



Equity Valuation Coca-Cola Company

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Abstract

Title: Equity Valuation – Coca-Cola Company

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This dissertation covers the equity valuation of The Coca-Cola Company, the largest non-alcoholic beverage company in the world. The main objective of this thesis is to provide an investment recommendation based on the estimated equity value of the company. Throughout the paper, all major issues are addressed in order to provide an accurate valuation. First, different valuation approaches are explored, followed by an overview of the company and the external environment. Finally, the forecasting assumptions are shown and concluded with a comparison of the result of this thesis with the Deutsche Bank report. In addition to the DCF valuation approach, the relative valuation was chosen to test the assumptions and compare them to the current market values. Finally, through both increasing and gradual cost efficiency as well as through revenue growth in growing markets and segments, a buy recommendation is given, based on the DCF approach of \$61.28 per share.

Keywords: The Coca-Cola Company, Beverages, Equity Valuation, Discounted Cash Flow, Relative Valuation

Resumo

Ítulo: Avaliação de Acções - Coca-Cola Company

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Esta dissertação cobre a avaliação patrimonial da The Coca-Cola Company, a maior empresa de bebidas não-alcoólicas do mundo. O principal objectivo desta tese é fornecer uma recomendação de investimento baseada no valor estimado do capital próprio da empresa. Ao longo do documento, todas as questões principais são abordadas, a fim de fornecer uma avaliação precisa. Em primeiro lugar, são exploradas diferentes abordagens de avaliação, seguidas de uma visão geral da empresa e do ambiente externo. Finalmente, os pressupostos de previsão são mostrados e concluídos com uma comparação do resultado desta tese com o relatório do Deutsche Bank. Para além da abordagem de avaliação DCF, a avaliação relativa foi escolhida para testar os pressupostos e compará-los com os valores de mercado actuais. Finalmente, tanto através do aumento e da eficiência gradual dos custos como através do crescimento das receitas em mercados e segmentos em crescimento, é dada uma recomendação de compra, com base na abordagem DCF de \$61,28 por acção.

Palavras-chave: The Coca-Cola Company, Bebidas, Avaliação de Acções, Fluxo de Caixa Descontado, Avaliação Relativa

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An important period of my life is now coming to an end. During this time, especially in the last few years, I have been able to grow as a professional, but above all as a person. I wouldn't be able to do it without the help of the people I would like to thank now. I would like to thank my parents, my brother and my friends for all their support and understanding. There will be new stages to come, with new challenges to overcome, and I am sure that I can count on every one of you. Finally, I would like to thank José Tudela Martins and Prof. António Borges de Assunção, who supervised and reviewed my master's thesis. I would like to express my sincere gratitude for their helpful suggestions and constructive criticism during the preparation of this thesis.

List of Abbreviations

APV – Adjusted Present Value

CAGR – Compounded Annual Growth Rate

CAPEX – Capital Expenditures

CAPM – Capital Asset Pricing Model

CSD – Carbonated Soft Drinks

D&A – Depreciation and Amortization

DCF – Discounted Cash Flow

EBIT – Earnings Before Interest and Taxes

EBITDA – Earnings Before Interest, Taxes, Depreciation and Amortization

EV – Enterprise Value

FCFE – Free Cash Flow to Equity

FCFF – Free Cash Flow to Firm

ITS – Interest Tax Shields

PER – Price-Earnings-Ratio

PP&E – Property, Plants and Equipment

ROA – Return of Assets

ROE – Return on Equity

ROIC – Return on Invested Capital

RTD – Ready-To-Drink

TCCC – The Coca-Cola Company

TV – Terminal Value

WACC – Weighted Average Cost of Capital

WC – Working Capital

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Introduction

The main purpose of this dissertation is to estimate the target price per share of The Coca-Cola Company (TCCC), an American beverage company listed on the New York Stock Exchange and the world's leading player in the non-alcoholic beverage industry, in order to provide an investment recommendation to current and potential investors in the company.

TCCC was founded in 1892 in the United States in Atlanta, Georgia, and has since grown to become the largest non-alcoholic beverage company in the world, dominating the carbonated soft drink industry. However, the ongoing COVID-19 pandemic has directly affected global consumption of the industry (especially out-of-home consumption) due to the closing of sites like bars and restaurants, causing a sharp decline in revenue across the industry. Nevertheless, Coca-Cola was already facing immense challenges in recent years as consumer behavior has shifted towards healthier beverages and slower growth in developed markets has burdened the company's revenue growth. Coca-Cola has therefore made efforts to overcome these challenges while capitalizing on potential opportunities. Indeed, in recent years, the company has become more cost-efficient by refranchising a large part of its bottling operation to increase profitability and unblock resources to support growth.

The structure of this dissertation is organized into four major sections. The first section includes the Literature Review, which details the most important valuation methods and their applicability. The second section presents a company and industry overview, analyzing the market and Coca-Cola's characteristics that build the foundation for the company valuation. The third section delivers the company valuation using the discounted cash flow method complemented by a relative valuation. Finally, the results of this dissertation are compared with those of the Deutsche Bank report, with the different assumptions and results obtained in both valuations discussed in detail.

1. Literature Review

1.1 Valuation Approach

The field of valuation has been established in business administration as an interdisciplinary subject area uniting a number of different business management disciplines, such as accounting, finance, and investment theory. According to Damodaran (2006), “valuation can be considered the heart of finance.” The aim of a business valuation is to determine the individual value of a company or a company unit and to provide information about both how valuable a company is in the present and will be in the future. In portfolio management, for example, a valuation attempts to find undervalued companies to invest in, thereby realizing the true value of the company’s stock. Nevertheless, the success of a manager's financial decision to launch a new product or invest in projects depends on their ability to correctly evaluate the value of the decision and thus create value for the company. Copeland, Koller, and Murrin (2000) also underlined that “all management decisions, either explicitly or implicitly, are based on some valuation model.” In this dissertation, valuation is used to make an investment decision (buy, hold, or sell) for TCCC.

Furthermore, any asset can be valued, but new assumptions and different valuation methods must be made for each asset individually based on their own characteristics (Damodaran, 2002). Many assumptions that have to be made in valuation methods can be subjective; as such, despite the many methods available, valuation is not an exact science but rather the opinion of the valuer (Fernandez, 2013). Accordingly, a valuation for the same asset can produce a variety of results due to the assumptions made by the valuer (Young et al., 1999).

However, over the last decades analysts have agreed on several methods available to evaluate companies. Some methods require more data or are generally more complex than others, as individual industry sectors and companies have their own characteristics that need to be reflected. Therefore, there is no valuation method that fits every company perfectly. Instead, one must decide which method is most suitable on a case-to-case basis. Nevertheless, Damodaran (2006) and Fernandez (2007) pointed out that company valuation methods can be divided into four main groups: all discounted cash flow methods (DCF methods), asset-based valuation (balance-sheet-based methods), relative valuation (income-statement-based methods) and contingent claim valuation.

Discounted cash flow methods “seek to determine the company’s value by estimating the cash flows it will generate in the future and then discounting them at a discount rate matched to the flows’ risk” (Fernandez, 2013). This has become a commonly used valuation method for corporate assets. The second group, asset-based valuation methods, determines the value of the company by focusing on the company’s net asset value, which is calculated by subtracting total liabilities from total assets (Fernandez, 2013). The third valuation method, relative valuation, estimates the company’s value “based upon how similar assets are currently priced in the market” (Damodaran, 2013). Finally, the fourth one, contingent claim valuation, values assets that share similar option characteristics and can be estimated through option pricing models (e.g. Black and Scholes).

Given the overall characteristics of Coca-Cola, the DCF method is the most suitable approach because it is based on detailed estimates of the company’s cash flows and assumptions and is the most reliable and accurate method for making investment decisions. Furthermore, the assumptions for DCF are easier to predict for larger, established companies like Coca-Cola that have a steadier growth history and a stable capital structure on which to base these projections. In addition to the DCF method, this valuation analysis is supplemented by the relative valuation method to test and compare the viability and consistency of the DCF valuation. To better understand the selected valuation methods and their underlying variables, they are described in detail in the next section.

1.2 Discounted Cash Flow Valuation

Among all valuation methods, the DCF method has proven to be the strongest and most popular practice for the valuation of corporate assets over the last twenty years. In simple terms, this approach consists of a relationship between the present value and the expected future value of corporate assets. Therefore, “the analyst’s task is first, to forecast expected future cash flows, period by period; and second, to discount the forecasts to present value at the opportunity cost of funds” (Luehrman, 1997) by adjusting timing and risk. The standard DCF model, which is used in this dissertation, is illustrated in the following equation (Fernandez, 2007)

$$V = \frac{CF_1}{1+R} + \frac{CF_2}{(1+R)^2} + \frac{CF_3}{(1+R)^3} + \dots + \frac{CF_n + VR_n}{(1+R)^n}$$

$$VR_n = \frac{CF_n(1+g)}{(R-g)}$$

Where

CF_i = Cash flow generated by the company in period n

g = Expected constant growth rate after the year n

VR_n = Residual value of the company in the year n

k = Discount rate of the cash flow's risk

The equation indicates two different time horizons. While, the left side of the equation is a growth period for an explicitly chosen number of years, the right side shows an indefinite time horizon with constant growth rate after year n. The indefinite time period is called terminal value (TV) in the free cash flow to firm (FCFF) model (Fernandez, 2007).

Expected future cash flows as well as discount rates require certain assumptions that have a significant impact on the outcome and accuracy of the valuation. The principle is similar for all variations of the DCF approach. The main differences between the models are the discount rates, cash flow components, and respective tax effects. This dissertation discusses the most widely used DCF models, namely FCFF, free cash flow to equity (FCFE) and adjusted present value (APV). Additional models include the dividend discount model (DDM) and excess return-based models like economic value added or dynamic return on equity which “focus on the capital stock and the spread between the return and the cost of capital” (Young, et al., 1999)

1.2.1 Free Cash Flow to the Firm (FCFF)

There are two types of free cash flow measures used in the valuation: FCFE and FCFF; “The first is to value just the equity stake in the business, while the second is to value the entire business” (Damodaran, 2006). In the FCFF model, the value of the company is determined by discounting the expected cash flows to the firm at the weighted average cost of capital

(WACC) because it is necessary to consider the entire capital structure of the firm to calculate its enterprise value (EV). In contrast, in the FCFE model, the value of equity is determined by discounting the expected cash flow to equity at the cost of equity because FCFE involves only the amount left for equity investors. Hence, FCFE calculates the equity value instead of EV (Damodaran, 2006).

