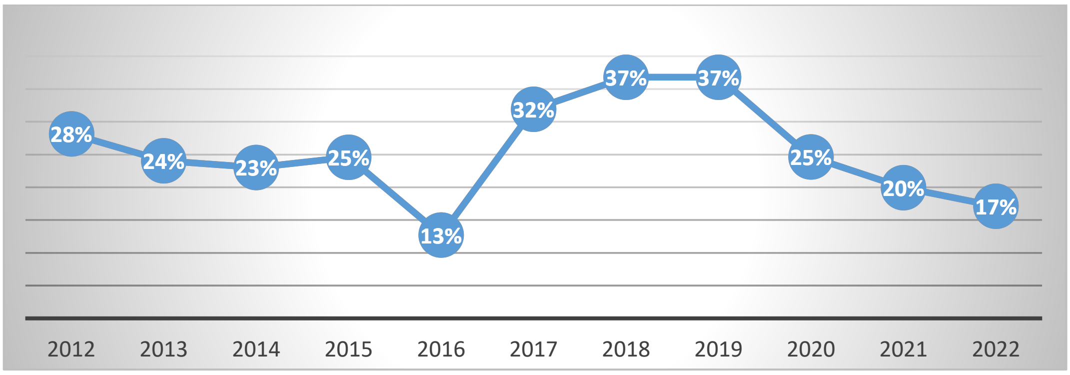
- Overall, total equity averaged 27% of total funding sources, experiencing drastic declines in 2016 (20%), as well as in 2020 (12%) and 2021-22 (6%). The latter changes were driven by the impact of the pandemic, leading to a significant drop in retained earnings.
- Regarding the structure of equity, the most substantial portion was comprised of retained earnings. Although this item accounted for an average of 26.1% of total equity, its share began declining since 2019, with relative stability in previous years (2012 to 2018).
- Share capital remained stable over the years except for 2016 when it spiked due to the issuance of new shares aimed at raising capital to pay off debts.
- Share premium/share-based payment reserve also remained relatively stable over the years, accounting for less than 0.1%.
- Total liabilities represented, on average, 73%, with the largest proportion in 2016 and 2020-2022.

- Long-term liabilities fluctuated throughout the years from 10 to 33%, averaging 21%, whereas short-term liabilities ranged from 28% to 71%, averaging 52%.
- Non-current liabilities mainly changed due to long-term borrowings, which constituted, on average, 13% of long-term liabilities. Long-term borrowings accounted for the lowest percentage in 2018 (3.6%) and 2019 (2.9%), while reaching peaks in certain years (2012-2013 and 2021), exceeding 24%.
- Deferred tax liabilities were the second-largest item of long-term liabilities, remaining relatively unchanged over the years (averaging 5.4%), except for 2017 (7.1%).
- Employee benefits represented only around 1.7% and remained stable throughout the years.
- Among current liabilities, trade and other payables accounted for the largest share, ranging from 21% to 47%. Fluctuations occurred notably in 2016 (38.1%) and 2020-2021 (47%).
- Borrowings fluctuated significantly over the years, with the highest increase observed in 2016.
- The smallest portions of current liabilities were comprised of provisions and current tax liabilities. While provisions remained almost unchanged throughout the period from 2012 to 2022, current tax liabilities fluctuated significantly.

4.1.2 Ratio analysis

The analysis of return on assets (RoA) for Nestlé from 2012 to 2022, as depicted in Graph 1, shows relatively stable results over the years, consistently above 20% with a decrease to 13% in 2016. Notably, there was a decreasing trend in RoA since 2020. Despite this, the results indicate that Nestlé's profit maximization efforts have been sufficient, reflecting effective management practices in terms of cost control, revenue generation, and asset management. The stability in RoA suggests that the company's management team has been successful in maintaining profitability over time, contributing to its overall financial health. However, it is important to compare these results with those of Cadbury to determine the respective competitive positions of the two companies.

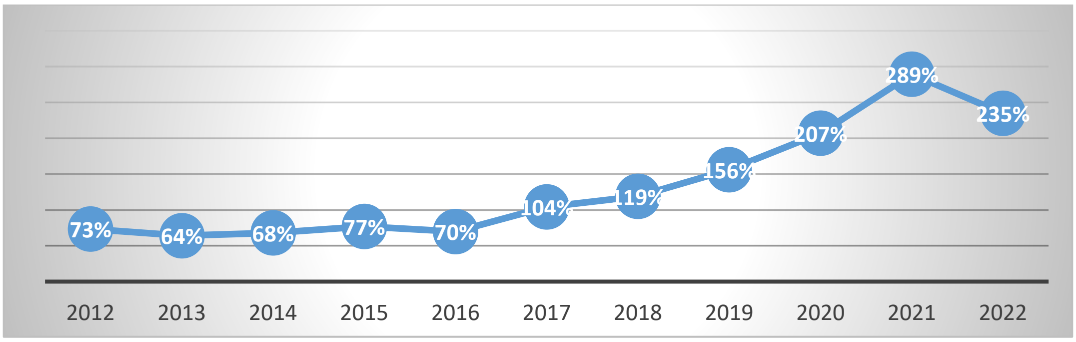
Graph 1. Nestlé's Development of Return on Assets in the period of 2012-2022



(own processing, Nestlé financial statements).

Graph 2 illustrates the Return on Equity (RoE) trend for Nestlé from 2012 to 2022. Notably, the company experienced consistent growth in this profitability ratio over the entire period, with a steady increase from 107% in 2017 to 235% in 2022. This positive trend is significant as it serves as an attractor for investors, especially considering the challenging economic situation in Nigeria. Moreover, the increasing RoE indicates effective capital allocation into investments and projects with high returns, demonstrating Nestlé's success in optimizing its capital structure strategy at both the Nigerian and group levels. It will be important to compare these results with those of Cadbury to assess Nestlé's competitive advantage within the industry.

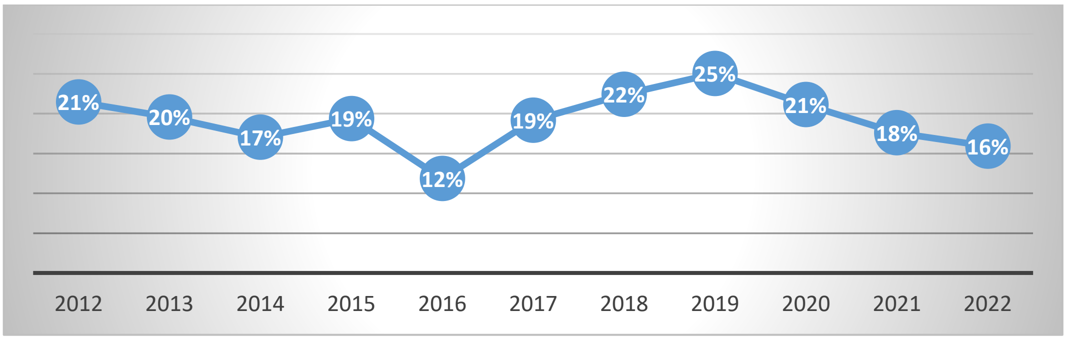
Graph 2. Nestlé's Development of Return on Equity in the period of 2012-2022



(own processing, Nestlé financial statements).

Graph 3 visualizes the trend of Return on Sales (RoS) for Nestlé from 2012 to 2022. Similar to RoA, RoS exhibited stability over the analyzed years, with a sharper decline observed in 2016 (to 12%). Despite this decline, the overall performance is considered commendable, particularly given the instability of the local market and significant fluctuations in demand. The consistent and predictable performance, even with a slight downward trend, instills confidence in the company's ability to meet financial targets. This can lead to greater investor trust and potentially a higher valuation, especially when combined with the high RoE observed for Nestlé.

Graph 3. Nestlé's Development of Return on Sales in the period of 2012-2022

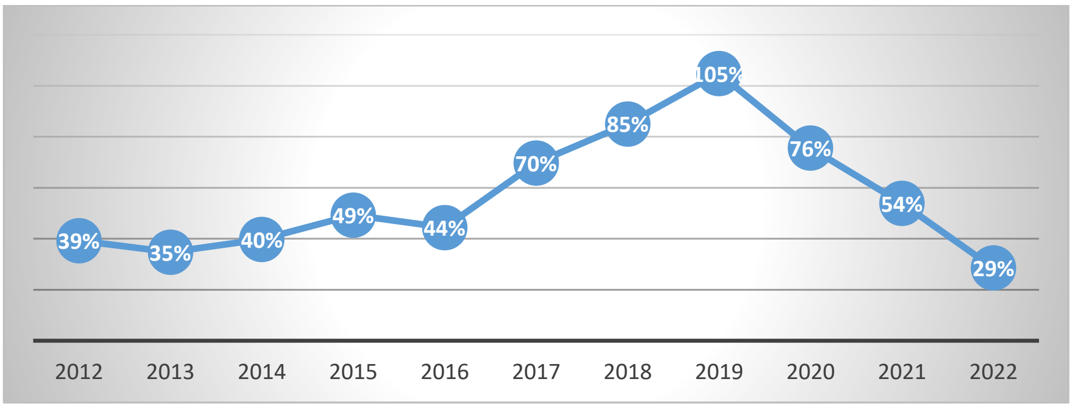


(own processing, Nestlé financial statements).

In Graph 4, the Return on Capital Employed (ROCE) for Nestlé is displayed from 2012 to 2022. Overall, there was a period of stable growth from 2013 to 2019, followed by a steady decrease in 2020-2022. This trend suggests that Nestlé experienced a phase of consistent value creation and growth opportunities during the earlier years of the analyzed period. The stable growth period aligned with a more favorable business environment for food processing companies since 2014, marked by investments into essential products.

The decline in ROCE from 2020 to 2022 may be attributed to various factors, including changes in market conditions, increased competition, or economic challenges such as currency devaluation in Nigeria. However, despite this decline, the overall financial performance of Nestlé remained positive, indicating resilience and adaptability in navigating challenges while still maintaining profitability and value creation.

Graph 4. Nestlé's Development of Return on Capital Employed in the period of 2012-2022



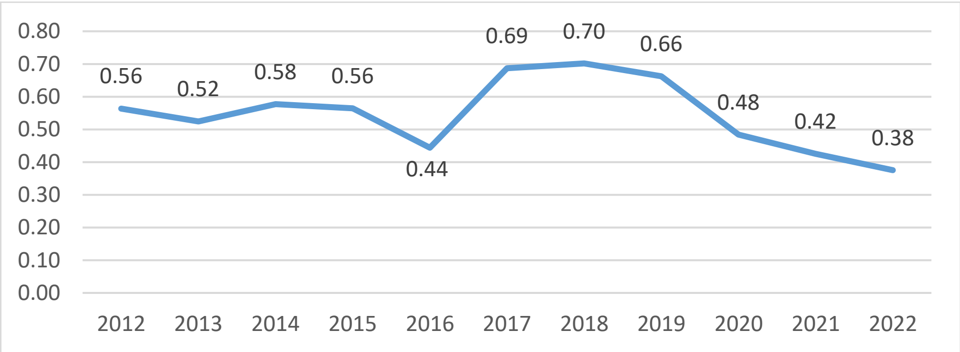
(own processing, Nestlé financial statements).

Another important part of ratio analysis focused on activity ratio, among which belong different indicators. In Graph 5, the development of total asset turnover for Nestlé is illustrated from 2012 to 2022. The graph shows that Nestlé had a relatively stable turnover rate around 0.5 during the analyzed period, indicating a consistent level of efficiency in generating sales revenue from its investment in assets.

The stability in total asset turnover from 2012 to 2015 suggested effective inventory management and sufficient sales levels during that period. However, there was a short-term decrease in 2016, likely due to significant cash flow changes resulting from the application of new and revised IFRS standards.

The recent declines in total asset turnover since 2020 can be attributed to various factors, including the impact of the Covid-19 pandemic, currency depreciation, and overall economic challenges. These external factors likely affected Nestlé's sales revenue and asset utilization, leading to a decrease in total asset turnover.

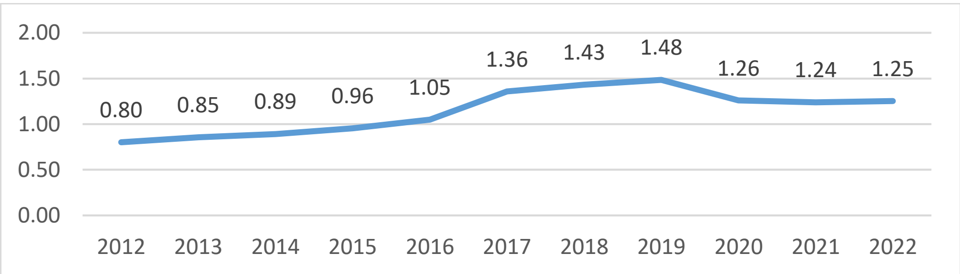
Graph 5. Nestlé's Development of Total Asset Turnover in the period of 2012-2022



(own processing, Nestlé financial statements).

When looking at fixed assets turnover, it had experienced significant growth over the years indicating few key improvements such as effective capital allocation, optimization of production and YoY higher sales revenue. Graph 6 visualizes this development.

Graph 6. Nestlé's Development of Fixed Asset Turnover in the period of 2012-2022

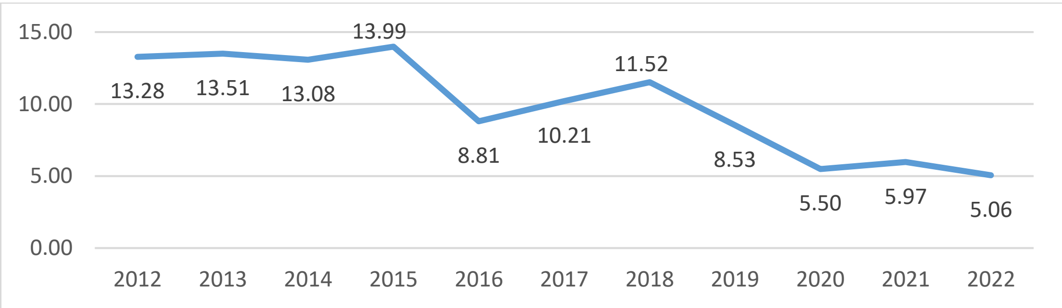


(own processing, Nestlé financial statements).

In Graph 7, the declining trend in Nestlé's inventory turnover ratio from 2012 to 2022 is evident. The ratio showed a notable decrease, particularly since 2019, indicating challenges in managing and selling inventory efficiently. The higher decrease in the inventory turnover ratio since 2019 suggested potential overstocking issues, possibly due to a decrease in overall market demand or changes in consumer preferences. Overstocking can negatively impact a company's liquidity, profitability, and storage costs.

To further evaluate the impact of inventory management on Nestlé's performance, it is essential to analyze the average inventory period and compare it with Cadbury's results. By comparing these metrics, it will be possible to assess whether the decline in inventory turnover is primarily attributed to Nestlé's internal factors or broader market conditions affecting both companies.