The cash flows of the FCFF are calculated before debt payments but after reinvestment needs and taxes and are therefore available to all investors of the company, while the cash flows of the FCFE are calculated after taxes, reinvestments needs, and debt and are available to common equity shareholders of the company. The FCFF and the FCFE can be calculated as follows:

$$FCFF = EBIT * (1 - \text{Tax Rate}) + \text{Depreciation} - \text{CAPEX} - \Delta \text{ Working Capital}$$

$$FCFE = \text{Net Income} + \text{Depreciation} - \text{CAPEX} - \Delta \text{ Working Capital} - (\text{New debt issued} - \text{Debt repayments})$$

FCFF DCF:

$$\text{Enterprise Value} = \sum_{t=1}^n \frac{FCFF_t}{(1 + WACC)^t} + \frac{\text{Terminal Value}}{(1 + WACC)^t}$$

$$\text{Terminal Value} = \frac{FCFF_n(1 + g)}{(WACC - g)}$$

1.2.2 Weighted Average Cost of Capital – WACC

In addition to determining future free cash flows, the next step of the FCFF model is to discount the cash flows using the WACC. The WACC is determined according to the proportions of equity and debt in the company's total capital. Therefore, the WACC is estimated by weighting the cost of debt (kd) and the cost of equity (ke) according to the firm's capital structure (Fernandez, 2013). In general, the formula of the WACC is given by:

$$WACC = k_e * \frac{E}{D+E} + k_d * \frac{D}{D+E} * (1 - T)$$

where $(E/D+E)$ and $(D/D+E)$ are the weights of a company's equity and debt of the EV. The marginal tax rate is replicated as (T) , and both the expected bankruptcy costs and the tax benefits of debt are implied in the formula.

The prerequisite for successfully applying WACC is that the capital structure remains the same for the forecasted period. However, in some cases, the capital structure could also change during the forecast period. Although the WACC can be used in these situations and the rate can be adjusted each year, the process is challenging and more complex. Luehrman (1997) also emphasized that "the more complicated a company's capital structure, tax position, the more likely it is that mistakes will be made" while calculating the WACC.

1.2.2.1 Cost of Equity

As part of the WACC, the cost of equity is often used by managers to make investment decisions because the cost of equity represents the return that shareholders demand as compensation for holding the asset and bearing its risk (Luehrman, 1997).

The most widely used approach to estimate expected returns and determine the cost of equity is the capital asset pricing model (CAPM), which links two concepts: risk and time value of money (Luehrman, 1997). In general, the formula is given by

$$E(R_i) = R_f + \beta_i * (R_m - R_f)$$

where the expected return equals the risk-free rate (R_f) plus the beta of the asset (β_i) multiplied by the market risk premium ($R_m - R_f$). To calculate the cost of equity, the three components of the model—the risk-free rate, beta, and market risk premium—have to be estimated (Damodaran, 2002).

The risk-free rate stands for the interest an investor would expect from a risk-free investment, such as highly liquid, long-term government bonds with a maturity of 10 years (Koller et al., 2005). Traditionally, US treasuries for international companies or German

treasuries for European companies have been used as a proxy for the risk-free rate due to their low default risk and high liquidity. Government bond yields should always be used in the same currency as the company's cash flow to estimate the risk-free rate. In this manner, inflation is consistent between cash flow and the discount rate.

The second component of the CAPM formula, the **market risk premium or equity risk premium**, equals the difference between the expected return of the market and the risk-free rate. The market risk premium provides a measure of the additional return that market participants demand for the additional risk in comparison to a risk-free investment. The most common way to calculate the market risk premium is by “looking at the historical premium earned by stocks over default-free securities over long time periods” (Damodaran, 2008). The actual returns achieved with stocks are estimated and compared with the actual returns of a default-free security. The difference achieved between the returns thus represents the historical risk premium on an annual basis.

Finally, a stock return is dependent on **beta**, which is a measure of systematic risk and “measures how much the stock and entire market move together” (Koller et al., 2005). The most common method to estimate the beta for listed companies is the historical market beta method. It uses linear regression of historical stock returns against the returns of the selected market index (e.g. S&P 500). After computing the regression, the beta is then represented by the slope coefficient. The principle is as follows: if a stock has a beta of 1, its volatility matches that of the market. If the beta is lower than 1, the stock is less volatile than the market. If the beta is higher than 1, it is more volatile than the market. Beta is calculated solely based on the past performance of a stock by considering its historical volatility compared to the broader market.

However, the historical beta is only conditionally suitable for forward-looking company valuations; this problem can be minimized by using the adjusted beta instead of the (measured) raw beta. The so-called Blume adjustment (Blume, 1975) is the most commonly used adjustment. The time instability and regression tendency of the beta factor towards 1 is approximated in the Blume adjustment by the following equation:

$$\text{Adjusted Beta} = 1/3 + 2/3 * \text{raw beta}$$

1.2.2.2 Cost of Debt

The second component in the WACC approach is the cost of debt. “The cost of debt measures the current cost to the firm of borrowing funds to finance projects” (Damodaran, 2012).

According to Koller et al. (2005), the yield to maturity (YTM) of the company on its long-term debt should be used to approach the cost of debt. The YTM approach is a suitable proxy for companies when the investment grade debt is rated higher than BBB as this ensures that the probability of default is significantly low. The YTM should be calculated directly from the price of the bonds outstanding and the promised cash flows if the company has publicly traded debt. If this is not the case or the debt trades rarely, using the company's debt rating to calculate the YTM is recommended (Koller et al., 2005).

1.3 Adjusted Present Value (APV)

The APV model is an alternative DCF model to the FCFF-based approach and is preferably used for companies with very complex or fluctuating capital structures. Adjusted present value separates the effects of debt financing, namely tax shield and bankruptcy costs, from the value of an operating asset, while WACC captures these effects in the discount rate (Damodaran, 2006). Hence, in the APV model, the value of an asset is estimated by presupposing that the company is all equity-financed and then adding back the tax shield and bankruptcy costs from debt financing at a later point. This statement is proven in the following formula:

$$\text{Value of the Firm} = V_u + PV_{tx} + PV_{bc}$$

where V_u is the value of the unlevered firm, PV_{tx} the present value of the interest tax shield, and PV_{bc} the present value of bankruptcy costs. Consequently, the value of the company can be estimated in three steps. The first step is to estimate the value of a purely equity-financed firm. This value is based on the expected cash flow discounted at the unlevered cost of equity (Damodaran, 2006).

$$\text{Value of Unlevered Firm} = \frac{FCFF (1 + g)}{(\rho_u - g)}$$

The next step is to calculate the tax benefit, which “is a function of the tax rate and interest payments of the firm and is discounted at the cost of debt to reflect the riskiness of this cash flow” (Damodaran, 2006).

$$\text{Value of tax benefits} = \frac{(\text{Tax rate} * \text{Cost of debt} * \text{debt})}{\text{Cost of debt}}$$

However, the correct approach for calculating the tax benefit could be an issue as its estimation raises questions about the right choice of the discount rate (Damodaran, 2006). While Myres (1974) and Cooper and Nyborg (2006) claimed that debt and tax savings are perfectly correlated under the scenario of a constant level of debt and, as such, the cost of debt should be used as the discount rate, Fernandez (2004) estimated the benefit of debt as the difference between the unlevered firm and the levered firm rather than by the present value of tax shields associated with interest.

The third and last step is to calculate the present value of the expected cost of bankruptcy because an increase of debt levels not only leads to a benefit of debt but also to a higher expected cost of bankruptcy (Damodaran, 2006).

$$\text{PV of Expected Bankruptcy cost} = \text{Probability of bankruptcy} * \text{PV of bankruptcy cost}$$

A major problem of the APV model is that neither bankruptcy cost nor the probability of bankruptcy can be determined directly. According to Opler and Titman (1994), estimating the cost of bankruptcy is difficult because it implies indirect and direct costs due to financial distress, which ultimately lead to the loss of customers or suppliers. One possibility to indirectly calculate bankruptcy probability consists of estimating the probability of bankruptcy by bond ratings, as in the WACC approach (Damodaran, 2006).

1.4 Relative Valuation

Whereas the DCF valuation is still concerned with determining the value of assets based on expected future growth, cash flows, and associated risk, the objective of relative valuation is

to value assets based on the current valuation of similar assets in the market. Relative valuation complements DCF valuation by stress testing projected cash flow, highlighting the differences between the company's performance and that of its peers, and presenting key industry drivers (Koller et al., 2005).

There are two important steps in the relative valuation. The first step is to find comparable assets (peer groups). In order to include the right companies in the peer group, one should analyze if comparable companies operate in the same industry; are of similar size; and have similar expected growth rates, return on invested capital (ROIC), and a comparable capital structure. Therefore, companies which are operating in the same industry and have similar performance characteristics should be evaluated with similar multiples (Goedhart et al., 2005).

In a second step the most suitable multiples need to be defined. Multiples can be divided into three different groups based on EV, growth-related values, and the equity of the company (Fernandez, 2001). Forward-looking multiples should be used because one-time effects are not included. The most used multiples are the equity-based price-to-earnings ratio (PER) and the enterprise value-based EV to EBITDA (Goedhardt et al., 2005).

The PER “can be estimated using current earnings per share, which is called a trailing PE, or an expected earnings per share in the next year, called a forward PE” (Damodaran, 2012). The PER formula is given by

$$\text{Price to Earnings} = \frac{\text{Price}}{\text{EPS}}$$

and indicates how often the profit is included in the current price of a share or after how many years the profit has repaid the price of the share.

However, using the PER can lead to a misleading valuation since the PER is affected by the capital structure. A suitable alternative for this is to use the EV/EBITDA multiple as this is less susceptible to a change in capital structure because the EV already includes debt and equity (Goedhart et al., 2005).

The enterprise value must be adjusted for non-operating items such as excess cash, which would otherwise lead to a major distortion of the multiple. Other frequently used multiples in relation to EV are EV/EBIT or EV/Sales. The EV/EBITDA formula is given by

$$\text{Enterprise to EBITDA} = \frac{\text{Enterprise Value}}{\text{Earnings before interest, tax, depreciation and amortization}}$$

2. Company Analysis

2.1 Coca-Cola Company Overview

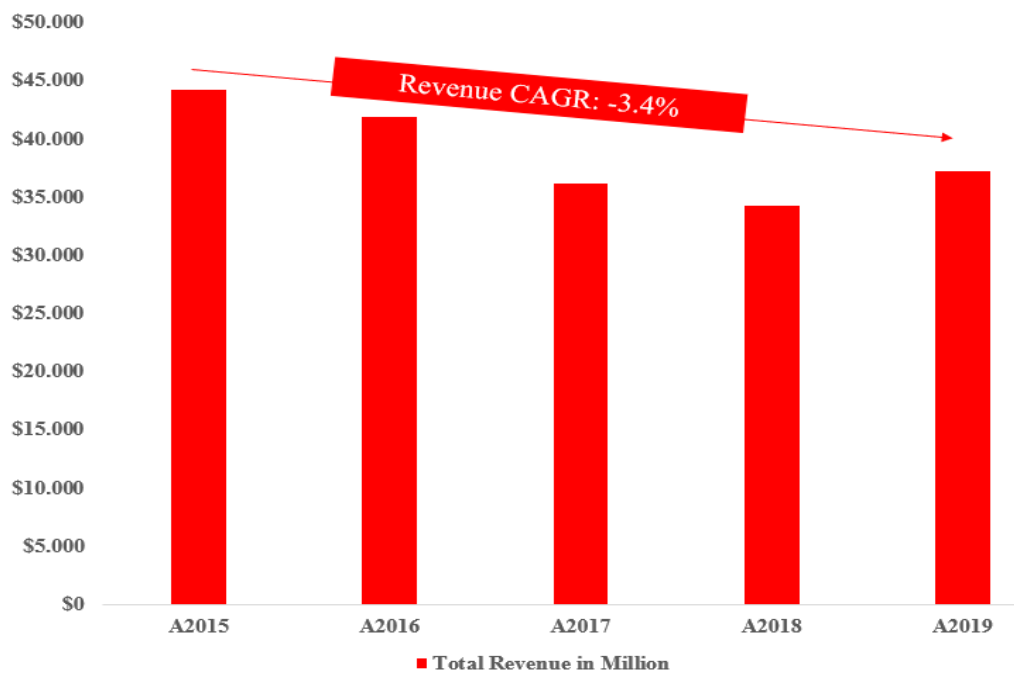
TCCC, founded in 1886, is an American beverage company that offers more than 500 brands in more than 200 countries and is headquartered in Atlanta, GA, USA. With 86,200 employees worldwide, Coca-Cola is currently the world market leader in non-alcoholic beverages and has been listed on the New York Stock Exchange since 1919 and in the S&P 500 since 1957 under the trading symbol KO. Currently, 69.1% of the 4.297 million outstanding shares are in free float, while the remaining shares are mostly held by institutional shareholders; among these, Berkshire Hathaway and the Vanguard Group are the major shareholders, owning 9.3% and 7.5% of shares, respectively.¹

The company's total revenue in 2019 was \$37.266 million and derived from seven operating segments: North America (30.9 % of total revenue), Bottling Investments (19.3%), Europe, Middle East and Africa (18.3%), Asia Pacific (13.8%), Latin America (10.7%), Global Ventures (6.7%), and Corporate (0.2%). The geographical regions focus on the sale of concentrates, while the sale of finished bottles is reflected in the Bottling Investments segment.

Over the last five years, revenue has decreased by 16%, mainly as a result of the refranchising of the Bottling Investments segment.

¹ Source: Bloomberg

Figure 1: Coca-Cola Total Revenue; Source: Annual Reports



Within each segment, Coca-Cola sells different beverage categories directly and indirectly: carbonated soft drinks, water, sports drinks, juice, milk and vegetable drinks, tea and coffee, and energy drinks. The Coca-Cola trademark (includes Coca-Cola Zero and Diet Coke) is by far the most popular drink and accounts for approximately 37% of the company's total revenue. Nevertheless, Coca-Cola has a very diversified brand portfolio of 21 brands that are worth a minimum of \$1 billion each.

Figure 2: The Coca-Cola Company's Most Popular Brands; Source: Coca-Cola Website



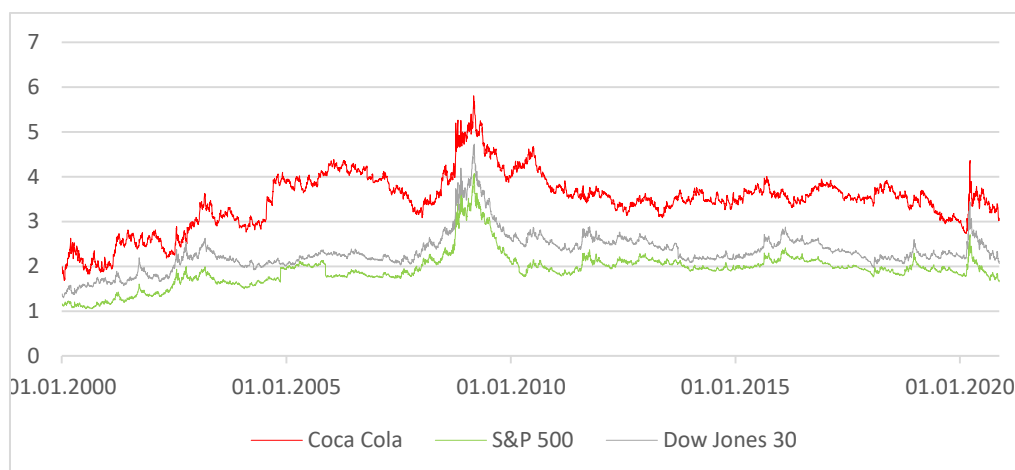
TCCC is a major participant in the Coca-Cola ecosystem, where it is directly or indirectly engaged in every stage of the value chain. TCCC directly participates in the procurement, marketing, and manufacturing of its products as well as holds stakes in and indirectly works with independent partners that package and distribute those products. However, over the last four years, TCCC has refranchised a large part of its bottling operations to further improve its operating margins. Overall, TCCC still represents the world's largest beverage distribution system and owns one of the most comprehensive bottling systems globally.

2.2 Stock and Dividend Performance

TCCC is one of the most well-known dividend payers on the entire stock market. TCCC has paid a quarterly dividend without interruption since 1920, and it has paid increasing dividends every year for the last 58 years; this plugs TCCC in a group of 57 stocks in the S&P 500, the so-called dividend aristocrats (companies with an increasing dividend policy for 25 consecutive years qualify as a dividend aristocrat). This status is a valuable quality feature for Coca-Cola and underlines the robustness of this stock and its reliable business model.

In February 2020, Coca-Cola announced that it was increasing its quarterly payment by 2.5% from \$0.40 to \$0.41, representing an annual dividend of \$1.64 in 2020 and a current yield of approximately 3.38%.² In addition, the dividend yield is almost twice the average dividend paid by other soft drink stocks and significantly higher than the 2% average current yield of the broader S&P 500 Index and Dow Jones 30 Index.

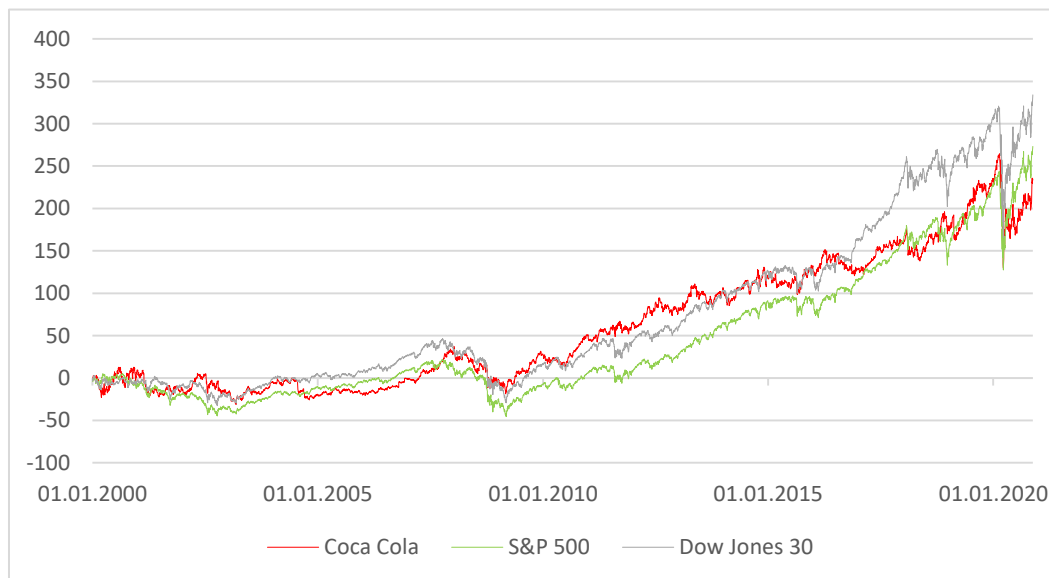
Figure 3: Comparison of the Dividend Yield in %; Source: Bloomberg



² Source: Coca-Cola website

The total return price of Coca-Cola more than doubled in the last 20 years and showed a steady growth after the financial crisis in 2009 until the COVID-19 pandemic in 2020. In comparison with the mentioned indices, the stock of Coca-Cola nearly matched the S&P 500 and slightly underperformed compared to the Dow Jones 30 in the last 20 years, which worsened during the pandemic. From the top price at approximately \$60 at the end of February 2020, the stock price decreased 38% as a result of the global lockdown and the connected slump in out-of-home consumption. Due to emerging hope for a vaccine and the anticipated end of the pandemic, the share price recovered from its low and increased by 37% to \$52.60 on November 17, 2020.

Figure 4: Total Return Comparison in %; Source: Bloomberg



2.3 Operating Segments

In general, TCCC generates net operating revenue through international and domestic concentrates as well as through finished product operations. The concentrate operations are defined by selling syrups, concentrates, and certain finished beverages to authorized bottling partners. To be able to produce and distribute finished beverages, the bottling partners combine the concentrates with sweeteners or water (still or carbonated), depending on the product. The bottling partners and some company-owned bottling firms manufacture, market,

and distribute the finished beverages to vending partners and customers, who ultimately sell the beverages to consumers. The finished product operations generate revenue by selling finished nonalcoholic beverages directly to retailers or distributors.

Figure 5: % of Total Net Operating Revenue Related to Concentrate Operations and Finished Product Operations; Source: Annual Report 2019

Year Ended December 31,	2019	2018	2017
Concentrate operations	55	58	50
Finished product operations	45	42	50
Total	100 %	100%	100%

The two operations are included in the operating structure of the company, which is the basis for its internal financial reporting.