Graph 7. Nestlé's Development of Inventory Turnover Ratio in the period of 2012-2022

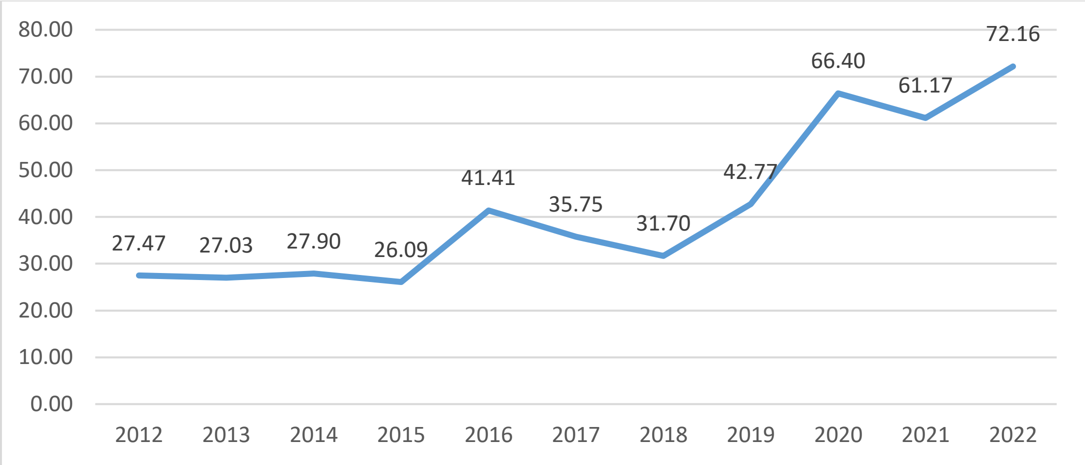


(own processing, Nestlé financial statements).

Graph 8 illustrates a concerning trend in Nestlé's average inventory period over the past 11 years, showing a significant increase from 27 days to 72 days. This increase indicated inefficiencies in inventory management, which may have contributed to challenges in maintaining optimal inventory levels and turnover ratios. The sharp increase in the average inventory period observed in 2020, from 42 days to 67 days, is particularly noteworthy. This increase coincided with a drop in trade and receivables, coupled with a significant decrease in total equity. Such changes in financial metrics can impact a company's working capital management and liquidity, potentially leading to prolonged inventory holding periods.

The prolonged average inventory period suggests that Nestlé may be facing difficulties in effectively managing its inventory levels, which could result in higher storage costs, increased risk of obsolescence, and reduced overall efficiency in the supply chain. It is crucial for Nestlé to address these inventory management challenges to enhance operational effectiveness and maintain competitiveness in the market.

Graph 8. Nestlé's Development of Average Inventory Period in the period of 2012-2022

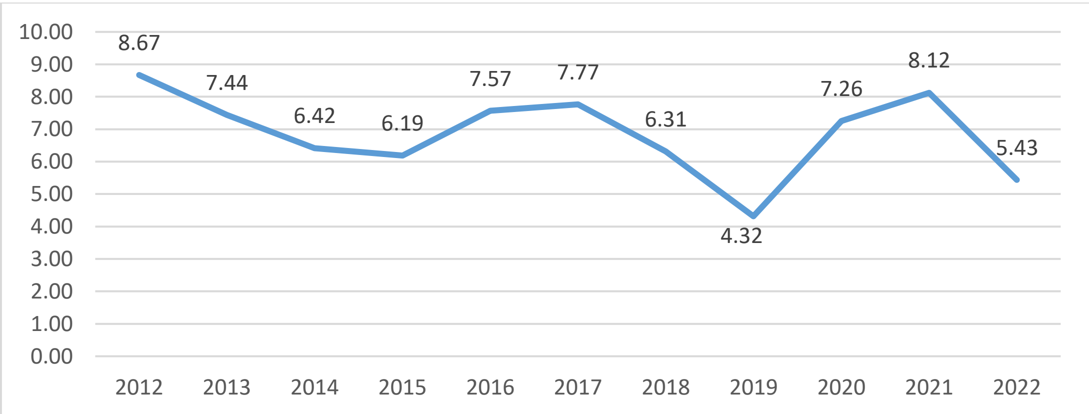


(own processing, Nestlé financial statements).

Graph 9 reveals fluctuations in Nestlé's receivables turnover ratio over the analyzed period. Higher rates observed in 2014 (8.6) and 2021 (8.1) indicated efficient collection of receivables, resulting in increased cash inflow from sales. These periods of higher turnover may have been influenced by factors such as improved credit management practices, timely invoicing, and effective collection procedures.

However, in 2022, there was a significant drop in the receivables turnover ratio. This decline suggested challenges in collecting receivables efficiently, which could be attributed to changes in market conditions, shifts in customer payment behavior, or disruptions in the supply chain. The steady increase in loans and borrowings, along with changes in current liabilities, may have also impacted the company's liquidity and cash flow management, affecting its ability to collect receivables promptly.

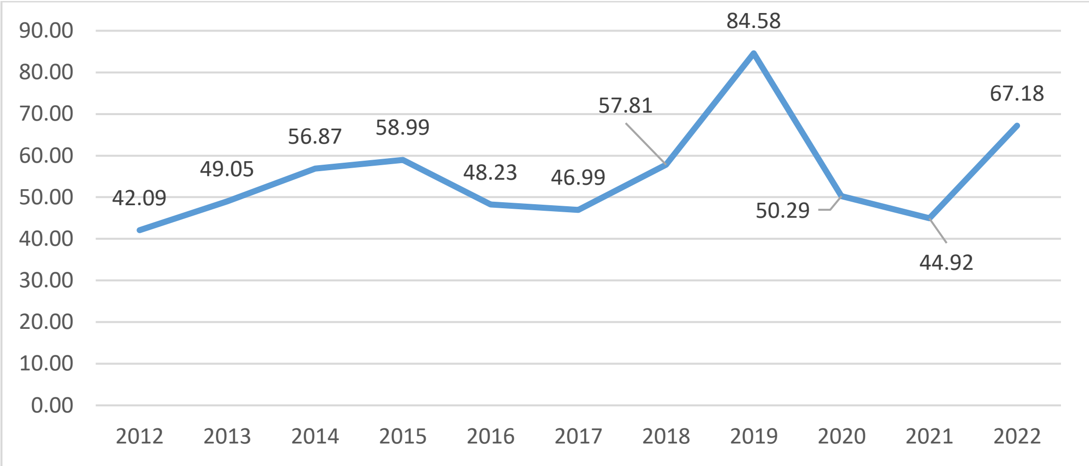
Graph 9. Nestlé's Development of Receivables Turnover in the period of 2012-2022



(own processing, Nestlé financial statements).

Lastly, Graph 10 visualizes Nestlé's development of the average collection period. Overall, it experienced significant fluctuations over the years, with a tendency to increase, reaching the highest number of days in 2019 (84.5). Nevertheless, in 2021, there was also a significant decrease over the selected period to 44.9 days, followed by another big jump in 2022 to 67.1. While looking at the audit reports from Ernst and Young, which evaluated the company's performance, some advice was given to look at the collection process, outlining its problematic nature.

Graph 10. Nestlé's Development of Average collection period in the period of 2012-2022

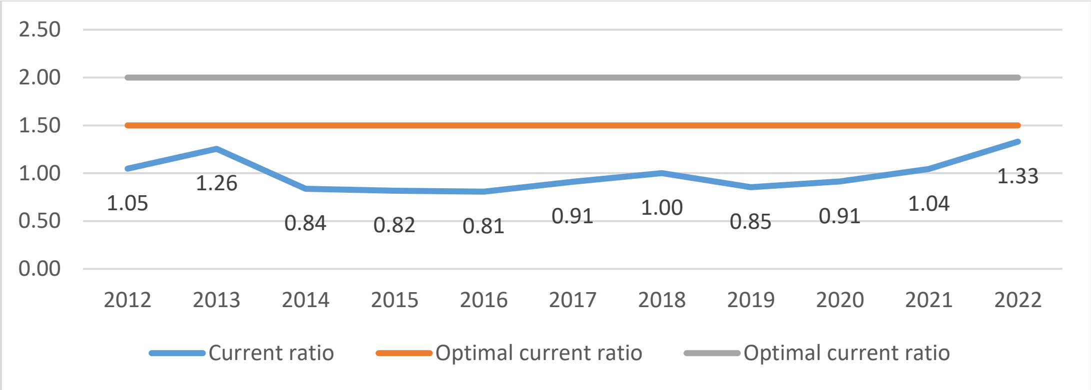


(own processing, Nestlé financial statements).

The next set of computations was conducted for liquidity ratios and is illustrated in graphs 11 to 13. Throughout the whole analyzed period, Nestlé had experienced low Current and Quick ratios, with a positive trend in the last years for the Cash ratio.

As evident from Graph 11, the company's Current ratio had gone through significant fluctuations, with a drop in 2014 and noticeable recovery from 2020. During this period, the company reviewed its overall cash management practices and embarked on a journey of increasing its current assets while also decreasing its current liabilities by lowering volumes in trade and other liabilities. An important component for Nestlé Nigeria Plc to pay more attention to is working capital management, achieved through accelerated collection and efficient inventory management, to optimize levels without risking stockouts (Gitman, 2021).

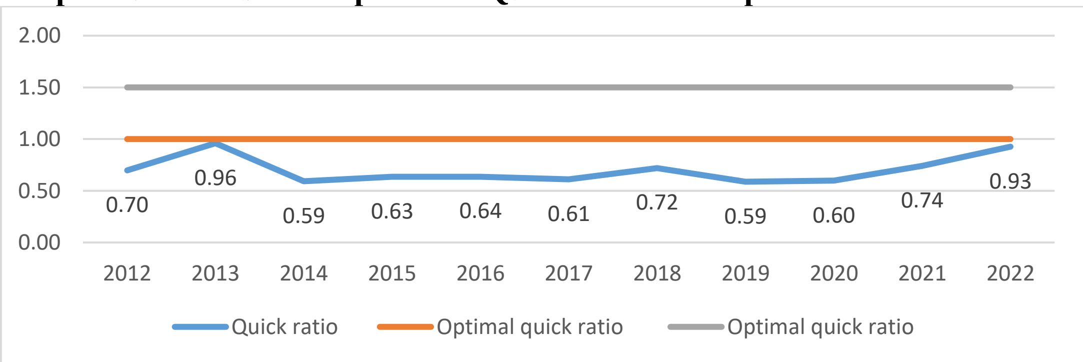
Graph 11. Nestlé's Development of Current Ratio in the period of 2012-2022



(own processing, Nestlé financial statements).

Very similar trends were recognizable for the Quick ratio, as illustrated in Graph 12. The company has experienced a significant decrease in 2014, from which the recovery is still ongoing, with a close to moderate rate in 2022 (0.93 vs. the optimal level of 1). The primary reason for the lagging results is Nestlé's high inventory levels and slow accounts receivable collection, which prevented the business from tying up its cash flow. The company must continuously monitor and manage working capital since overall trends do not display a healthy balance between liquidity and profitability. Regular review and updating of cash flow forecasts should contribute to quickly addressing cash shortages and building proactive measures (Brigham & Houston, 2018).

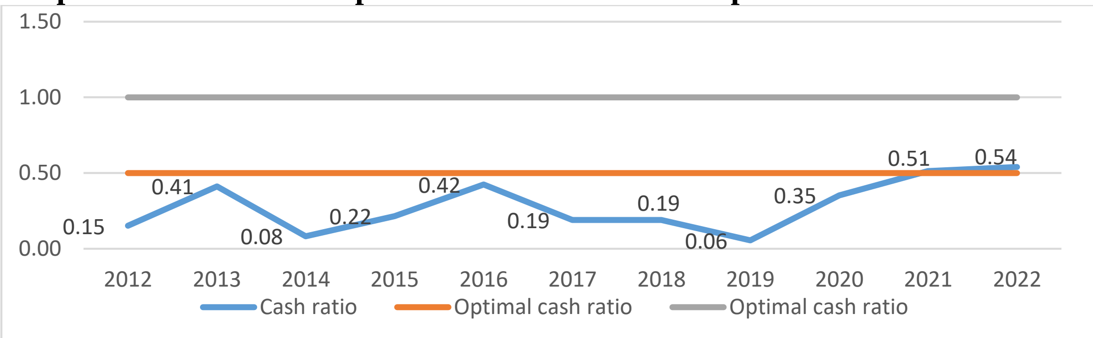
Graph 12. Nestlé's Development of Quick Ratio in the period of 2012-2022



(own processing, Nestlé financial statements).

Lastly, Graph 13 depicts the development of the Cash ratio, which experienced significant fluctuation throughout 2012 to 2022. The company had experienced significant drops in 2014 and 2019, followed by a stabilization process, resulting in an optimal cash ratio in 2021 and 2022. This achievement is mainly due to increasing financial stability and skyrocketing ROE, which boosted investors' confidence and provided more favorable terms for capital.

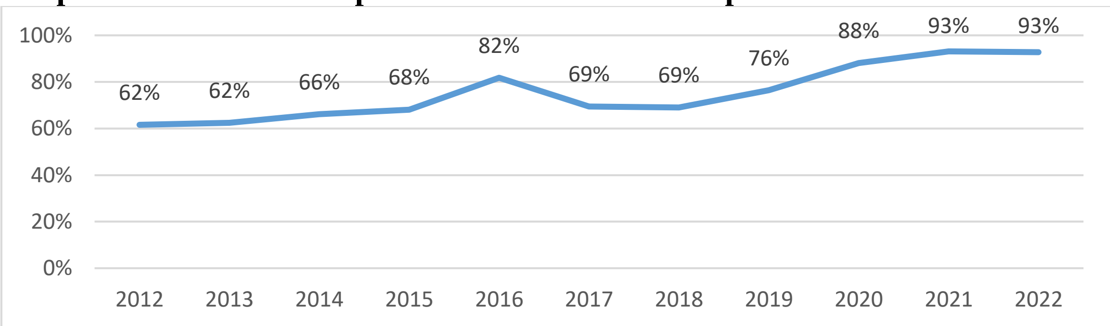
Graph 13. Nestlé's Development of Cash Ratio in the period of 2012-2022



(own processing, Nestlé financial statements).

The final part of the ratio analysis focused on debt indicators, as depicted in Graph 14 covering the years 2012 to 2022. The structure remained almost unchanged until 2018, indicating that the proportion of Nestlé's total assets financed by debt had not significantly changed, showcasing the company's financial stability and creditworthiness. However, starting in 2019, the ratio showed a high growth rate, indicating increased dependency on external financing. This was primarily driven by higher capital expenditures in property, plant, and equipment aimed at enhancing overall productivity and competitiveness. Additionally, market conditions, including currency depreciation, led to increased loans and borrowings.

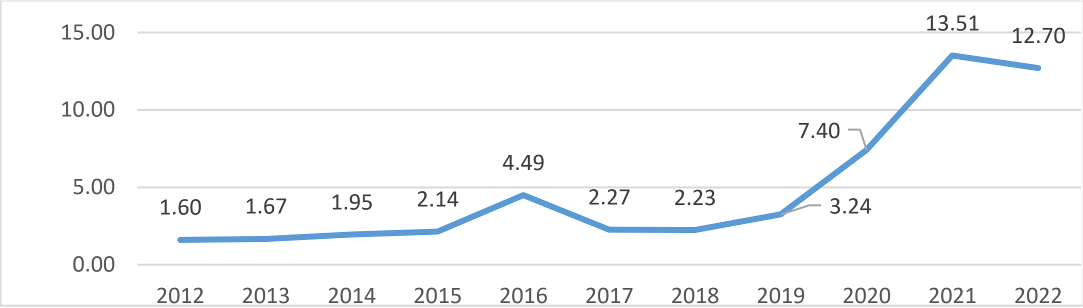
Graph 14. Nestlé's Development of Total Debt in the period of 2012-2022



(own processing, Nestlé financial statements).

Another significant debt indicator is the debt-to-equity ratio, analyzed in Graph 15. Until 2019, the ratio remained relatively stable within the range of 2, with only one notable deviation to 4.5 in 2016. However, since 2020, it has experienced substantial growth. This upward trend poses potential threats to the company, including increased financial risk, potential liquidity challenges, and shareholder concerns. While Nestlé took certain mitigation steps for retained earnings in 2022, the ratio remained high, indicating the need for further attention and strategic adjustments.

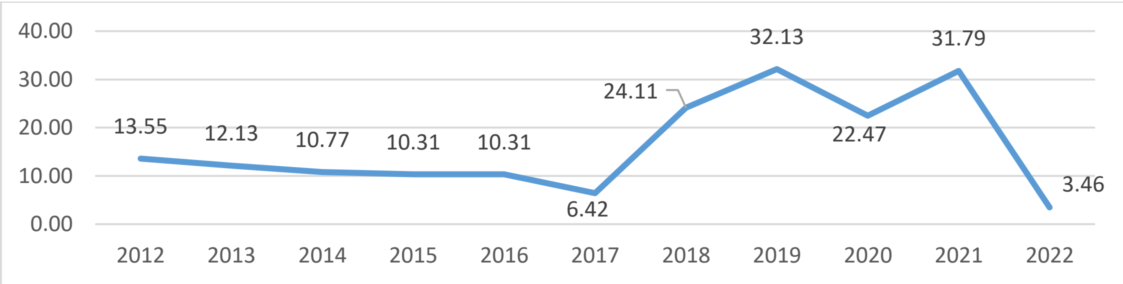
Graph 15. Nestlé's Development of Debt-to-Equity Ratio in the period of 2012-2022



(own processing, Nestlé financial statements).

The final debt indicator for this analysis is the interest coverage ratio, which exhibited significant variation, particularly between 2017 and 2022. This volatility stemmed from fluctuations in earnings before interest and taxes (EBIT), with a notable two-fold increase in revenue in 2017. However, this growth was disrupted by a decrease in 2020, attributed to higher operating expenses, followed by a subsequent recovery period.

Graph 16. Nestlé's Development of Interest Coverage Ratio in the period of 2012-2022



(own processing, Nestlé financial statements).

To sum up, ratio analysis has revealed a few of Nestlé's strengths and opportunities indicating company's overall long-term strong financial strategy, need to revisit working capital management and certain liquidity concerns in the last few years, namely since 2019.

4.1.3 Analysis of cumulative indicators

Commencing with bankruptcy indicators, the Z-Altman score was applied to Nestlé's financial statements to evaluate the company's financial health and identify any potential threats or likelihood of bankruptcy in the short term. As Nestlé is a publicly traded company, the Z-score formula for listed companies was utilized. Table 10 presents the results for the period 2012-2022.

Table 10. An Altman Z-score evaluation of Nestlé for the period 2012-2022

Altman Z-score	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NWC / Assets	0.36	0.46	0.42	0.49	0.69	0.59	0.61	0.66	0.74	0.79	0.84
Retained earnings / Assets	0.53	0.52	0.47	0.44	0.25	0.42	0.43	0.33	0.16	0.09	0.10
EBIT/Assets	0.93	0.79	0.76	0.81	0.42	1.05	1.21	1.21	0.81	0.66	0.57
MV of Equity /BV of Liabilities	6.08	8.44	6.86	5.62	2.78	7.26	6.30	4.73	3.30	2.56	0.00
Sales / Assets	0.56	0.52	0.58	0.56	0.44	0.69	0.70	0.66	0.48	0.42	0.38
Z-altman score	**8.46**	**10.7**	**9.10**	**7.93**	**4.58**	**10.0**	**9.26**	**7.60**	**5.50**	**4.53**	**1.88**
Evaluation	**Low risk**										Moderate risk

(own processing, Nestlé financial statements).

According to the model, Nestlé ranks among strong, financially stable entities. From 2012 to 2021, the company consistently remained in the low-risk area, demonstrating its ability to meet financial obligations. However, the 2022 result shows Nestlé entering a moderate-risk area, indicating a potential risk of bankruptcy due to a drastic decrease in the leverage ratio.

As depicted in the table, the leverage ratio (Market value of equity to book value of liabilities) predominated over other financial indicators, except in 2022. This suggests high investor trust in the company's future, although the decline in 2022 was predictable based on the results of the debt ratio analysis. The asset turnover ratio was the second most significant factor, except for the last two years (2021-2022). During this period, the liquidity ratio (NWC/Assets) increased, while retained earnings to assets and sales to assets deteriorated.

With these dynamics across all four financial indicators, it can be concluded that Nestlé Nigeria Plc. faced significant risks to its financial stability, driven by rising levels of leverage, profitability, solvency, and activity metrics. This heightened the likelihood of potential bankruptcy in the foreseeable future.

Conducting the Kralicek quick test evaluation aimed to assess the company's financial stability and profitability metrics by assigning financial evaluation criteria. Table 11 presents the results of the test, indicating overall stability and financial reliability of Nestlé.

Table 11. Kralicek Quick Test: Nestlé in the period of 2012-2022

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
R1 Equity/Total Assets	38%	38%	34%	32%	18%	31%	31%	24%	12%	7%	7%
Grading	Excellent				Well	Excellent			Very well	Well	
R2 Debt Settlement Period From Cash flow	42	49	57	59	48	47	58	85	50	45	67
Grading	Excellent										
Financial Stability	*10*	*10*	*10*	*10*	*8*	*10*	*10*	*9*	*10*	*10*	*10*
R3 Op cash flow/Sales	26%	25%	25%	27%	24%	26%	27%	29%	26%	24%	24%
Grading	Excellent										
R4 EBIT / Total Assets	28%	24%	23%	25%	13%	32%	37%	37%	25%	20%	17%
Grading	Excellent				Very well	Excellent					
Profit Situation	*10*	*10*	*10*	*10*	*9*	*10*	*10*	*10*	*10*	*10*	*10*
Total Grading	5	5	5	5	4.25	5	5	4.75	5	5	5

(own processing, Nestlé financial statements).

Through the calculation of the arithmetic means of all financial indicators, a result of 4.9 was obtained. As indicated earlier, a result higher than 3 points indicates financial stability and a strong position for the company. Looking at the individual indicators, despite recent fluctuations in the equity ratio, overall results were consistent year over year. However, a performance decline has been observed since 2021, especially in 2022. Nevertheless, Nestlé was still far from potential bankruptcy.

A drawback of the extreme value of the equity ratio was a decline in the ROCE, which is a crucial financial indicator for shareholders and investors. This suggests that Nestlé used its capital employed to a large extent, revealing a non-efficient utilization of the company's assets to generate profits.

Regarding the debt settlement ratio, it was quite sufficient at the beginning, but in the last 5 years, it deviated significantly, creating pressure on the company to settle its financial obligations. However, the overall debt settlement period remained at an excellent level.

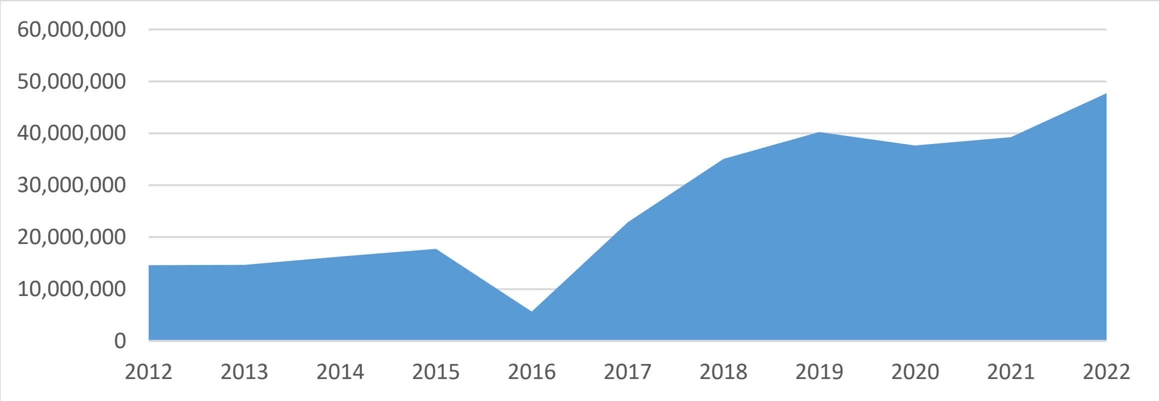
Looking at the return on sales derived from cash flows, Nestlé operated productively in creating profit from sales of food and beverage products, reaching a high and stable level of the ratio. Despite all economic crises and the challenging business environment in Nigeria, the company maintained its stability.

The last ratio evaluating the profitability metrics of Nestlé was ROA. Over the years, ROA varied with a higher decline in 2016, resulting in a lower score. However, the company recovered from it and operated within an excellent score afterward, generating additional profit.

4.1.4 EVA

The application of the Economic Value Added (EVA) concept allows for an evaluation of the economic value generated solely from Nestlé's invested capital. Graph 17 illustrates the economic stability and efficiency during the period from 2012 to 2022. Nestlé consistently exceeded the opportunity cost of the funds by generating profits used to finance its operations. This positive EVA suggests that the company is creating value for its shareholders and operating efficiently. This finding is also strongly supported by the high ROE results.

Graph 17. Nestlé's EVA Development in the period of 2012-2022



(own processing, Nestlé financial statements).

In the period 2012-2015, the economic value remained relatively stable due to similar EBIT, a slight decrease in WACC (on average 6.3%), and unchanged CIT (30%). However, in 2016, the EVA dropped dramatically compared to 2015, attributed to a decline in the Cost of Equity by 67% and a decrease in WACC to 1.4%, reflecting the overall downturn in the company's performance amid unstable economic conditions in the country. From 2017 to 2019, the economic value improved, driven by a more significant growth rate of equity cost compared to the increase in WACC. However, in 2020, the economic value decreased significantly due to the impact of the pandemic, leading to a considerable drop in the cost of equity (15%) and the cost of debt. Table 12 illustrates the development of WACC, which serves to identify the minimum rate of profit shareholders expect to receive on their invested capital. The WACC remained stable from 2012 to 2015, indicating the overall financial stability of the company and positive changes in the costs of equity and debt. However, from 2020 to 2022, WACC significantly decreased, averaging at 0.4%, reflecting the company's declining costs of debt and equity. This trend, observed in the analysis of activity ratios and ROCE, is consistent with the findings. Nevertheless, the declining WACC did not significantly impact the development of EVA, given the consistently high ROE rates experienced by the company.

Table 12. Development of the WACC components of Nestlé in the period of 2012-2022

Indicator in %	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Cost of equity	28.04	5.07	0.12	7.09	**-66.81**	326.04	28.05	6.08	**-14.87**	2.12	22.10
Cost of debt	26.6	26.6	23.8	22.4	12.6	21.7	21.7	16.8	**8.4**	**4.9**	**4.9**
CIT	30	30	30	30	30	30	30	30	30	30	30
WACC	7.3	7.0	5.6	5.0	**1.4**	7.4	4.9	2.8	0.6	0.2	0.3

(own processing, Nestlé financial statements).

To summarize, the main factors contributing to the sharp decline in EVA in 2016 were the decreasing value of NOPAT and ineffective operating activities amid an economically unstable environment. However, overall, the trend in EVA remains positive, largely driven by the consistently high ROE generated by the company.

4.2 Cadbury: financial analysis

Cadbury Nigeria Plc operates in the food and beverage industry (manufacturing and distribution of consumer goods) within Nigeria, as well as for export purposes. It traces roots back to the 1950s when the company was established to source cocoa beans from Nigeria. This initiative laid the groundwork for the company's founders to introduce Cadbury-branded products to the local consumer market. Fast forward to 2021, Cadbury has broadened their operations to a cocoa and butter processing plant in Ondo State, as well as a manufacturing facility in Ikeja, Lagos state (Mondelēz International, Inc., n.d.)

The company's operations are divided into four main segments:

- Refreshment Beverages, featuring Cadbury Bournvita and 3-in-1 Hot Chocolate.
- Confectionery Products, including TomTom, Candy Caramel, Candy Coffee, Buttermint, and Clorets gum.
- Biscuit Category, represented by Bournvita Biscuit.
- Intermediate Cocoa Category, highlighting Cocoa Butter (FT.com, n.d.)

4.2.1 Analysis of absolute indicators

Similar to Nestlé, horizontal analysis is conducted for two types of account items in the financial position: total assets and total equity and liabilities for the years 2012 to 2022, both in absolute and relative terms.

Table 13. Cadbury's horizontal analysis of the main asset account items (in absolute terms)

In thousand of naira	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/2022
Non-current assets	**2949003**	**-466166**	**-802969**	**-1087145**	**-402117**	**-53838**	**-501025**	**-801073**	**225890**	**1064066**
Property, plant and equipment	2991941	-796544	-767259	-1178218	-305313	39030	-437768	-724003	258924	1052686
Intangible assets	-42938	330378	-58858	114220	-96803	-92868	-63257	-92192	-39243	-6262
Right of use assets	0	0	0	0	0	0	0	15122	6209	17642
Current assets	**67113**	**-13895172**	**408688**	**1079140**	**416239**	**-211244**	**1144923**	**5209819**	**10251717**	**14961327**
Inventories	-163201	512272	-456471	3084483	1231429	-387262	197526	-818585	2856684	3812436
Trade and other receivables	123203	-296693	-927121	-197491	-78047	-1120487	759499	-673895	197566	1110807
Prepayments	-399916	-46699	69168	589051	-323513	-196015	-151117	15811	489043	414437
Cash and cash equivalent	507027	-14064052	-2396903	-2396903	-413292	1492182	339015	6686488	6708424	9623647
Total Assets	**3016116**	**-14361338**	**-394281**	**-8005**	**14122**	**-895082**	**1273898**	**4408746**	**10477607**	**16025393**

(own processing, Cadbury financial positions).