The operational set-up of Coca-Cola is divided into four geographical segments (Asia Pacific; North America; Latin America; and Europe, Middle East, and Africa) and three functional segments (Global Ventures; Bottling Investments; and Corporate, which focuses on strategic initiatives, governance, and the simplification and standardization of transaction processes).

The geographic operating segments gain a large part of their revenue from the production and sale of beverage concentrates and syrups. In some cases, revenue can also be generated from the sale of finished beverages.

The Global Ventures segment was founded in 2018 and focuses on globally scaling acquisitions and associated brands. Thus, the financials of acquired companies like Costa Coffee, the smoothie brand Innocent, the tea brand Doğadan and Coca-Cola's investment in the energy drink brand Monster Beverages are included in this segment.

The Bottling Investments segment is composed of the consolidated or company-owned bottling operations. After the refranchising of large parts of this segment, the current sites of bottlers only exist in Asia and Africa. Consolidated or company-owned bottling operations derive most of their revenue from the sale of finished beverages.³

³ Source: Annual Report 2019 Coca-Cola

Figure 6: Revenue Distribution by Segments; Source: Annual Reports

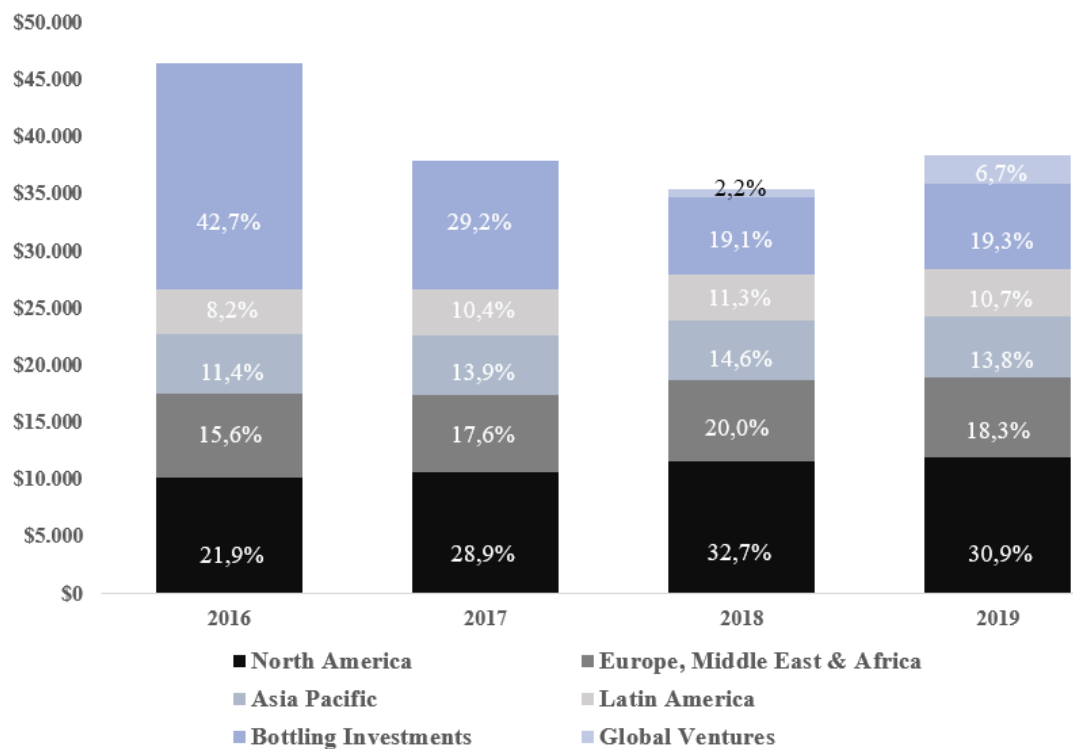


Figure 6 shows that the share of the Bottling Investments segment of total revenue has been drastically decreasing over the last few years. This decrease is related to the extensive refranchising of Coca-Cola's bottling operations, which converted company-owned bottling plants to new franchisees and ultimately outsourced the revenue. Since the bottling business is associated with up to five times more revenue per beverage sold than the concentrates, any impact on the bottler's sales has an amplified effect on Coca-Cola's overall revenue. However, the associated costs of refranchising were also high, and the refranchising therefore had a much smaller impact on the company's bottom line. The refranchising was completed in the beginning of 2019, and the segment is no longer expected to be further reduced.

Over the last four years, North America was the segment with the most significant growth at 17% between 2016 and 2019, followed by Latin America with 8%; this was mainly due to the fact that, as a result of the refranchising in the two segments, some revenue streams from the Bottling Investments segment were reclassified under these areas. The remaining segments did not show significant growth during the last four years. The Corporate segment is not illustrated as it only contributes between 0.2% and 0.3% of the total revenue.

2.4 Strategy

The Coca-Cola Company has announced strategic steps to reorganize and further enable the Coca-Cola system to become more efficient and more consumer-centric through a portfolio of drinks positioned to grow in a more rapidly changing marketplace.

The first step in achieving these goals is to prioritize fewer but larger and stronger brands to target each of the different consumer needs. Of the 400 master brands (describes an overarching brand under which various products are sold) owned by TCCC, more than half are brands from a single country, with little to no scale. The combined total sales of these brands are only approximately 2% of Coca-Cola's total sales. These brands are not only growing more slowly than the company average but also still require significant resources and investment to maintain their growth. Dismantling the brands has the advantage that Coca-Cola can redirect resources to the brands that have the greatest future opportunities. Therefore, TCCC will try to expand leadership in the geographical segments with a focused brand portfolio because the large and stronger brands have both higher scale and profitability compared to a single-country brand.

In terms of marketing effectiveness and efficiency, several areas will be targeted to improve operations. Coca-Cola is striving to bring marketing more into the digital age as new technologies allow data to be collected and evaluated faster, and it is easier to focus more on the impact of messages and their alignment within market execution plans through targeted, event-driven initiatives.

Coca-Cola's system is moving further away from a complicated organizational structure led by 17 operating units to a network model led by only seven operating units. The operating units will be strongly interlinked with each other, have a uniform structure, and focus on eliminating resource duplication and faster scaling of new products.

The new operating model is leaner, more agile, and faster, and Coca-Cola expects to decrease structural costs and clear resources to support growth. Hence, the organization is well positioned for the future and poised to emerge stronger from the pandemic and to return quickly to the growth path of 2019.

3. Industry Analysis

3.1 Macroeconomic Situation

The year 2020 was marked by the spread of the COVID-19 virus and the associated challenges for individuals and the economy. The lockdowns in March 2020, which were enforced almost worldwide to stop the increased incidence of infection, caused immense damage to individual companies and the global economy. Stock indices around the world plummeted (e.g. S&P 500 -34%), consumption and production of goods and services were severely restricted, and forecasts for economic growth had to be massively revised downwards.⁴

As a consequence of these events, macroeconomic factors such as real gross domestic product (GDP) had the largest drop ever recorded. For example, the GDP in the US declined in the second quarter of 2020 by 9.5% and in the European Union by 12.1% with comparison to the previous year.⁵ This economic downturn prompted economic policymakers worldwide to resort to extraordinary measures to cushion the economic consequences of the COVID-19 pandemic. Central banks, including the European Central Bank (ECB) and the US Federal Reserve (Fed), have implemented extensive measures to strengthen the liquidity supply of the banking system and to increase lending. Due to the economic aid packages and the decreased incidence of the virus over the summer months, the economy—and thus also the stock indices—recovered in the third quarter.

The real GDP increased in the third quarter of 2020 by 7.4% in the US and 11.6% in the European Union compared with the previous quarter.⁶ These positive developments can be explained by a recovery in domestic demand as well as an increase in goods and services exports. Furthermore, the stock indices also rose sharply from their COVID-19 lows in March 2020 (e.g., the S&P 500 increased by more than 50%).⁷ The recovery in the stock markets was mainly driven by technology and "stay at home" (e.g., delivery and streaming services) stocks as the need for greater digitalization benefited these companies.

⁴ Source: Bloomberg

⁵ Source: OECD, 2020

⁶ Source: OECD, 2020

⁷ Source: Bloomberg

Nevertheless, the pandemic situation has remained prevalent, and the impact of increasing numbers of infections worldwide is already visible in the fourth quarter. Since neither politicians nor pandemic experts know exactly how long the pandemic will last or how long it will take to effectively implement the vaccine, it is difficult to forecast the economic performance of the individual countries in the near future. Given the current situation in the fourth quarter wherein restaurants, bars, and events are closed, Coca-Cola is facing a drop in sales and consumption around the world. The sales of the non-alcoholic beverage industry are expected to have fallen between 15-20% in 2020. While the first half of 2021 is expected to still be negatively affected by the pandemic, 2022 is anticipated to return to 2019 levels of consumption.⁸

3.2 Industry Overview and Coca-Cola's Market Positions

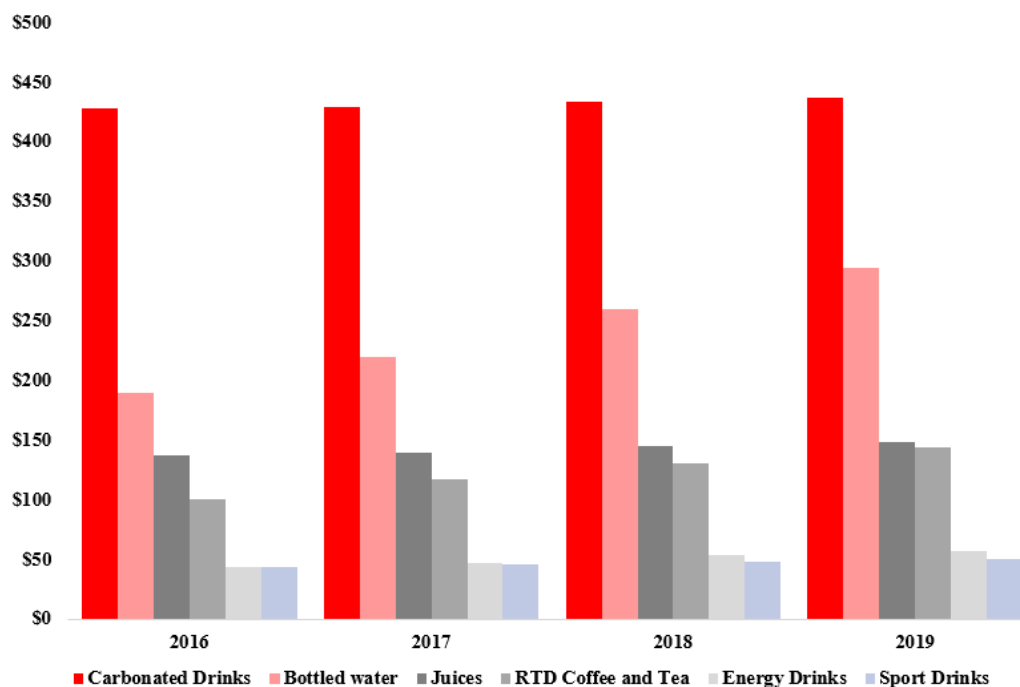
TCCC belongs to the non-alcoholic beverage industry, which had a market size of \$1.130 billion in 2019 and which is assumed to reach \$1.443 billion by 2025 with a compounded annual growth rate (CAGR) of 4.1%.⁹

Based on product type, the market can be split into carbonated drinks (carbonated soft drinks [CSD], diet, and low-sugar drinks), bottled water, juices, energy drinks, ready-to-drink (RTD) coffee and tea, and sport drinks. Carbonated drinks are the most important category and account for 39% of the industry, with a global turnover of \$437 billion in 2019 that is dominated by the CSD sub-segment (e.g. Fanta, Sprite, and Trademark Cola) with a size of \$328 billion (75% category's total turnover).