Table 14. Cadbury's horizontal analysis of the main asset account items (in relative terms)

	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Non-current assets	**17.4%**	-2.8%	-5.1%	-7.5%	-2.8%	-0.4%	-3.7%	-6.2%	**1.7%**	7.5%
Property, plant and equipment	**18%**	-5%	-5%	-8%	-2%	0%	-3%	-6%	2%	7%
Intangible assets	**-367%**	**97%**	-21%	29%	-32%	-45%	-44%	**-176%**	**-300%**	**-92%**
Right of use assets								**100%**	29%	45%
Current assets	0.3%	**-112.6%**	3.2%	7.8%	2.9%	-1.5%	7.5%	25.6%	**33.5%**	**32.8%**
Inventories	-9%	21%	-24%	**61%**	20%	-7%	3%	-16%	**35%**	32%
Trade and other receivables	2%	-5%	-18%	-4%	-2%	**-30%**	**17%**	-17%	5%	22%
Prepayments	**-189%**	-28%	30%	**72%**	-65%	-65%	-99%	9%	**74%**	39%
Cash and cash equivalent	3%	**-382%**	32%	**-80%**	-16%	36%	8%	**60%**	38%	35%
Total Assets	7%	**-50%**	-1%	0%	0%	-3%	4%	13%	**24%**	**27%**

(own processing, Cadbury financial positions).

Table 13 and 14 summarize the results of the horizontal analysis of the main asset account items in absolute and relative terms. The following trends have been observed in Cadbury's financial performance: Non-current assets showed a consistent increase in 2013 (17.4%), followed by slight declines in subsequent years, with an increase in 2021 (1.7%).

These changes were attributed to alterations in the company's long-term investments and asset management practices, as follows:

- Property, plant, and equipment experienced a steady increase in 2013 (18%), followed by consistent declines in the following years. This trend indicated the depreciation of existing assets and the absence of expansion in business operations.
- Intangible assets fluctuated significantly, with a drastic decrease in 2013 (-367%), followed by fluctuations in subsequent years, including a notable increase in 2014 (97%). Such drastic changes resulted from the write-offs that Cadbury conducted in 2013 due to the extremely challenging economic situation in Nigeria. It is also worth noting the declining numbers since 2020, which are closely connected to the proper utilization of assets.
- The introduction of right of use assets in 2020 indicated a change in lease agreements, as well as an overall restructuring of intangible assets pursued by the company.

Looking at the current assets, they fluctuated widely, with a sharp decrease of 112.6% in 2014, followed by increases and declines in subsequent years, including an upward spike in 2021 (33.5%) followed by similar growth in 2022 (32.8%). These deviations reflected changes in the company's short-term resource management and operational activities, outlined below:

- Inventories fluctuated, with notable increases of 61% in 2016, followed by declines and a major increase in 2021 and 2022 (35% and 32%). The root cause of these fluctuations was production ramp-ups and inventory build-ups designed to meet anticipated demand.
- Trade and other receivables showed fluctuations, mostly declines, with a major peak in 2018 (30%), followed by a substantial increase (17%). Changes in trade and other receivables resulted from shifts in sales volumes and credit policies pursued by the company.
- Prepayments experienced constant high fluctuations, including a drastic decrease of 189% in 2013 and a notable increase in 2021 (74%). Wide fluctuations in prepayments stemmed from alterations in contractual obligations implemented by Cadbury in respective years.
- Cash and cash equivalents experienced a sharp decrease in 2014 of 382%, dictated by increased liquidity needs due to the economic crisis. Cadbury also

experienced a major increase in 2020 (60%) due to investment activities, followed by stable performance in 2021-2022.

All the fluctuations described above illustrate changes in Cadbury's overall asset composition and value over time, reflecting evolving asset management strategies, operational performance, and responses to changing market conditions or regulatory requirements. Notably, periods of decrease were correlated with strategic adjustments in asset allocation and additional investments to align with business goals.

Table 15. Cadbury's horizontal analysis of the main equity and liabilities account items (in absolute terms)

In thousand of naira	2012 / 2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Total Equity	**3955575**	**-11245480**	**-464154**	**-1228564**	**686058**	**933355**	**890089**	**-16712**	**86831**	**-333726**
Share capital	593	-626086	0	0	200	-200	0	0	0	0
Share premium	25880	-11271477	0	0	0	-10	0	0	0	10
Other reserve	373	0	0	0	0	0	0	0	0	0
share based payment reserve	21317	7291	-12226	12368	7064	13229	26966	27466	35861	23676
Retained earnings/accumulated loss	3899795	644792	-451928	-1240932	678994	920126	863123	-44178	50970	-357402
Non-controlling interest	7617	0	0	0	0	0	0	0	0	0
Non-current liabilities	**1579184**	**-1031182**	**720344**	**35865**	**-365194**	**615745**	**567820**	**-147843**	**2840763**	**1295425**
Employee benefits	1216725	-1078601	895917	196451	-467510	171387	411527	517794	-4293412	-91133
Deffered tax liabilities (taxation)	362459	47419	-175573	-160586	102316	444358	150488	-666699	540069	334447
Lease liabilities	0	0	0	0	0	0	5805	1062	-1977	7604
Borrowings	0	0	0	0	0	0	0	0	6596083	1044507
Total Current liabilities	**-2518643**	**-2084676**	**-650471**	**1184694**	**-306742**	**-2444182**	**-184011**	**4573301**	**7550013**	**15063694**
Bank overdraft	-1500000	0	0	151365	1750682	-1902047	0	0	0	0
Current tax liabilities	182496	-286082	-12137	-445074	-32704	-1095	214967	-170422	-2642	272710
Trade and other payables	-1201139	-1798594	-638334	1478403	-3722433	1156673	-399536	1292563	7119996	2454884
Lease liabilities	0	0	0	0	0	0	558	437	-887	498
Borrowings	0	0	0	0	1697713	-1697713	0	3450723	433546	12335601
Total liabilities	**-939459**	**-3115858**	**69873**	**1220559**	**-671936**	**-1828437**	**383809**	**4425458**	**10390776**	**16359119**
Total Equity and Liabilities	**3016116**	**-14361338**	**-394281**	**-8005**	**14122**	**-895082**	**1273898**	**4408746**	**10477607**	**16025393**

(own processing, Cadbury financial positions).

Table 16. Cadbury's horizontal analysis of the main equity and liabilities account items (in relative terms)

	2012 / 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
Total Equity	16%	**-88%**	-4%	-11%	6%	7%	7%	0%	1%	-3%

Share capital	0%	**-67%**	0%	0%	0%	0%	0%	0%	0%	0%
Share premium	0%	**-4139%**	0%	0%	0%	0%	0%	0%	0%	0%
Other reserve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Share based payment reserve	61%	17%	-40%	29%	14%	21%	30%	23%	23%	13%
Retained earnings/accumulated loss	53%	8%	-6%	-19%	10%	12%	10%	-1%	1%	-4%
Non-current liabilities	33%	**-27%**	16%	1%	-9%	13%	11%	-3%	35%	**14%**
Employee benefits	28%	**-33%**	22%	5%	-12%	4%	9%	10%	**-643%**	-16%
Deferred tax liabilities (taxation)	76%	9%	-50%	-86%	35%	61%	17%	**-306%**	71%	31%
Lease liabilities							100%	15%	-40%	**61%**
Borrowings									**100%**	14%
Total Current liabilities	-18%	-17%	-6%	9%	-2%	-24%	-2%	32%	34%	**41%**
Bank overdraft				**100%**	**92%**					
Current tax liabilities	22%	-51%	-2%	**-436%**	-47%	-2%	76%	-151%	-2%	71%
Trade and other payables	-9%	-15%	-6%	12%	-42%	12%	-4%	12%	39%	12%
Lease liabilities							100%	44%	**-821%**	**82%**
Borrowings					100%			100%	11%	76%
Total liabilities	**-5%**	**-19%**	**0%**	**7%**	**-4%**	**-12%**	**3%**	**23%**	**35%**	**35%**
Total Equity and Liabilities	**7%**	**-50%**	**-1%**	**0%**	**0%**	**-3%**	**4%**	**13%**	**24%**	**27%**

(own processing, Cadbury financial positions).

Looking at the results in Tables 15 and 16, several overall trends were identified, including changes in the company's capital structure, financial performance, and compliance with accounting standards over the years. Sharp deviations in certain categories result from economic downturns in Nigeria, followed by strategic decisions aimed at optimizing the company's financial position and addressing those challenges.

Starting with total equity, the sharp decrease of 88% during 2014, attributed to changes in share capital and share premium, was an outcome of capital restructuring due to the crisis in the country. It aimed to countermeasure significant losses that all companies had experienced. Additionally, constant fluctuations in share-based payment reserves were a result of changes in employee compensation and benefit plans. Similarly, deviations in retained earnings/accumulated losses throughout the entire analyzed period between 2012 and 2022 helped observe the company's overall profitability and dividend distributions.

Regarding liabilities, the evidence shows that Cadbury often adjusted the company's long-term and short-term financial obligations, debt management practices, and liquidity position. The following conclusions can be drawn:

- Significant decreases in employee benefits in 2013 by 33% and 643% in 2021, as well as in deferred tax liabilities by 306%, were based on the respective tax assessments and changes in the accounting treatment. These changes significantly impacted overall non-current liabilities results.

- Introduction of lease liabilities in 2019 indicated an adoption of new lease accounting standards.
- The recent inclusion of borrowings under non-current liabilities in 2022 was a result of debt issuances.
- Changes in bank overdrafts and borrowings under current liabilities in 2016 and 2017 indicated shifts in working capital management.
- Wide variations in current tax liabilities were a result of constant accrual adjustments done by Cadbury through the restructuring of its business operations, as well as the timing of income recognition.
- Ongoing fluctuations in trade and other payables stemmed from changes in supplier terms and adjustments of operating expenses.

Afterwards, vertical analysis was conducted based on the company's financial position to identify the composition of the company's capital and its funding resources. Table 17 illustrates the development of Cadbury's asset structure between 2012 and 2022.

Table 17. Cadbury's vertical analysis of the main asset account items

In thousand of naira	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total non-current assets	34.8%	39.2%	**57.2%**	55.2%	51.3%	49.9%	50.2%	47.3%	**38.6%**	29.9%	23.7%
LT Receivables	34.7%	39.2%	**56.0%**	54.1%	49.9%	48.8%	49.4%	46.8%	38.4%	29.8%	**23.6%**
Intangible assets	0.1%	0.0%	**1.2%**	1.05%	**1.4%**	1.1%	0.75%	0.5%	0.2%	**0.05%**	0.0%
Property, plant equipment	0.0%	0.0%	0.0%	0.05%	0.0%	0.0%	0.05%	0.0%	0.0%	0.05%	0.1%
Total current assets	65.2%	60.8%	**42.8%**	44.8%	48.7%	50.1%	49.8%	**52.7%**	61.4%	**70.1%**	76.3%
Inventories	5.1%	4.4%	8.3%	6.8%	17.7%	**22.0%**	**20.8%**	**21.0%**	15.8%	18.5%	20.0%
Trade and other receivables	15.6%	14.8%	**21.1%**	18.2%	17.5%	17.2%	13.4%	15.7%	**11.6%**	9.3%	8.5%
Prepayments	1.5%	0.5%	0.6%	0.8%	**2.9%**	1.8%	1.1%	0.5%	0.5%	1.5%	1.8%
Cash and cash equivalent	42.9%	41.1%	**12.8%**	19.0%	10.6%	**9.1%**	14.5%	15.4%	**33.5%**	40.8%	**46.0%**
Total Assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(own processing, Cadbury financial positions).

During the period from 2014 to 2019, the portion of non-current assets consistently prevailed in the total structure, ranging between 47% to 57% of total assets. Similar to Nestlé, it can be concluded that Cadbury structured its assets in the most favorable manner for shareholders. Over the period of 2014 to 2019, the company held, on average, 51% of non-current assets in long-term receivables. However, their portion significantly reduced in 2022, dropping to 23.6%. Intangible assets experienced spikes in 2014 and 2016 due to the introduction of new products and respective trademarks. Property and plant equipment formed nearly the same portion throughout the years, accounting for less than 0.5% of the total value of non-current assets.

Regarding current assets, their portion declined from 2014 to 2018, averaging 56.5%, followed by ongoing increases. The most significant part was comprised of Cash and its equivalents, accounting for an average of 26%. The second biggest portion was represented by Trade and other receivables, making up 14.8% of the total value on average. As depicted in the analysis, both account items fluctuated over the years, reflecting changes simultaneously. With the decrease in Trade and other receivables, Cash and cash equivalents increased. The smallest portion of short-term assets was accounted for Prepayments, averaging 1.2%, with a major spike in 2016 to 2.9%. Another item present in total current assets is inventories, which experienced major growth from 2016 to 2019, reaching above 20%.

Table 18 represents the vertical analysis of equity and liabilities items from 2012 to 2021. Overall, total equity averaged 42%, with a major decline in 2021-22 to 31% and 22%, respectively, and a spike in 2013 to 56% due to an increase in retained earnings/accumulated loss. Non-current liabilities remained almost unchanged, representing an average of 15% of the total value. Total current liabilities represented an average of 43%, steadily increasing since 2020, with the highest drop in 2013 to 33%. Altogether, total liabilities accounted for an average of 58%, fluctuating year over year, with the largest proportions from 2014 onwards.

Table 18. Cadbury's vertical analysis of the main equity and liabilities items

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Equity	50%	**56%**	44%	43%	39%	41%	46%	47%	41%	**31%**	**22%**
Share capital	4%	4%	3%	3%	3%	3%	3%	3%	3%	2%	2%
Share premium	29%	27%	1%	1%	1%	1%	1%	1%	1%	1%	0%
Other reserve	9%	8%	12%	12%	12%	12%	12%	12%	10%	**8%**	6%
share based payment reserve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Retained earnings/accumulated loss	9%	**17%**	**28%**	27%	22%	25%	29%	**31%**	26%	**20%**	**14%**
Non-controlling interest	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Non-current liabilities	8%	11%	13%	16%	16%	15%	17%	19%	16%	18%	16%
Employee benefits	8%	10%	11%	15%	15%	14%	15%	15%	15%	**2%**	1%
Deferred tax liabilities (taxation)	0%	1%	2%	1%	1%	1%	**3%**	3%	1%	2%	2%
Lease liabilities	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.02%
Borrowings	0%	0%	0%	0%	0%	0%	0%	0%	0%	**15%**	12.80%
Total Current liabilities	42%	**33%**	43%	41%	45%	44%	37%	34%	**44%**	**50%**	**62%**
Bank overdraft	4%	0%	0%	0%	1%	**7%**	0%	0%	0%	0%	0%
Current tax liabilities	2%	2%	2%	2%	**0%**	**0%**	**0%**	1%	**0%**	**0%**	1%

Trade and other payables	37%	**31%**	41%	39%	44%	31%	36%	33%	33%	**41%**	34%
Lease liabilities	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Borrowings	0%	0%	0%	0%	0%	**6%**	0%	0%	**10%**	**9%**	27%
Total liabilities	50%	**44%**	56%	57%	61%	59%	54%	53%	59%	**69%**	78%
Total Equity and Liabilities	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

(own processing, Cadbury financial positions).

In terms of equity structure, the most significant portion was made up of Retained earnings, accounting for an average of 23% of total equity. Its portion significantly increased since 2013, rising from 9% to 17%, before experiencing a decrease since 2020. Share capital remained stable over the years, representing only 3% of total equity. Share premium/share-based payment reserve was relatively stable since 2014, following a significant decrease in 2013 due to a share buy-back, resulting in shares issued decreasing by half.

As for non-current assets, the majority was represented by employee benefits, averaging 11% of the total amount, with a significant decrease in 2021 to 2% due to the company's restructuring. Deferred taxations were the second largest item, with only around a 1% portion. Lease liabilities appeared since 2019, but in extremely low amounts. Borrowings appeared under long-term liabilities for the first time in 2021.

Turning to current liabilities, trade and other payables were the largest item, making up between 31% to 41%. Borrowings emerged in 2016, 2020-2021, contributing to a spike in total current liabilities. Similarly, lease liabilities followed a similar pattern as in non-current liabilities. Current tax liabilities showed little fluctuation, with decreases in 2016-2018, as well as in 2020-2021. The last item in short-term liabilities was represented by bank overdrafts, occurring in 2012, 2016, and peaking in 2017 at 7%.

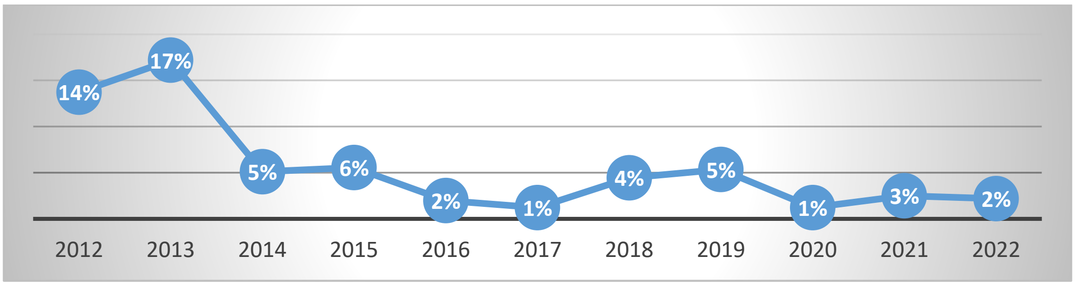
4.2.2 Ratio analysis

The following analysis begins with profitability ratios such as RoA, RoE, RoS, and ROCE during the period from 2012 to 2021. Examining the development of return on assets (RoA) for Cadbury, Graph 18 provides the following results:

- Since 2014, the ratio has been stable, averaging 3%, following a decrease of 12% in 2013.
- The outlined results don't attest to sufficient profit maximization by Cadbury, indicating a need to improve management practices in terms of cost control, revenue generation, and asset management.

- It is evident that despite management's efforts, the company's profitability did not experience growth, placing it in a non-competitive position.

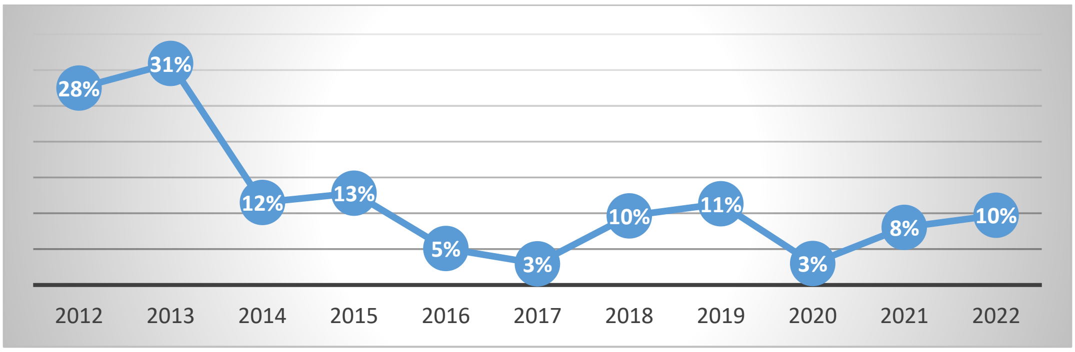
Graph 18. Cadbury's Development of Return on Assets in the period of 2012-2022



(own processing, Cadbury financial statements).

The purpose of Graph 19 is to visualize the development of the Return on Equity ratio. Over the entire period from 2012 to 2022, the company has experienced significant fluctuations and unstable performance in this profitability ratio, ranging from a highest result of 31% to a lowest of 3%. It is evident that Cadbury struggles with improving overall profitability despite various efforts, such as the introduction of right-use assets and lease liabilities/borrowings, as well as year-over-year increasing EBIT. As outlined earlier, the company's competitive position is quite low, affecting its overall ability to adapt to changing market conditions, including the Covid-19 pandemic and the economic downturns in Nigeria in 2014, 2016, and 2017.

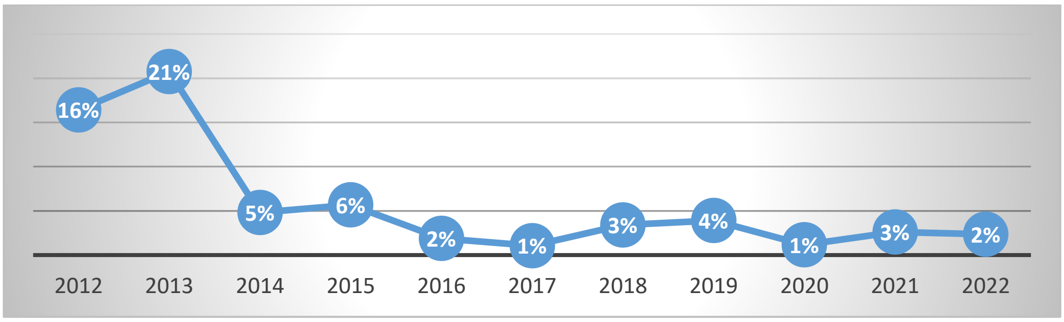
Graph 19. Cadbury's Development of Return on Equity in the period of 2012-2022



(own processing, Cadbury financial statements).

Graph 20 illustrates the development similarities between ROA and Return on Sales, particularly showing consistent performance over the analyzed years, with a sharper decline in 2014 to 5%. The overall low results since 2017, averaging 2%, did not instill confidence in the company's growth or its ability to attract additional investors. This also left Cadbury with potentially lower valuation, especially when combined with the low ROE.

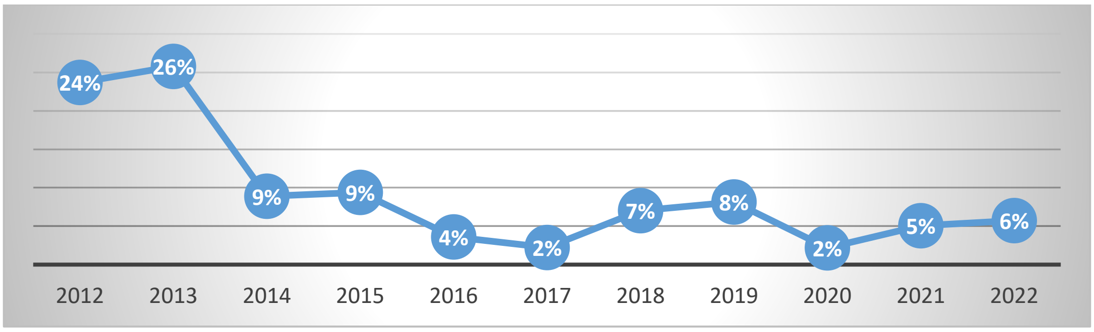
Graph 20. Cadbury's Development of Return on Sales in the period of 2012-2022



(own processing, Cadbury financial statements).

When examining Return on Capital Employed (ROCE) as illustrated in Graph 21, a similar trend to all other profitability indicators is observed. After a significant decline in 2014 to 9%, Cadbury did not overwhelmingly recover, showing some growth in 2018-2019 followed by another major decline to 2% in 2020. Despite more favorable market conditions, Cadbury's ROCE did not benefit from these and continued to demonstrate low value creation. Such a result is also in line with the findings of horizontal analysis, where constant fluctuation was observed. Nevertheless, the recovery starting from 2022 cannot go unnoticed. It is essential for the company to learn how to adapt to market demand and economic downturns.

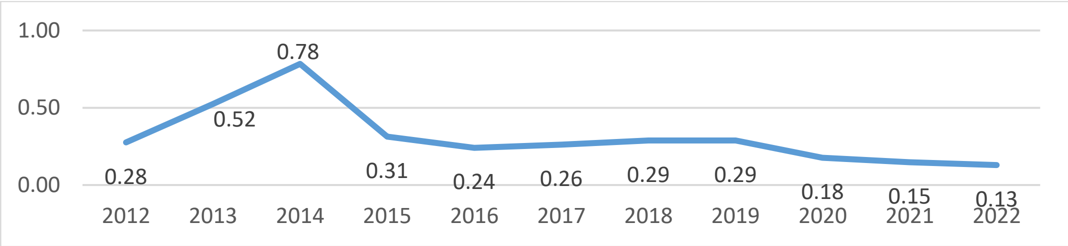
Graph 21. Cadbury's Development of Return on Capital Employed in the period of 2012-2022



(own processing, Cadbury financial statements).

The second part of the ratio analysis concentrates on activity ratios, with corresponding depictions on Graphs 22 to 27. Beginning with the development of total asset turnover in Graph 22, Cadbury maintained a stable rate from 2015 to 2019 inclusive. This stability was attributed to a constant decrease in non-current assets, particularly in the management of its property, plants, and equipment. Similar to Nestlé, recent declines since 2020 have had multiple root causes, including the impact of the Covid-19 pandemic, followed by currency depreciation and overall economic crisis. The sharp increase in 2014 to 0.78, followed by a decrease to 0.31, was the outcome of higher cash flow.

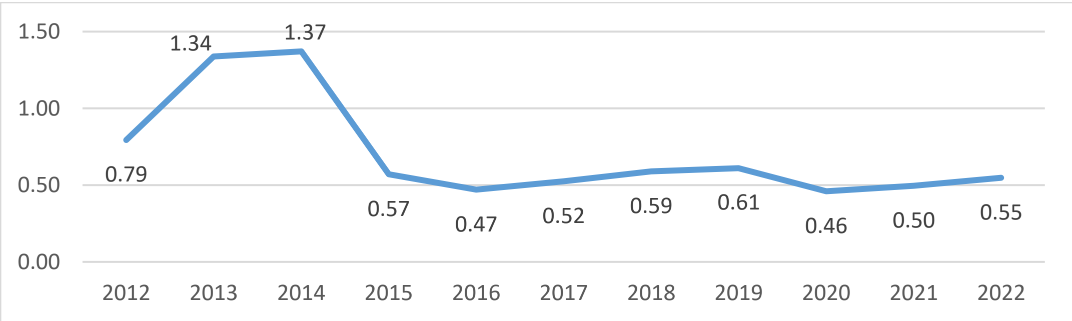
Graph 22. Cadbury's Development of Total Asset Turnover in the period of 2012-2022



(own processing, Cadbury financial statements).

When examining the fixed assets turnover, there was a significant drop in 2015 from which the company was never able to recover. Graph 23 visualizes the overall development. Notably, following this significant drop, Cadbury maintained a similar turnover rate averaging 0.6. This consistent level of efficiency in generating sales revenue from its investment in fixed assets indicated stable operational performance. However, it also signals that the company did not make significant improvements or investments in its fixed assets, which are critical for future growth and competitiveness.

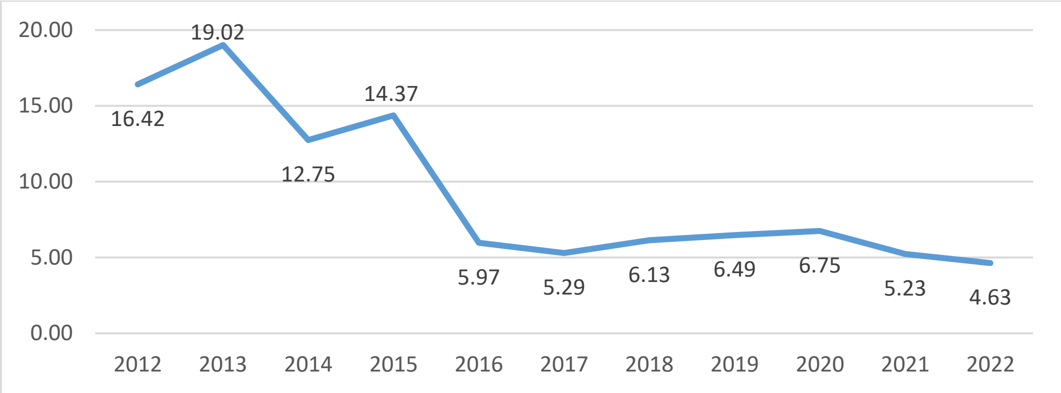
Graph 23. Cadbury's Development of Fixed Asset Turnover in the period of 2012-2022



(own processing, Cadbury financial statements).

The next analyzed indicator is the inventory turnover ratio. Graph 24 illustrates a major decrease in 2016 (down by 2.5 times). This result aligns with the overall financial performance and signals potential overstocking and inefficient inventory practices. It is also worth mentioning that a similar pattern was observed for Nestlé at a later point in time. Therefore, it is safe to assume that customer demands decreased over time, leading to quite similar results.

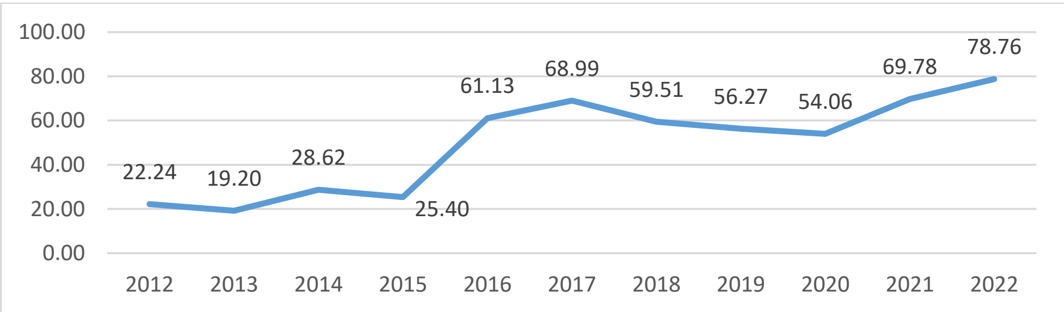
Graph 24. Cadbury's Development of Inventory Turnover Ratio in the period of 2012-2022



(own processing, Cadbury financial statements).