⁸ Source: Bloomberg

⁹ Source: Bloomberg

Figure 7: Historical Beverage Segments Revenue in Billions; Source: Bloomberg



According to Figure 7, next to carbonated drinks, bottled water (26%) and juices (13%) were the most important categories in 2019. Over the last four years, the growth of carbonated drinks stagnated (CAGR of 1.1%), driven by a shift in consumers' behavior. Consumers are gradually reducing the intake of CSDs due to growing awareness of the harmful effects of high sugar consumption, the trend to diet, and lower calorie varieties of carbonated drinks. While the share of CSDs has stagnated in recent years, diet and zero-sugar drinks have grown at double-digit rates, thus generating the slight growth in carbonated drinks revenue¹⁰. The healthier segments of bottled water (CAGR of 9.5%) and RTD coffee and tea (CAGR of 7.5%) were able to significantly increase their share of total sales over the last four years. These drinks are enjoying increasing popularity among health-conscious consumers and have become an important trend in the market.

This trend towards healthier beverages will continue and is thus reflected in the expected growth for the individual categories over the next five years. According to Bloomberg forecasts (Figure 8), the bottled water and RTD tea and coffee segments are expected to be the fastest-growing segments. Meanwhile, the carbonated drinks segment is expected to grow at an accelerated rate compared to previous years due to the greater demand and popularity of diet and low-sugar drinks.

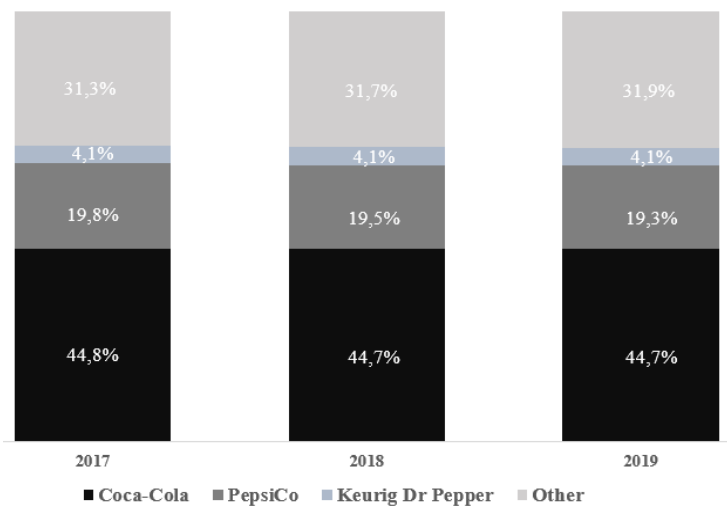
¹⁰ Source: Bloomberg

Figure 8: Main Global Beverage Development; Source: Bloomberg

in Sbillion	2019	E2025	'20-25' CAGR
Carbonated Drinks	437	525	3,1%
Bottled Water	294	415	5,9%
Juice	148	174	2,7%
RTD Tea & Coffee	144	193	5,0%
Energy Drinks	57	72	4,0%
Sport Drinks	50	64	4,2%
Total Market	1130	1443	4,2%

Within the CSD segment of the industry (more than 50% of total TCCC revenue), TCCC is the leader with a constant volume-based share (units sold) of 44.7%, ahead of both Pepsi (19.3%) and Keurig Dr. Pepper (4.1%).¹¹ While its strong leadership position in the CSD category provides substantial distribution efficiencies over rivals, Coca-Cola has not been able to increase its market share in recent years.

Figure 9: Global Carbonated Soft-Drink Leader Share; Source: Bloomberg



Nevertheless, Coca-Cola has the highest value share globally in all non-alcoholic beverage segments except for energy and sports drinks; this underlines that Coca-Cola is well positioned in all areas in the market and can actively participate in the fast-growing segments of bottled water and RTD tea and coffee with the potential to expand its market share.

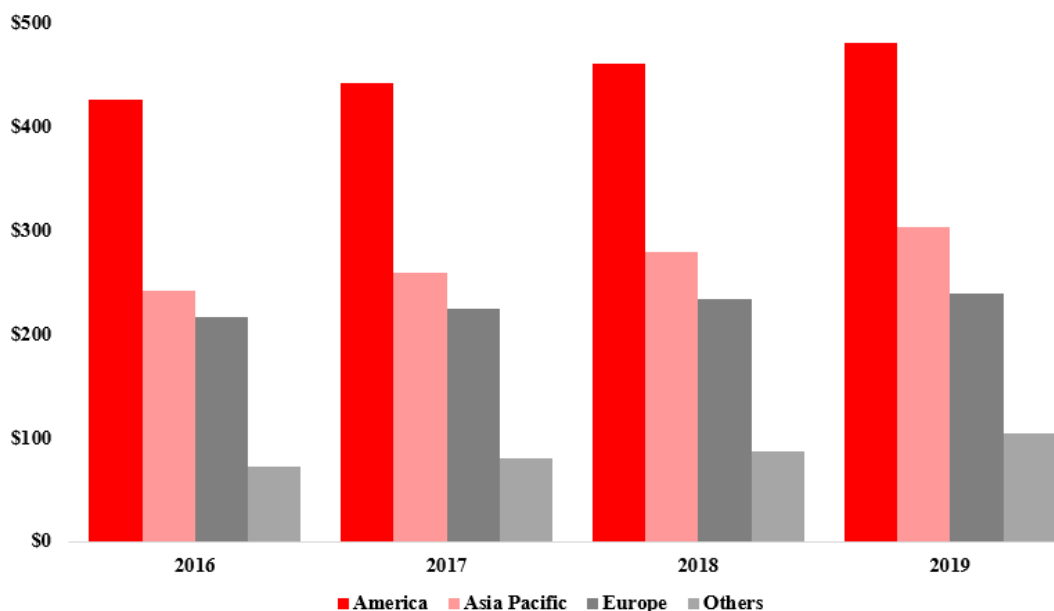
¹¹ Source: Bloomberg

Figure 10: Coca-Cola's Exposure to Beverage Segments; Source Coca-Cola Website

Carbonate Soft Drinks	Waters & Hydration	Juice	RTD Tea & Coffee	Energy	Sport Drinks
45% 2019 Value Share	15% 2019 Value Share	10% 2019 Value Share	15% 2019 Value Share	15% 2019 Value Share	15% 2019 Value Share
#1 Value Share Position	#1 Value Share Position	#1 Value Share Position	#1 Value Share Position	#2 Value Share Position	#2 Value Share Position

Looking at the different global regions of the non-alcoholic beverage industry, America (North America and Latin America) has been the strongest market in terms of sales, while growth in the Asia Pacific region was the highest (CAGR of 6.0%) over the last four years. This strong growth in Asia was achieved primarily through the rapid development of the Chinese and Indian markets. While the European market showed slight growth, the American market grew mainly through the growth in Latin America.

Figure 11: Market Split in Revenue Billion; Source: Bloomberg



It is expected that the greatest future growth potential will be in developing and emerging markets (especially Asia Pacific and Africa), driven by their burgeoning middle classes and their increasing demand.

4. Valuation of Coca-Cola

For the valuation of Coca-Cola, two models were used. In the first section, all assumptions to forecast the FCFF are illustrated. The main drivers of the FCFF are operating revenue, operating expenses, depreciation and amortization, capital expenditure, and working capital. The WACC and all the associated components follow to determine the EV. After calculating the firm value, the equity value was calculated to obtain a share price for Coca-Cola.

In the second section, relative valuation is used because it tests the results of the DCF by valuing assets based on the equity and enterprise multiples of comparable peers in the market.

Seven years are used as the forecasting period for this dissertation, ranging from December 31, 2020, to the December 31, 2027. This period was chosen because 2022 is expected to be the first year without any effect of the current pandemic in terms of TCCC's performance, and thus some segments are expected to reach a steady state in the seventh year, five years after the last effects of the pandemic.

In order to make a suitable forecast, published information from Coca-Cola, largely from the company's annual reports, was used to gain a better understanding of the development of the individual positions in the financial statements. Analysis of the past three to four years in the financial statements was used to identify trends between the quarters and years. Furthermore, the strategic plan of Coca-Cola, forecasted market data, and economic development in the different geographical segments were considered to forecast the revenue.

4.1 Operating Revenue

Operating revenue, which is the revenue Coca-Cola gains from its business activities, is one of the most important variables in the income statement and in the valuation model because other financial positions are derived from it.

First, the overall approach to forecast revenue is illustrated, followed by the forecast for individual segments (Europe, Middle East, and Africa; Latin America; North America; Asia Pacific; Global Ventures; Bottling Investments; and Corporate). The Corporate segment is not analyzed in detail as it contributes to only 0.2% of the total revenue and is therefore not relevant for future growth. The distinction between the segments is particularly important because each has its own growth prospects based on different historical performances and future expectations.