Graph 25 focuses on the development of the average inventory period. Over the past 11 years, it has significantly increased from 22 days to 78 days. The earlier identified decreasing turnover ratio and increasing average inventory period are clear signs of no revision in inventory management practices. In 2016, with a double increase in inventories, notably contributed to a new average inventory period of 61 days. In 2021, on the contrary, the increase was connected to a significant drop in trade and other receivables.

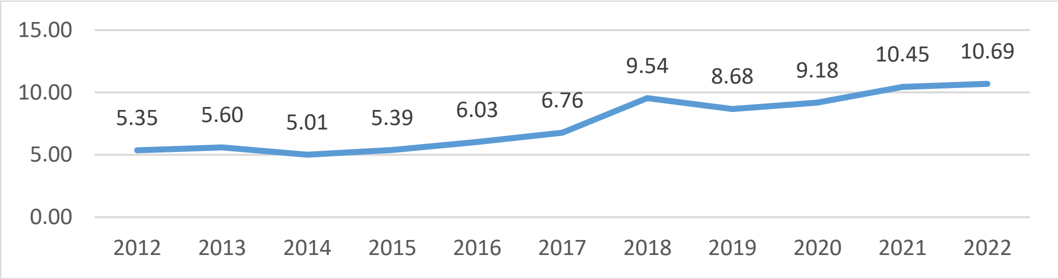
Graph 25. Cadbury's Development of Average Inventory Period in the period of 2012-2022



(own processing, Cadbury financial statements).

Followed by the assessment of receivables turnover, depicted in Graph 26, it is critical to outline a trend of stability for the periods of 2012 to 2017, as well as 2018 to 2022. The jump in 2018 can be explained by a 2x higher profit (EBIT), which maintained a similar volume in the following years.

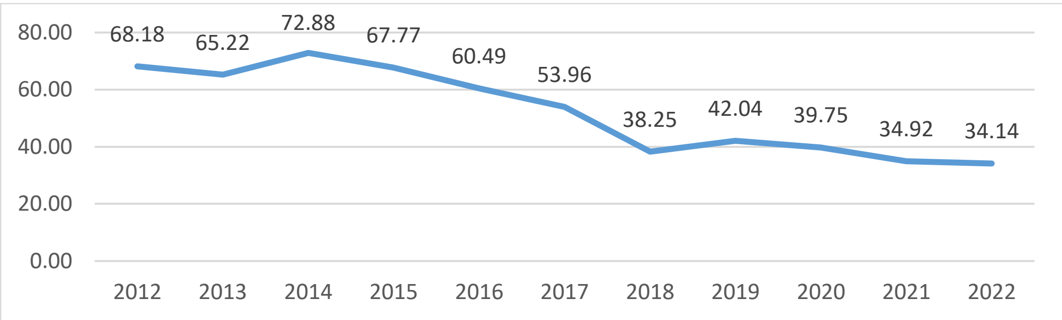
Graph 26. Cadbury's Development of Receivables Turnover in the period of 2012-2022



(own processing, Cadbury financial statements).

Lastly, Graph 27 illustrates Cadbury's average collection period between the years 2012 and 2022. Similar to receivables turnover, a pattern of a stable rate is derived: from 2012 to 2017, there was an average of 60 days, followed by an enormous decrease to an average of 35 days since 2018. Notably, Cadbury had effective credit policies and collection procedures in place, resulting in an overall improvement in cash flow. Another important dimension connected to customers' payment terms, where they are less likely to default on their payments, reducing the risk of bad debts for the company. This result potentially served as a key point of attractiveness for Cadbury in terms of operational efficiency and financial stability.

Graph 27. Cadbury's Development of Average collection period in the period of 2012-2022

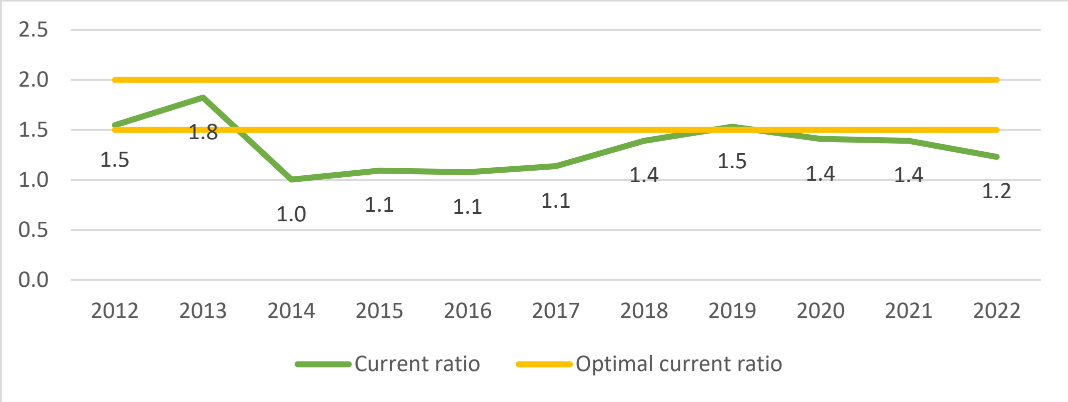


(own processing, Cadbury financial statements).

The following part of the analysis focused on liquidity ratios. Throughout the entire period, Cadbury experienced significant fluctuations in all three indicators: Current, Quick, and Cash ratios, with upward and downward trends.

As displayed in Graph 28, the company's Current ratio underwent waves of fluctuations, with a drop in 2014 and a noticeable recovery in 2019 back to an optimal ratio level. The reasons for such fluctuations lay in deviations in cash and its equivalents, with corresponding upward or downward trends in current assets.

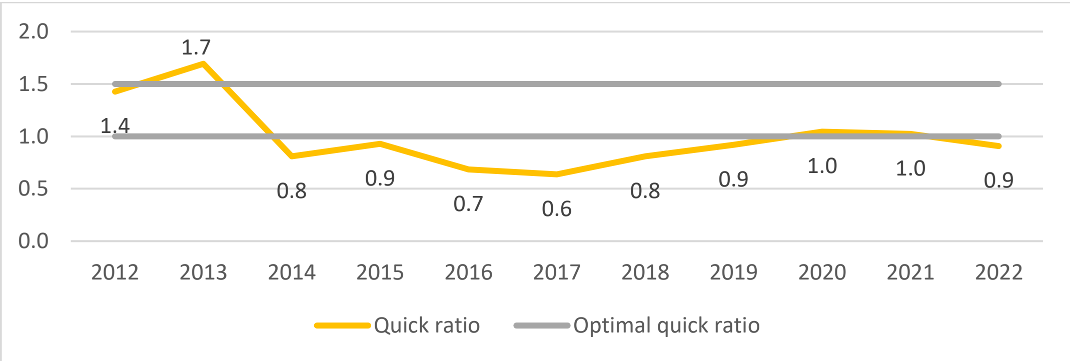
Graph 28. Cadbury's Development of Current Ratio in the period of 2012-2022



(own processing, Cadbury financial statements).

Quite comparable trends were recognized for the Quick ratio, as illustrated in Graph 29. The company experienced a significant decrease in 2014 and was able to recover in 2021 back to an optimal level. The primary reason for the lagging trend was high inventory levels and a slow average collection period that prevented the business from tying up its cash flow. With changes in these factors, an optimal ratio was again achieved. In 2022, there was again observed a slight decline caused by an increase in inventories.

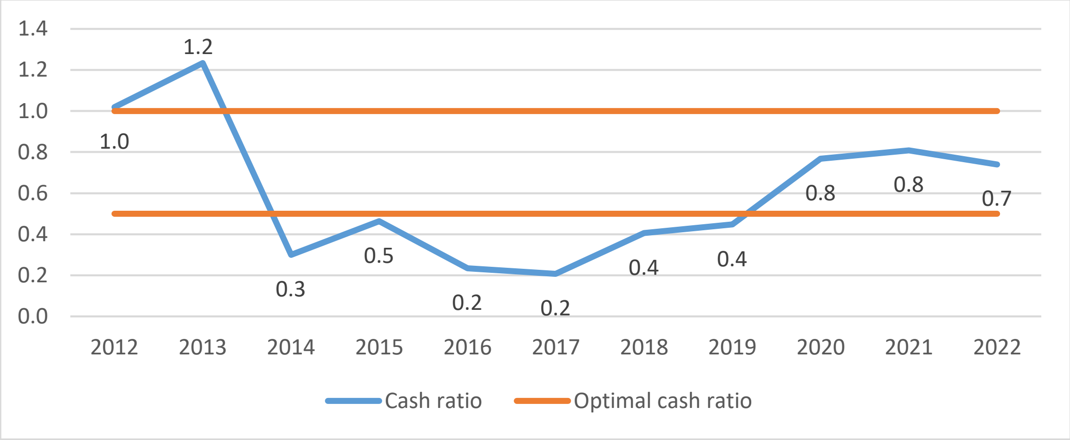
Graph 29. Cadbury's Development of Quick Ratio in the period of 2012-2022



(own processing, Cadbury financial statements).

Finally, Graph 30 visualizes the development of the Cash ratio with its constant fluctuations throughout the entire analyzed period from 2012 to 2022. The two lowest points were reached in 2014 (0.3) and 2016-2017 (0.2), followed by a steady recovery period. Since 2020, Cadbury has achieved an optimal ratio, providing slightly more confidence in the company's future performance to investors and capital markets.

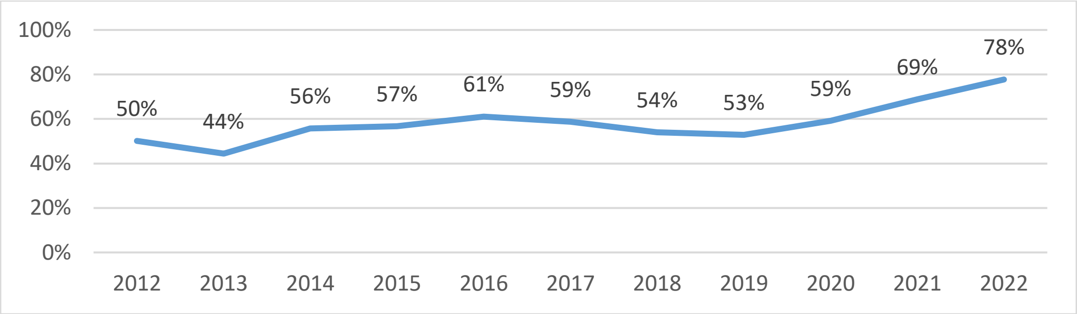
Graph 30. Cadbury's Development of Cash Ratio in the period of 2012-2022



(own processing, Cadbury financial statements).

In the following part of the ratio analysis, computations for debt indicators were conducted. Starting with Graph 31, Cadbury's total debt ratio remained very similar until 2020. These results indicated that the proportion of the company's total assets financed by debt had not changed significantly, showcasing the company's financial stability and creditworthiness. However, starting in 2021, the ratio experienced a high growth rate, creating more dependency on external financing. A key factor contributing to this growth was market conditions and currency depreciation, pushing companies to rely heavily on loans and borrowings.

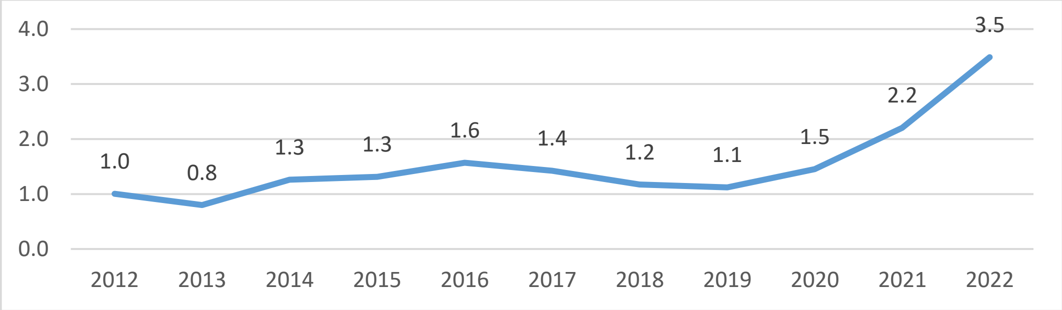
Graph 31. Cadbury's Development of Total Debt in the period of 2012-2022



(own processing, Cadbury financial statements).

The Debt-to-equity ratio serves as an additional important debt indicator. Graph 32 illustrates Cadbury's development trends for this indicator. Similar to Nestlé, until 2019, it showed a stable result within the scale of 1.4 with no deviations. The upward trend started in 2021 and peaked in 2023 (3.5), doubling the ratio from 2020. It is important to focus on this indicator in the comparison part since overall company growth and ROE can be impacted.

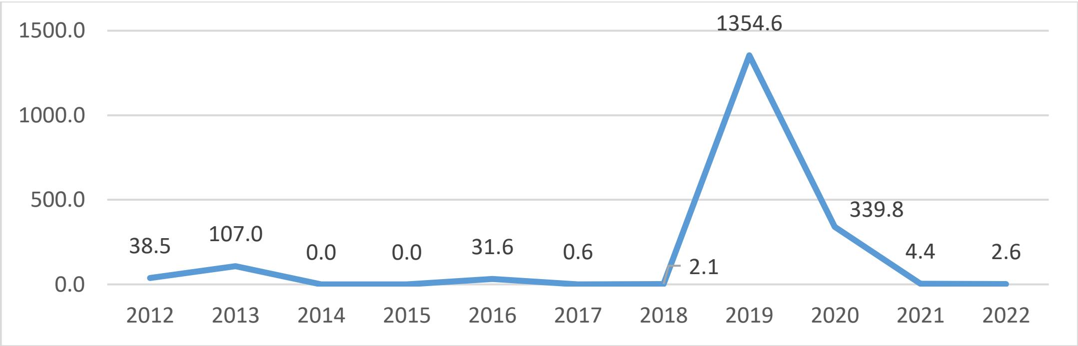
Graph 32. Cadbury's Development of Debt-to-Equity Ratio in the period of 2012-2022



(own processing, Cadbury financial statements).

Lastly, the interest coverage ratio is outlined on Graph 33, which also varied significantly. Cadbury was experiencing liquidity problems, so the company defaulted on its debt obligations, entering financial distress in 2014-2015, where it was not able to make interest payments. In 2019 and 2020, very minor interest rate payments contributed to skyrocketing interest coverage ratio.

Graph 33. Cadbury's Development of Interest Coverage Ratio in the period of 2012-2022



(own processing, Cadbury financial statements).

To sum up, the ratio analysis has revealed Cadbury's overall concerning financial performance and financial strategy, outlining a higher number of opportunities rather than strengths. There are significant liquidity concerns and indicators of the company's financial distress that need to be addressed by management.

4.2.3 Analysis of cumulative indicators

For the analysis of bankruptcy indicators, the Z-Altman score was applied to Cadbury's financial statements to depict any possible threats as well as the probability of going bankrupt in the short run. Similar to Nestlé, Cadbury is a publicly traded company; therefore, the Z-score formula for listed companies was applied. Table 19 illustrates the outcomes for the period 2012-2022. According to the evaluation, the company's financial performance is deteriorating over the years, currently placing it in a high-risk zone. In the early period from 2012 to 2014, the company was in the low-risk area, indicating its ability to meet its financial obligations. Starting from 2015 (post-economic crisis), Cadbury entered a moderate risk zone, and the overall score has fluctuated year over year. The biggest concern, however, arose in 2020 due to a further decline, placing the company in a high bankruptcy risk area.

Table 19. An Altman Z-score evaluation of Cadbury for the period 2012-2022

Altman Z-score	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NWC / Assets	0.8	0.7	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.8	0.9
Retained earnings / Assets	0.1	0.2	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.2
EBIT/Assets	0.5	0.6	0.2	0.2	0.1	0.0	0.1	0.2	0.0	0.1	0.1
MV of Equity / BV of Debts	2.7	5.8	2.9	1.2	0.7	1.1	0.8	0.8	0.5	0.3	0.3
Sales / Assets	0.3	0.5	0.8	0.3	0.2	0.3	0.3	0.3	0.2	0.1	0.1
Z-Altman score	**4.34**	**7.84**	**4.77**	**2.60**	**1.87**	**2.31**	**2.21**	**2.31**	**1.84**	**1.69**	**1.61**
Evaluation	Low Risk			Moderate					High		

(own processing, Cadbury financial statements).

As depicted in the table, the share of the leverage ratio, Market value of equity to book value of liabilities, prevailed over the other financial indicators until 2020. Given the overall company performance, it helped the company to retain investors. The subsequent decline was expected based on the results of the debt ratio analysis. The second most significant portion was formed by the liquidity ratio (NWC/Assets), which did not experience any significant fluctuations over the years. This trend displayed effective management of working capital, steady cash flow management, and a balanced approach to financing operations. Retained earnings to Assets had not experienced any major deviations as well, given the observation that profits were often reinvested into its assets or retained for future use rather than distributed to shareholders as dividends. A downward trend was observed for both turnover ratio (Sales/Assets) and profitability (EBIT/Assets), which led the company to a higher exposure to financial risks and an inability to effectively generate more profit.

To summarize the findings, Cadbury has faced considerable risks to its financial stability due to declining profitability and turnover ratios, predicting an extreme likelihood of bankruptcy in the near future.

Conducting the Kralicek Quick Test evaluation, the overall results aimed to assess the company's financial stability and profitability metrics by applying financial evaluation criteria. Table 20 illustrates the results of the test, indicating Cadbury's high level of stability and financial reliability.

Table 20. Kralicek Quick Test: Cadbury in the period of 2012-2022

<table>
<tr><th></th><th>2012</th><th>2013</th><th>2014</th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>R1
Equity/Total Assets</td><td>50%</td><td>56%</td><td>44%</td><td>43%</td><td>39%</td><td>41%</td><td>46%</td><td>47%</td><td>41%</td><td>31%</td><td>22%</td></tr>
<tr><td>Grading</td><td colspan="10">Excellent</td><td>Very well</td></tr>
<tr><td>R2
Debt Settlement Period From Cash flow</td><td>68</td><td>65</td><td>73</td><td>68</td><td>60</td><td>54</td><td>38</td><td>42</td><td>40</td><td>35</td><td>34</td></tr>
<tr><td>Grading</td><td colspan="11">Excellent</td></tr>
<tr><td>Financial Stability</td><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td><td>9</td></tr>
<tr><td>R3
Op cash flow/Sales</td><td>14%</td><td>17%</td><td>5%</td><td>6%</td><td>2%</td><td>1%</td><td>4%</td><td>5%</td><td>1%</td><td>3%</td><td>3%</td></tr>
<tr><td>Grading</td><td colspan="2">Excellent</td><td colspan="2">Well</td><td colspan="3">Poor</td><td>Well</td><td colspan="3">Poor</td></tr>
<tr><td>R4
EBIT / Total Assets</td><td>19%</td><td>23%</td><td>14%</td><td>15%</td><td>6%</td><td>9%</td><td>11%</td><td>10%</td><td>8%</td><td>1%</td><td>2%</td></tr>
<tr><td>Grading</td><td colspan="2">Excellent</td><td>Very well</td><td>Excellent</td><td>Poor</td><td colspan="4">Well</td><td colspan="2">Poor</td></tr>
<tr><td>Profit Situation</td><td>10</td><td>10</td><td>7</td><td>8</td><td>4</td><td>5</td><td>5</td><td>6</td><td>5</td><td>4</td><td>4</td></tr>
<tr><td>Total Grading</td><td>5</td><td>5</td><td>4.25</td><td>4.5</td><td>3.5</td><td>3.75</td><td>3.75</td><td>4</td><td>3.75</td><td>3.5</td><td>3.25</td></tr>
</table>

(own processing, Cadbury financial statements).

Through the calculation of the arithmetic means of all financial indicators, a result of 4.0 was obtained. According to the methodology, a result higher than 3 points represents financial stability and a strong position for the company.

Looking at the individual indicators, despite recent fluctuations in the equity ratio, overall results were consistent year over year. However, a decline in performance has been observed since 2021, and especially in 2022. Nevertheless, this doesn't position Cadbury as a company with low profitability. A drawback of the stable value of the equity ratio was dictated by the payout of dividends to shareholders without generating sufficient profits to replenish retained earnings.

Regarding the debt settlement period, the year-over-year decline trend indicated the usage of short-term measures to manage the company's debt by delaying payments to suppliers or creditors, which could be unsustainable in the long run. Although the overall debt settlement period remained at an excellent level, potential liquidity issues could serve as a red flag for investors.

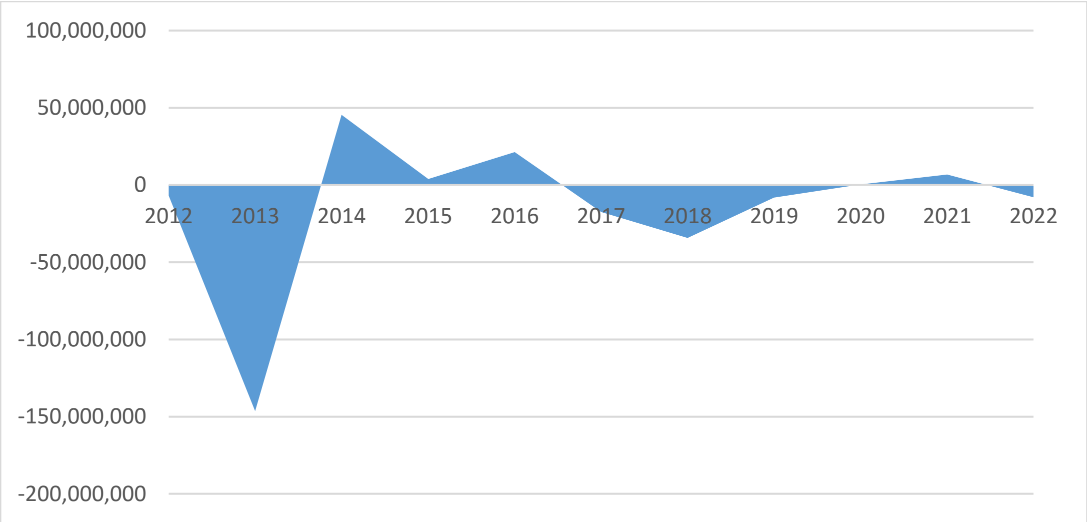
Assessing the return on sales derived from cash flows, the decline in the debt settlement period revealed ongoing cash flow issues. Considering the still high level of sales, this can only be explained by high expenses. Given the economic crises and challenging business environment in Nigeria, Cadbury felt the respective impact significantly.

The last ratio evaluating the profitability metrics of Cadbury was ROA. Over the years, ROA has varied with a higher decline in 2016, resulting in a lower score. Cadbury still has not recovered from this, thus creating additional pressure on overall financial performance.

4.2.4 EVA

The application of the Economic Value Added (EVA) concept was utilized for Cadbury to additionally assess the economic value generated solely from its invested capital. Graph 34 illustrates the overall economic instability and efficiency during the period from 2012 to 2022.

Graph 34. Cadbury's EVA Development in the period of 2012-2022



(own processing, Cadbury financial statements).

Cadbury has consistently generated negative EVA over the analyzed period, with negative results in 2012-2013, 2017-2019, and 2022, indicating that it has not been able to generate sufficient returns to cover the cost of its invested capital. This trend detects certain inefficiencies in operations, as well as an ongoing inability to create value for shareholders.

Looking at significant fluctuations in EVA values from year to year, with some years showing positive EVA and others showing negative EVA, the changes in the company's profitability, as well as its capital structure, become quite visible (i.e., financial distress in 2017-2018, growing total liabilities in 2022, etc.). It is important to note that competitive pressures in the market also did not contribute to positive value creation. While there had been several years of negative EVA, there were also instances of positive EVA in 2021. The positive EVA values were driven by an increase in total current assets, mainly in inventory and cash.

Table 21 illustrates WACC development over the years and helps to draw the following conclusions:

- Considerable volatility from year to year, ranging from negative values (-152%) to triple-digit percentages (353%). This result is impacted by fluctuations in the company's cost of capital, which was mainly influenced by changes in interest rates, debt levels, and overall market conditions.
- In some years, the WACC was negative and reflected earlier indicated issues with overall profitability. Negative WACC values occurred in the years 2014-2016 and 2021 when the company's beta was negative.

Considering that the WACC is a critical metric used in investment appraisal and capital budgeting decisions, its fluctuations affect the attractiveness of investment opportunities, influencing the discount rate applied to future cash flow.

Table 21. Development of the WACC components of Cadbury in the period of 2012-2022

Indicator in %	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Cost of equity	6.00	79.00	-59.89	-16.87	-119.68	52.83	172.37	30.44	-12.01	-51.25	31.61
Cost of debt	35.0	39.2	30.8	30.1	27.3	28.7	32.2	32.9	28.7	21.7	15.4
CIT	30	30	30	30	30	30	30	30	30	30	30
WACC	25.8	353.2	-152.5	-9.8	-74.0	63.0	128.0	31.8	2.1	-14.6	14.2

(own processing, Cadbury financial statements).

To sum up, the main drawbacks that led the EVA to plummet in 2017 were the decreasing value of NOPAT and non-effective operating activities of the company in economically unstable environment. Outlined EVA performance highlights both challenges and opportunities for improvement in its economic value creation efforts.

5 Results and Discussion

5.1 Nestlé vs. Cadbury – holistic comparison of financial performance

Comparing the results of both companies, few overall performance trends was observed for various indicators. Starting with profitability ratios, below conclusion can be drawn:

- Cadbury’s profitability ratios were generally lower compared to Nestlé, which showed relatively stable trends over the years. Those lower profitability ratios and more variability indicated significant challenges in generating profits and utilizing capital effectively.
- Overall, Nestlé appeared to be in a better financial position from profitability ratio analysis and considered as a more attractive investment option.

Regarding liquidity ratios, there are key headlines:

- Cadbury demonstrated better liquidity ratios compared to Nestlé, with current ratios often meeting or exceeding the optimal threshold of 1.5.
- However, both companies experienced periods where all liquidity ratios fall below optimal levels, indicating potential challenges in meeting short-term obligations.

Analyzing debt management ratios, the result favored Nestlé with the following outcomes:

- Nestlé had higher levels of total debt and debt-to-equity ratio compared to Cadbury, suggesting potentially greater financial leverage.
- Both companies exhibited fluctuations in their interest coverage ratios, but Cadbury's ratios showed more extreme variations, indicating greater volatility in its ability to cover interest expenses.
- Nestlé's equity as a percentage of total assets declined more consistently over the years compared to Cadbury, indicating a weakening financial position.
- Overall, Nestlé appeared to have higher levels of financial leverage and more stable interest coverage ratios compared to Cadbury, outlining better financial health and risk management practices.

Looking at activity ratios, Cadbury’s strengths were revealed as follows:

- Nestlé exhibited lower asset turnover ratios and longer inventory holding periods compared to Cadbury, indicating lower efficiency in utilizing assets and managing inventory.
- Cadbury showed improving efficiency in asset turnover and inventory management over the years compared to Nestlé, indicating better operational efficiency and resource utilization.
- Both companies exhibited fluctuations in receivables turnover and average collection periods, resulted in varying efficiency in accounts receivable management over the years.

Followed by the review of Altman Z-scores, the following results can be depicted:

- Both Nestlé and Cadbury exhibited fluctuations in their Altman Z-scores over the years, with decreasing trends indicating a higher risk of bankruptcy.
- Cadbury showed higher volatility in its financial ratios compared to Nestlé, indicating greater uncertainty in its financial stability.
- Nestlé exhibited lower Altman Z-scores compared to Cadbury, indicating a relatively lower risk of bankruptcy but still a moderate risk, compared to Cadbury's moderate to high risk.

Lastly, based on Kralicek Quick test results conclusions below can be made:

- Nestlé exhibited more consistent and higher performance across all Kralicek Quick Test ratios compared to Cadbury.
- Cadbury showed more variability in its performance, especially in the "Op cash flow/Sales" and "EBIT / Total Assets" ratios, indicating potential areas for improvement in operating cash flow management and asset utilization.
- Both companies excelled in terms of debt settlement management, indicating strength in this aspect of financial management.

Those results will help us to test our earlier defined hypotheses. Starting with the first one, which states that companies within the same industry will not have any significant differences in their liquidity positions, such as current ratio and quick ratio. The unpared t-test technique was applied, resulting in the two-tailed P value equaling to 0.0013. By conventional criteria, this difference is very statistically significant. Therefore, it leads us to the conclusion that hypothesis can be disproved.

Second hypothesis stated that a company that displays a significantly higher level of financial stability compared to the other will have a notably higher Altman Z-score.

Leveraging the same technique as above, the two-tailed P value equaled to 0.0005. Again, the result displayed extremely statistically significant difference. This difference proves our hypothesis to be right and applicable between the companies.

Last, third hypothesis formulated that a company would demonstrate superior operational efficiency compared to the other if a higher Kralicek Quick Test score is achieved. Applying the unpared t-test, the two-tailed P value was 0.0002, again reconfirming the initial assumption.

Based on the insights and tested hypotheses above, Nestlé appears to be the better investment option compared to Cadbury for several reasons:

- Higher profitability and stability suggested the ability to generate profits, utilize capital leading to stronger financial performance and management practices as an outcome.
- Although Cadbury demonstrated better liquidity ratios, Nestlé's ratios were generally stable and met or exceeded optimal thresholds during most periods. This indicated Nestlé's ability to effectively manage short-term obligations despite occasional challenges.
- Nestlé demonstrated more stable interest coverage ratios, indicating better risk management practices and financial health.
- While Cadbury showed strengths in asset turnover and inventory management efficiency, Nestlé's operational efficiency and resource utilization remained competitive. Fluctuations in receivables turnover and average collection periods affected both companies similarly.
- Nestlé indicated a lower risk of bankruptcy compared to Cadbury, with more stable financial ratios and a lower risk profile.
- Nestlé consistently demonstrated higher and more consistent performance across all Kralicek Quick Test ratios compared to Cadbury. This indicated Nestlé's stronger financial position and management effectiveness, particularly in debt settlement management.