As Coca-Cola is a globally diversified company and generates more than 50% of its revenue outside of the United States, Coca-Cola heavily relies on favorable currency exchange rates. Since there is no clear trend in recent years as to whether this has had a positive or negative effect on its revenue and it is hard to predict how changes in currency exchange rates will impact revenues, the currency effect is not explicitly forecasted in this dissertation. Nevertheless, it should be noted that currency effects can pose an enormous risk to Coca-Cola's revenue, although Coca-Cola uses hedging strategies to minimize these risks.

Furthermore, it is important to note that the divestiture or acquisition of a company has an impact on Coca-Cola's revenue. As Coca-Cola is constantly striving to renew and expand its portfolio, divestitures and acquisitions are made every year. The dissertation takes into consideration the officially announced divestiture and acquisition process that focuses on the divestiture of more than half of the 400 master brands over the next few years (these brands only account for 2% of TCCC's total revenue, and each is only offered in one country). TCCC intends to concentrate on fewer but stronger and more consumer-oriented brands. In addition, the CEO of Coca-Cola, James Quincey, mentioned that there will not be as many acquisitions in the future as in the past because the company wants to increasingly focus on product development. Nevertheless, acquisitions will remain an important tool for Coca-Cola to gain new market shares or enter new markets. Given the described constellation of aims, it is therefore expected that the effects of acquisition and divestiture will cancel each other out and are thus not explicitly forecasted in the dissertation.

Forecasting Approach

According to the current pandemic and its significant impact on Coca-Cola's revenue, a quarter-over-quarter comparison was performed for 2021 and Q4 2020,¹² and all assumptions were made as of Q3 2020; this was mainly because both Q4 in 2020 and Q1 and Q2 in 2021 are expected to be directly affected by the pandemic. For Q3 and Q4 in 2021, it is assumed that the already begun distribution of the vaccine (started in the end of December) in many places in the world will ensure a return to everyday life without restrictions for most people.

However, in order to calculate the impact of the pandemic, the average growth of the quarters of the individual segments from 2017 to 2019 without restrictions was compared to the first three quarters of 2020 to better understand the financial impact of the pandemic on Coca-Cola's revenue.

A significant decline in overall revenue was observed in Q2 2020 (-27% compared to Q2 2019) as the almost worldwide closure of restaurants and events heavily affected out-of-home consumption. The recovery in Q3 (-9% compared to Q3 2019) due to the partially lifted restrictions was halted by the "second wave" of the pandemic in Q4. Hence, for calculating Q4 2020, an average of the effect of the pandemic in Q3 and Q2 in 2020 was built and subtracted from the average development from Q3 to Q4 2017 to 2019.

Nevertheless, through the implementation of the vaccine in the end of December 2020 and the expected easing of restrictions, a recovery of revenue is expected for the first half of 2021 compared to the pandemic-affected quarters of the previous year, followed by a significantly stronger Q3 and Q4. Therefore, revenue in 2021 is assumed to recover compared to 2020, but it will still be significantly lower than the levels seen in 2019 mainly due to the pandemic restrictions in the first half of the year.

For the rest of the forecasting period, the revenue growth for the different segments is based on their historical performance from 2017 to 2019 and adjusted for company strategy and future market trends. Furthermore, it is assumed that TCCC will be back to 2019 revenue levels by 2022.

As stated above, it is assumed that the currency and acquisitions/divestures impact is zero, therefore the revenue forecast is based on the organic revenue growth of each segment. The organic revenue consists of organic volume growth and the price mix.

¹² For quarter comparison see Appendix 15.

In the table below, historical and future organic growth rates from each segment and the development of the total revenue are summarized. The assumptions for the individual segments are explained in the following chapters.

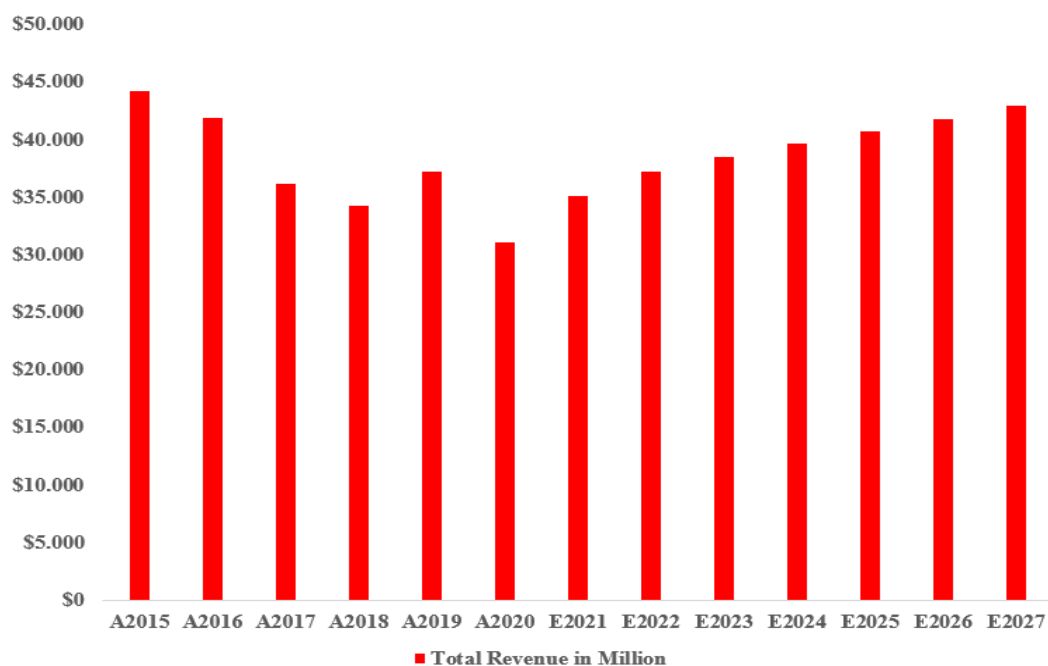
Figure 12: Historical Organic Revenue Growth Rates; Source: Annual Reports

Segments	A2017	A2018	A2019	A2020	Average 17-19
Revenue Growth %					
North America	3%	0%	3%	-7%	2%
Bottling Investments	-7%	-12%	7%	-29%	-4%
Europe, Middle East & Africa	4%	7%	5%	-15%	5%
Asia Pacific	1%	5%	5%	-15%	4%
Latin America	6%	11%	13%	-24%	10%
Global Ventures	-	-	7%	-31%	7%

Figure 13: Forecasted Organic Revenue Growth Rates; Source: Own Calculations

Segments	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Revenue Growth %							
North America	4%	4%	2%	2%	2%	1,8%	1,8%
Bottling Investments	23%	15%	3%	3%	3%	3%	3%
Europe, Middle East & Africa	9%	5%	4%	3,5%	3%	2,5%	2%
Asia Pacific	8%	7%	6%	6%	6%	5,5%	5%
Latin America	17%	6%	5%	4%	3%	2,5%	2,5%
Global Ventures	31%	15%	10%	7%	5%	4%	4%

Figure 14: Development Total Revenue; Source: Annual Reports and Own Calculations



North America

As the highest contributor to Coca-Cola's revenue (comprising 31% of total revenue in 2019), North America is the most important segment. Over the last few years, its historical performance has been stable, with an average growth of 2%.

Within North America, CSD is the most important category; with 65% of the unit case volume in 2019, Coca-Cola's performance is highly dependent on this market. Given the historic market performance of CSD in North America, it has surpassed its climax and has declined by 2% since 2017 and is expected to further decline in the forecasted period. To react to changing consumer behavior and the stricter regulations regarding the use of sugar, TCCC launched other healthier beverage products like Smartwater, premium water, and Diet Coca-Cola. Clearly defined brands, packages, and sales strategies—especially for bottled water and diet drinks—have grown by double digits in the last two years, enabling Coca-Cola to mitigate the trend of the declining CSD volume.

Because of its strong positioning in the increasing market of water and diet drinks in North America, a constant growth of Coca-Cola's revenue is assumed, with an expected growth rate following the historical average of 2% from 2022 until 2025. After 2025, it is expected that revenue will grow at the same pace as the forecasted GDP growth of North America (1.8%).

Bottling Investments

Over the past few years, the Bottling Investments segment was the worst performer, with an average revenue growth of -4%. This low growth rate is related to Coca-Cola's conversion from a beverage and bottling company to a purer focus on just beverages. The declining revenue is therefore attributable to the extensive refranchising of Coca-Cola's bottling operation. The huge increase in revenue growth from 2018 to 2019 was mainly due to an acquisition of a bottling operation in the Philippines, which increased volume growth by 6% and placed the Bottling Investments segment as the second highest contributor (share of 19.3% in 2019) to total revenue in 2019.

After finishing the refranchising in 2019, the revenue growth of this segment is expected to recover from the pandemic in 2022 and then grow at a constant growth rate of 3%—similar to

global GDP growth—on the basis of increased efficiency and price mix through the refranchising.¹³

Europe, Middle East, and Africa

This segment is the third highest contributor to Coca-Cola's total revenue (share of 18.3% in 2019), with an average growth of 5% over the last few years. As its name indicates, three markets constitute this segment, with Europe generating the highest volume share (52% in 2019) of the different markets.

The segment is highly dependent on the CSD category, which represented 78% of the unit case volume in 2019. In Europe, the growth of CSD has decreased over the years (growing only 0.5% in 2019) due to a shift in consumers' attitudes towards sugar consumption and, as in North America, attempts are being made to counter this trend by offering healthier beverages. As the market for healthier beverages is much more contested in Europe and CSD are expected to stagnate over the forecasted period, a slightly negative trend in Europe is assumed.

Due to the strong growth rates in the CSD category in Middle East and Africa (7.5% in 2019), it is expected that the Middle East and Africa will be the most important areas for growth in this segment, which underlines Coca-Cola's heavy investments in manufacturing and distribution in these markets. The rapidly growing population (e.g., 2% growth every year is expected in Africa until 2025, according to the World Bank) of young people in the regions makes this a particularly valuable demographic group, especially as local economies improve, and more people have disposable income. The high expected revenue CAGR (2019-2025) of 9.1% for non-alcoholic drinks in Africa highlights this growth potential.¹⁴

Overall, it is assumed that the Europe, Middle East, and Africa segment shows a gradual growth decrease of 0.5% after the pandemic until 2027 (2%) because it is expected that the advantage of the growing economic and demographic developments for the price mix and volume growth in Middle East and Africa cannot fully compensate the stagnation in volume growth in Europe.

¹³ Source: IMF

¹⁴ Source: Statista

Asia Pacific

Over the last few years, the average growth rate of the Asia Pacific segment was 4%. The growth rate of the revenue in this segment has been gradually increasing, driven by CSD (which grew 8% from 2018 to 2019), the main beverage category of the segment, especially in India and China.