To sum up, based on the analysis provided, Nestlé presented itself as a more attractive investment option due to its stronger profitability, stable financial ratios, lower risk of bankruptcy, and more consistent performance across various financial metrics. Investors can find Nestlé to be a safer and potentially more lucrative investment choice compared to Cadbury.

5.2 Recommendations for enhancing financial performance

5.2.1 Nestlé

Considering overall financial performance and conducted analyses, few key focus areas are recommended to Nestlé such as profitability, liquidity and debt management, assets efficiency and operating cash flow.

First, the company must maintain profitability by sustaining effective cost control measures, optimizing revenue streams, and efficiently managing its assets. This can help ensure consistent financial performance over time.

Second, Nestlé should proactively manage its liquidity position by maintaining adequate cash reserves and enhancing working capital efficiency. This proactive approach will help the company navigate unforeseen financial challenges and seize growth opportunities.

Third, Nestlé should carefully monitor its total debt levels and debt-to-equity ratio to ensure sustainable financial leverage. This may involve refinancing debt on favorable terms and reducing reliance on debt financing.

Fourth, Nestlé should continuously seek opportunities to improve asset turnover ratios and minimize inventory holding periods to enhance operational efficiency. This can be achieved through the adoption of lean manufacturing practices and optimization of supply chain management.

Fifth, Nestlé should focus on enhancing its financial stability by improving its Altman Z-score through consistent financial performance and effective risk management. This will enhance investor confidence and support long-term growth prospects.

Finally, the company must prioritize the sustained generation of strong operating cash flow by efficiently managing working capital and prioritizing investments that yield sustainable returns. This approach will ensure ongoing business operations and support strategic initiatives while maintaining financial flexibility.

5.2.2 Cadbury

Cadbury should prioritize several strategic initiatives to bolster its financial health and operational performance. Firstly, the company should concentrate on enhancing profitability by implementing measures to boost revenue generation, control costs, and optimize asset utilization. This entails identifying and rectifying operational inefficiencies while refining pricing strategies to maximize profitability.

Secondly, despite demonstrating favorable liquidity ratios, Cadbury should maintain a proactive approach to liquidity management. This involves ensuring consistent performance by maintaining sufficient cash reserves and optimizing working capital management practices. By doing so, Cadbury can mitigate the risk of liquidity shortages and strengthen its ability to meet short-term obligations.

Thirdly, Cadbury should focus on reducing its total debt levels and debt-to-equity ratio to lower financial leverage. It should also work towards stabilizing its interest coverage ratios to ensure adequate coverage of interest expenses and minimize the risk of financial distress.

Fourthly, the company should seek to optimize asset utilization by improving asset turnover ratios and reducing inventory holding periods. This can be achieved through streamlining production processes, minimizing excess inventory, and enhancing inventory management practices.

Fifthly, Cadbury should aim to enhance its financial stability by improving its Altman Z-score. This involves stabilizing financial ratios and reducing volatility in financial performance, thereby boosting investor confidence and mitigating the risk of bankruptcy.

Lastly, Cadbury should prioritize the improvement of its operating cash flow management. This includes optimizing working capital cycles, enhancing collection processes, and reducing operating expenses to ensure sustainable cash generation and profitability. These strategic initiatives will contribute to Cadbury's long-term success and resilience in the competitive market landscape.

6 Conclusion

In this thesis, a comprehensive financial analysis was conducted to evaluate the financial well-being of two prominent food processing companies in Nigeria, Nestlé and Cadbury, over the period from 2012 to 2022. The objective was to identify key factors influencing their financial performance, critically evaluate these factors using various financial methods, and provide recommendations based on our findings.

The financial analysis encompassed several dimensions, including absolute indicators, ratio analysis, analysis of cumulative indicators, and Economic Value Added (EVA). These analyses provided insights into the companies' profitability, liquidity, debt management, asset efficiency, financial stability, and operating cash flow.

To outline the key findings, few areas were assessed. In terms of profitability, it was evident that Nestlé consistently outperformed Cadbury, demonstrating stronger revenue generation, cost control, and asset management practices. Cadbury, on the other hand, faced challenges in maintaining stable profitability, with lower ratios and higher variability.

When looking at liquidity management, both companies generally maintained satisfactory liquidity ratios, Cadbury exhibited more robust liquidity positions, often surpassing optimal thresholds. However, fluctuations in these ratios for both companies highlighted the importance of vigilant liquidity management. Consequently, in debt management practices, Nestlé demonstrated higher levels of total debt and debt-to-equity ratios compared to Cadbury, suggesting greater financial leverage. However, Nestlé managed to maintain more stable interest coverage ratios, indicating better debt management practices.

Another important area of assessment was asset efficiency. Cadbury displayed superior asset turnover ratios and shorter inventory holding periods, indicating better operational efficiency and resource utilization compared to Nestlé. This suggested that Cadbury effectively managed its assets to generate revenue and minimize excess inventory. In terms of financial stability, based on companies’ Altman Z-scores, both entities indicated decreasing trends with a higher risk of bankruptcy. However, Nestlé generally showed lower volatility in financial ratios, reflecting relatively better financial stability compared to Cadbury.

Lastly, in operating cash flow, Nestlé consistently demonstrated stronger operating cash flow generation, indicating efficient working capital management and sustainable cash generation. Cadbury, meanwhile, exhibited more variability in performance, especially in operating cash flow relative to sales. Based on the overall findings, Nestlé presented itself as a more attractive investment option due to its stronger profitability, stable financial ratios, lower risk of bankruptcy, and more consistent performance across various financial metrics.

Conducted financial analysis also included testing several hypotheses related to industry comparisons, profitability, financial metrics, financial stability, and operational efficiency. The findings supported the two of the identified hypotheses, indicating significant differences between the companies in various financial aspects.

Lastly, the respective recommendations for Nestlé and Cadbury were offered. For Nestlé it included the following:

- Maintain focus on profitability by sustaining effective cost control measures and optimizing revenue streams.
- Improve liquidity management by maintaining adequate cash reserves and optimizing working capital efficiency.
- Manage debt levels carefully to ensure sustainable financial leverage and maintain healthy interest coverage ratios.
- Enhance asset efficiency by improving asset turnover ratios and reducing inventory holding periods.
- Strengthen financial stability by stabilizing Altman Z-scores through consistent financial performance and risk management.
- Sustain strong operating cash flow generation by efficiently managing working capital and prioritizing investments with sustainable returns.

For Cadbury, the following adjustments were advised:

- Improve profitability by implementing strategies to enhance revenue generation and cost control.
- Maintain vigilant liquidity management to ensure consistent liquidity positions and mitigate the risk of liquidity shortages.
- Work on reducing total debt levels and debt-to-equity ratios to lower financial leverage and stabilize interest coverage ratios.
- Optimize asset utilization by improving asset turnover ratios and reducing inventory holding periods.
- Strengthen financial stability by stabilizing Altman Z-scores and reducing volatility in financial ratios.

- Focus on improving operating cash flow management to ensure sustainable cash generation and profitability.

In conclusion, it can be stated that by implementing the recommendations provided, both companies can enhance their financial well-being, mitigate risks, and position themselves for sustainable growth and success in the dynamic Nigerian food processing industry despite challenging economic environment.

7 References

Books:

Booth, A., Sutton, A., & Papaioannou, D. (2016). *Systematic approaches to a successful literature review*. Sage. ISBN: 9781473952805.

Bragg, S. M. (2020). *Financial analysis: Fourth Edition*. Accounting tools, Incorporated. ISBN: 978-1642210545.

Brealey, R. A., Myers, S. C., Allen, F., & Mohanty, P. (2016). *Principles of corporate finance (12th ed.).* McGraw-Hill Education. ISBN: 978-1259144387.

Brigham, E. F., & Houston, J. F. (2018). *Fundamentals of financial management, 15th edition*. Cengage Learning. ISBN: 978-1337395250.

Burton, R. J., Forney, J., Stock, P., & Sutherland, L.-A. (2021). *The good farmer: Culture and identity in Food and Agriculture*. Routledge. ISBN: 978-1138727960.

Elliott, B. & Elliott, J. (2006). *Financial accounting, Reporting and Analysis: International edition, 2nd ed*. Pearson Education Limited. ISBN: 9780273702535.

Friedlob, G. & Scheliefer, L. (2003). *Essentials of financial analysis, 1st ed.* John Wiley & Sons. ISBN: 9780471432647.

Gitman, L. J., & Zutter, C. J. (2021). *Principles of managerial finance (16th ed.)*. Pearson. ISBN: 9780136945758.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis (8th ed.)*. Cengage Learning. ISBN: 9781473756540.

Mrkvička, J. & Kolář, P. (2006). *Financial analysis.* ASPI. ISBN: 80-7357-219-2

Neuman, W. L. (2013). *Social research methods: Qualitative and quantitative approaches*. Pearson. ISBN: 978-1292020235.

Quinlan, J., Babin, B. J., Carr, J. C., & Griffin, M. (2019). *Business research methods.* Cengage Learning. ISBN: 9781473758902.

Ragin, C. C. (2014). *The comparative method: Moving beyond qualitative and quantitative strategies.* University of California Press. ISBN: 9780520909243.

Reilly, F & Brown, K. (2012). *Analysis of Investments & Management of Portfolios. 10th ed*. South-Western Cengage Learning. ISBN: 978-0538482486.

Ross, S. A., Westerfield, R. W., Jordan, B. D., & Roberts, G. S. (2018). *Fundamentals of corporate finance (12th ed.).* McGraw-Hill Education. ISBN: 978-1259918957.

Růčková, P. (2015). *Financial analysis, 5th ed*. Grada. ISBN: 978-8024799308.

Sario, A. U. H. (2024). Financial Analysis Essentials. Azhar UL Haque Sario. ISBN: 979-8224475179.

Stern, J. M., Stewart, G. B., & Chew Jr, L. H. (2003). *The EVA Challenge: Implementing Value-Added Change in an Organization*. Wiley. ISBN: 978-0471478898.

Vochozka, M. (2020). *Methods of complex evaluation of an enterprise, 2nd ed.* Grada Publishing. ISBN: 978-8027117017.

Electronic resources:

“About Nestlé in Nigeria.” *Nestlé*, www.nestle-cwa.com/en/csv/nestl%C3%A9-nigeria/about-nestl%C3%A9-nigeria. Accessed 20 Mar. 2024.

“Cadbury Nigeria Plc.” *FT.Com*, markets.ft.com/data/equities/tearsheet/profile?s=CADBURY%3ALAG. Accessed 21 Mar. 2024.

„Cadbury Nigeria Plc 2012 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2012-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2013 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2013-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2014 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2014-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2015 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2015-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2016 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2016-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2017 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2017-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2018 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2018-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2019 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2019-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2020 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2020-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2021 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2021-ar-00/. Accessed 19 Mar. 2024.

„Cadbury Nigeria Plc 2022 Annual Report“. *African Financials*. https://africanfinancials.com/document/ng-cadbur-2022-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2012 Annual Report.” *African Financials*. https://africanfinancials.com/document/ng-nestle-2012-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2013 Annual Report.” *African Financials*, https://africanfinancials.com/document/ng-nestle-2013-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc: 2014 Annual Report.” *African Financials,* africanfinancials.com/document/ng-nestle-2014-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2015 Annual Report.” *African Financials*, https://africanfinancials.com/document/ng-nestle-2015-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2016 Annual Report.” *African Financials*, https://africanfinancials.com/document/ng-nestle-2016-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2017 Annual Report.” *African Financials*, https://africanfinancials.com/document/ng-nestle-2017-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2018 Annual Report.” *African Financials*, https://africanfinancials.com/document/ng-nestle-2018-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2019 Annual Report.” *African Financials*, https://africanfinancials.com/document/ng-nestle-2019-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2020 Annual Report.” *African Financials*, https://africanfinancials.com/document/ng-nestle-2020-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc: 2021 Annual Report.” *African Financials*, africanfinancials.com/document/ng-nestle-2021-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc (Nestle.Ng): 2022 Annual Report.” *African Financials*, africanfinancials.com/document/ng-nestle-2022-ar-00/. Accessed 19 Mar. 2024.

“Nestle Nigeria Plc”, *African Financials*, africanfinancials.com/company/ng-nestle/. Accessed 20 Mar. 2024.

“Nigeria.” *Mondelēz International, Inc*., www.mondelezinternational.com/nigeria/. Accessed 20 Mar. 2024.

Asta, L., & Zaneta, S. (2010). Sustainable development decision-making model for small and medium enterprises. *Environmental research, Engineering and management*, 2(52), pp. 14-24.

CFI Team. “Altman’s Z-Score Model.” *Corporate Finance Institute*, 27 Oct. 2023, corporatefinanceinstitute.com/resources/commercial-lending/altmans-z-score-model/. Accessed 20 Mar. 2024.

Kagan, J. “Credibility Theory: What It Means, Types, Faqs.” *Investopedia*, 2022, www.investopedia.com/terms/c/credibility-theory.asp-0. Accessed 20 Mar. 2024.

Meuwissen, M. P., van Asseldonk, M. A., van Asseldonk, T. G., & Kemp, R. G. (2017). Economic modeling of innovations in the agri-food industry: A review. *Agricultural Systems*, 152, pp. 1-9.

Nganje, W. E., Bangsund, D. A., Leistritz, F. L., & Wilson, W. W. (2007). An economic analysis of entry and exit of food manufacturing firms. *Agribusiness*, 23(3), pp. 303-324.

Nnamdi, O. and Owusu, R. (2014). Africa as a source location: literature review and implications, *International Journal of Emerging Markets*, Vol. 9 No. 3, pp. 424-438.

Polo, A. & Enkela,C. “KRALICEK QUICK TEST – AN ANALYSIS TOOL FOR ECONOMIC UNITS DETERMINATION IN LIABILITY DIFFICULTY.” *European Scientific Journal*, vol. 10, no. 19, July 2014, pp. 142–152.

8 List of pictures, tables, graphs and abbreviations

8.1 List of pictures

8.2 List of tables

8.3 List of graphs

8.4 List of abbreviations

WACC – Weighted Average Cost of Capital
NOPAT – Net operating profit after taxes
EVA – Economic Value Added
CSR – Corporate Social Responsibility
ROA – Return on Assets
ROE – Return on Equity
ROS – Return on Sales
EBIT – Earnings before Interest and Taxes
EAT – Earnings After Tax
EBITDA – Earnings before interest, taxes, depreciation, and amortization
EBT – Earnings Before Tax
ROCE – Return on Capital Employed

LNG – Liquid Natural Gas
PLC – Public Limited Company

Appendix