With rising urbanization, increasing populations, fast-growing GDP per capita rates (e.g., expected 8% CAGR for China from 2020-2025), and the fastest growing markets for the consumption of non-alcoholic beverages, it is expected that the market in Asia Pacific will clearly outperform its historical average growth rates¹⁵.

These high growth rates ranging from 7% to 5.5% (2022-27) are compounded by Coca-Cola's innovation in the segment through more than 300 new product launches, mainly for healthier beverages, in 2019 to serve the demand in the fastest growing market.

Latin America

This segment has shown the strongest development over the last few years, with an average organic growth rate of 10% and boosted by a strong performance of CSD in Mexico and Brazil.

It is assumed that after recovery from the pandemic in 2022, the volume growth will slow down to 5% in 2023 following market trend towards healthier beverages, decreasing the strong growth of CSD. By 2025, the growth is expected to approach the forecasted GDP growth of 2.5% for Latin America overall.¹⁶

Global Ventures

The newly created Global Ventures segment, made in 2018, focuses on global acquisitions, including Innocent, Doğadan, Costa Coffee, and the investment in Monster Beverages. The high growth rate from 2018 to 2019 (7%) relates to the strong performance of Innocent and Monster Beverages.

¹⁵ Source: Statista; See Appendix 1.

¹⁶ Source: IMF

Through Costa, Doğadan, and Monster, TCCC has strong market shares in the growing markets of RTD coffee and tea and energy drinks. It is expected that the demand for RTD coffee and tea as well as energy drinks will increase rapidly due to the growing demand for healthier beverages. Their status as a healthier substitute to CSD will lead to strong growth, especially in developed countries. Furthermore, the smoothie producer Innocent will also benefit strongly from increasing demand due to higher health awareness among consumers.

With all companies participating in the key trend of healthier beverages, this segment is expected to experience the highest growth rates after recovery from the pandemic (10% in 2023). After 2023, it is assumed that the segment's growth will slow down each year to arrive at 4% by 2027. This deceleration is driven by an expected increase in global competition that decreases TCCC's growth aspirations.

4.2 Operating Expenses

TCCC classifies most of its expenses under cost of goods sold (COGS) and Selling, General and Administrative (SG&A), which accounted for a combined 96% of total expenses in 2020. The remaining 4% are attributable to other operating charges.¹⁷ Overall, total expenses have been reduced significantly in recent years, from \$27.8 billion in 2017 to \$22.4 billion in 2020, driven by the refranchising of the bottling segment.

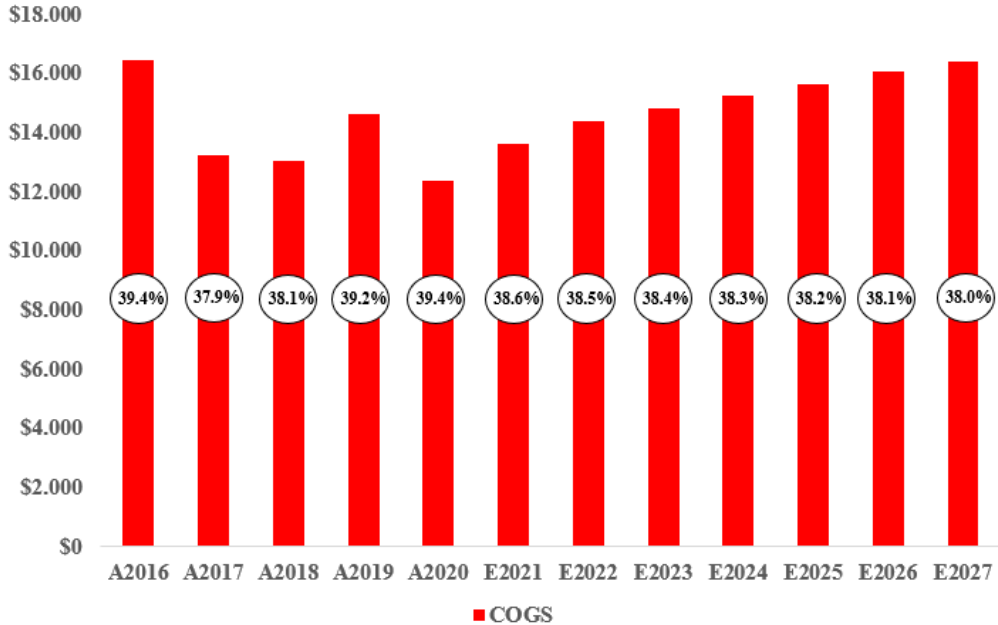
The approach used to forecast the expenses is similar to that used for revenue. The historical development of the individual expense positions relative to operating revenue was used to understand the future development and derive trends. In addition, strategic decisions of Coca-Cola regarding its future positioning were taken into account. The development of expenses in the context of the pandemic in Q4 2020 and the first half year of 2021 was determined under the same assumptions applied to revenue. For the subsequent years (2022-2027), the historical average of the respective expense positions relative to revenue was used and individually adjusted along specific assumptions.

¹⁷ See Appendix 2.

Cost of Goods Sold (COGS)

The COGS contributed to 55% of the total expenses in 2020 and included mainly the costs of sweeteners, bottles, metal, handling, and shipping. Over the last four years, TCCC decreased its COGS significantly through the refranchising of the bottling segment and the average historical relation of COGS to revenue was 38.7%. It is assumed that TCCC will become more cost-efficient with the finalization of the refranchising effort and the associated reduction in structural costs. The COGS as a percentage of revenue will gradually decrease over the forecasted period to 38.0% in 2027.

Figure 15: Development of the COGS and % Relation to Revenue; Source: Annual Reports and Own Calculations

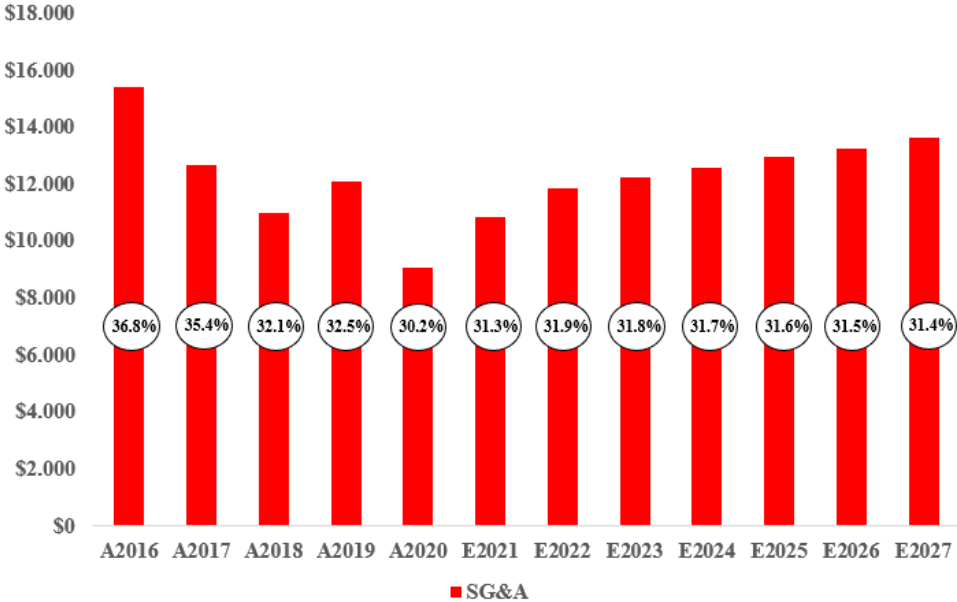


Selling, General and Administrative (SG&A)

Selling, General and Administrative costs were responsible for 41% of total expenses in 2020 and include selling and distribution, advertising, marketing, and other costs. Similar to the COGS, SG&A decreased over the last four years due to the reductions resulting from refranchising the bottling segment, with a historical average relation of 32.5% to revenue. To further improve margins, TCCC started a productivity program to achieve additional efficiencies in marketing expenditures and supply chain using more online marketing and

targeted advertisement. Therefore, it is expected that TCCC will further decrease SG&A as a percentage of revenue to 31.4% by 2027.

Figure 16: Development of SG&A and % Relation to Revenue; Source: Annual Reports and Own Calculations



Overall, TCCC was able to strongly improve its efficiency and effectiveness over the last few years by refranchising the capital-intensive and low-margin Bottling Investments segment and through other operating efficiency programs. In the forecasted period, it is assumed that TCCC will further improve its profitability but in much smaller steps; the increased profitability is also reflected in the EBIT margin below (increasing from 27.6% to 29.0% over the forecasted period).

Figure 17: Development EBIT Margin; Source: Annual Reports and Own Calculations



3.3 Gross Intangible Assets and Property, Plant, and Equipment (PP&E)

In order to forecast depreciation and amortization (D&A), it is necessary to first forecast gross intangible assets and property, plant, and equipment (PP&E) as D&A are directly derived from these values. The driver for forecasting PP&E and intangible assets is the average historical percentage share of PP&E and intangible assets in relation to revenue.¹⁸

It is assumed that Coca-Cola will not have to acquire fixed assets at the same rate as revenue increase as the company becomes more efficient with its capital investments (higher PP&E turnover is a measure of how efficient TCCC is at generating revenue from fixed assets).

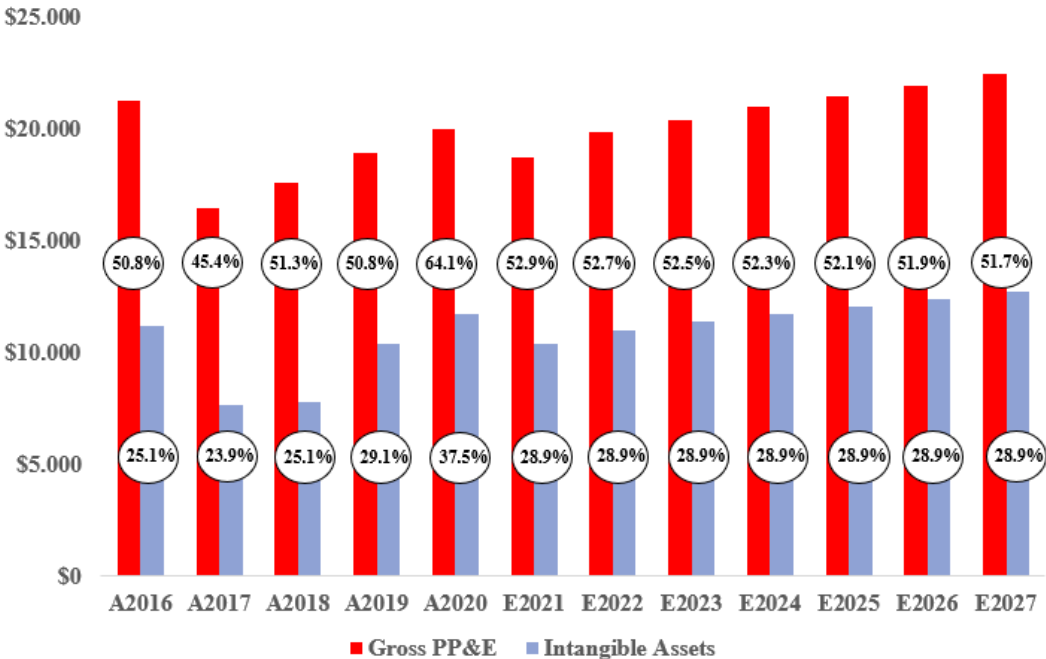
Therefore, it is expected that gross PP&E's average percentage share of revenue (52.9% over the last four years) will decrease slightly (from 52.9% to 51.7%) over the forecasted period.¹⁹

For intangible assets, on the other hand, the average percentage of revenue over the past few years will be maintained because it is not expected that TCCC will invest more in the development of intangible assets than it has done historically.

¹⁸ For historical development, see Appendix 3.

¹⁹ For forecasted period, see Appendix 4.

Figure 18: Development of Gross PP&E and Intangible Assets and % Relation to Revenue; Source: Annual Reports and Own Calculations

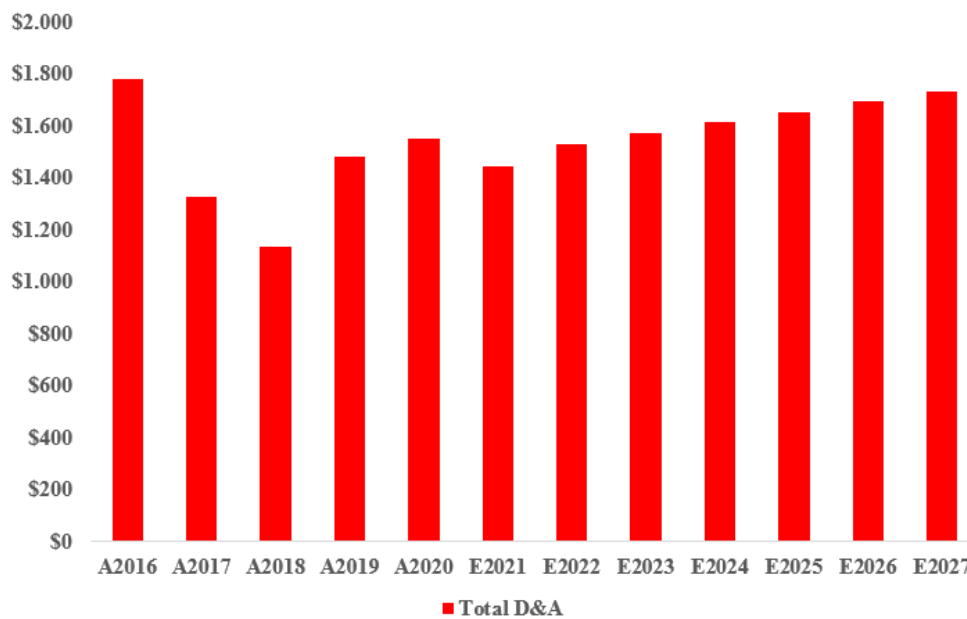


4.4 Depreciation and Amortization

In order to determine D&A, the average historical percentage of depreciation (7.1%) relative to gross PP&E and amortization (1.1%) to intangible assets over the last four years was applied. It is assumed that the forecasted D&A will have the same ratio as the historical D&A since no changes in D&A accounting methods are expected. ²⁰

²⁰ For historical and forecasted period, see Appendix 5 and 6.

Figure 19: Development of D&A; Source: Annual Reports and Own Calculations



4.5 Capital Expenditure (Capex)

Capital expenditure, also known as capex, is a measure of how much a company invests in existing and new fixed assets either to maintain or grow the business. Capex can be estimated according to the following formula.

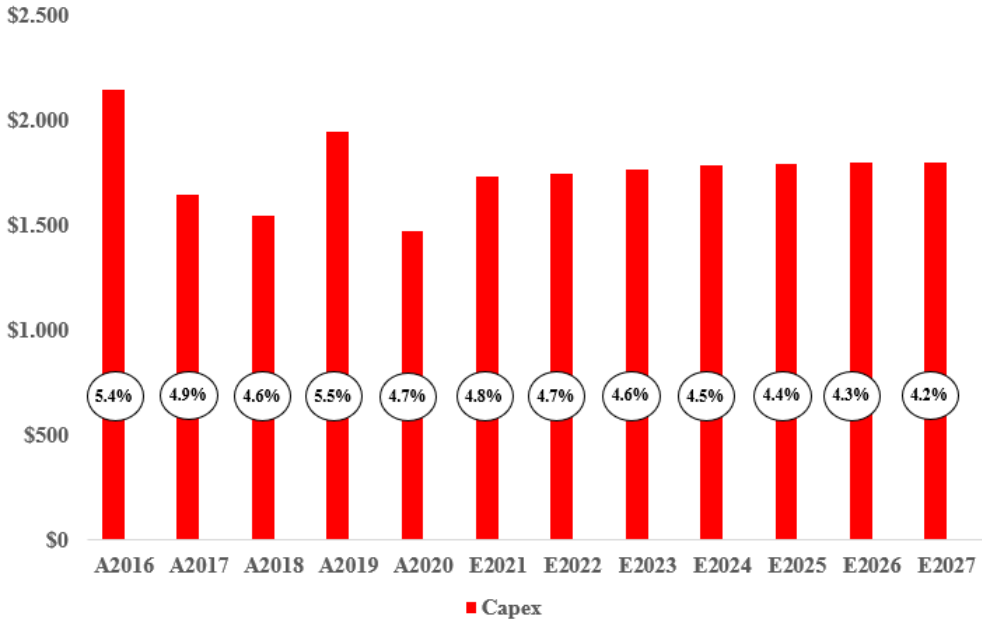
$$\text{Capex} = \text{net PP\&E (current period)} - \text{net PP\&E (prior period)} + \text{Depreciation (current period)}$$

However, after following the formula, the capex value seems too high compared to the historical ones. As TCCC reports its capex in relation to revenue, this approach is applied and based on the historical average percentage relation from capex to revenue (4.8%).

It is assumed that the capex will gradually converge with D&A on the path to a steady state as it is not expected that the company will grow heavily or will invest more to renew its assets than it has done historically. According to this assumption, capex as a percentage relation to revenue will gradually decrease 0.1% over the forecasted period and the Capex/D&A ratio will decline to 1.04 by 2027.²¹

²¹ For Capex/D&A ratio see Appendix 7.

Figure 20: Development capex and % Relation to Revenue; Source: Annual Reports and Own Calculations



4.6 Working Capital

The working capital equals current assets minus current liabilities. In general, working capital represents the company's ability to meet its short-term obligations as well as operational efficiency, meaning the efficient use of both current liabilities and assets.

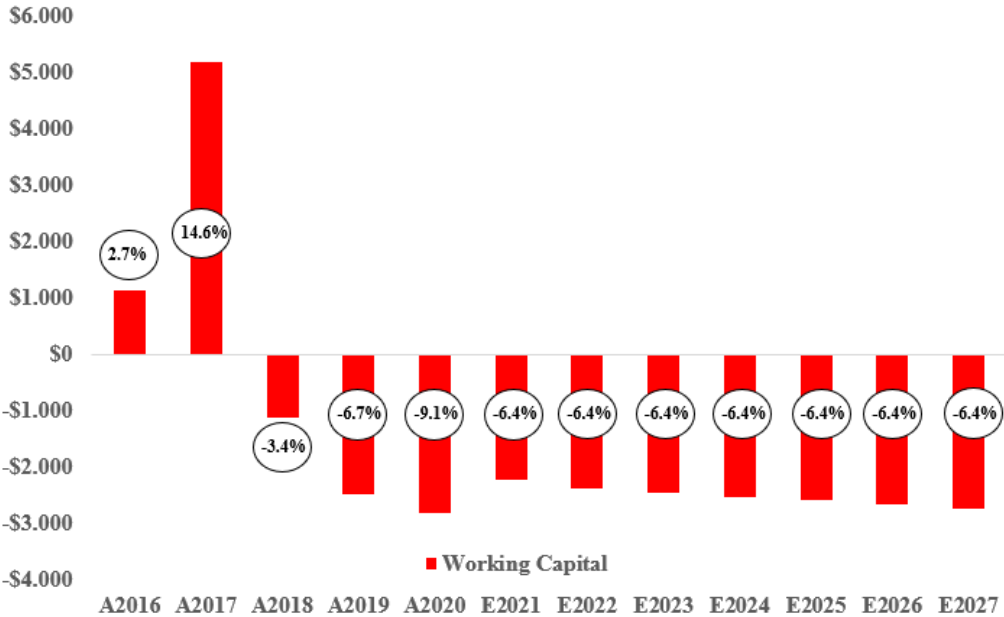
The current assets consist of all current assets necessary for the business, excluding cash and marketable securities. In this case, trade accounts receivable, inventories, prepaid expenses, and other current assets are included in the total current assets. Accounts payable, accrued expense, and other current liabilities (accrued income taxes) are included in the total current liabilities as these are directly linked to the ongoing business.

At TCCC, current liabilities exceeded current assets in the last three years, which led to negative working capital resulting from the high amount of accounts payable and accrued expense and the large cash position. The reason for the positive working capital in 2016 and 2017 was that in these years, the investment in CCBA (Coca-Cola Beverages Africa) was classified as held for sale and included in other current assets as a discontinued operation. As TCCC changed its plans in 2018 and no longer wanted to divest CCBA, it was then reported in the company's continuing operations.

Moreover, Coca-Cola has high bargaining power and is consequently able to obtain beneficial terms from its suppliers. The increase in trade payables and accruals over the last four years is due to the extension of payment terms with suppliers; this has the advantage that Coca-Cola is able to free up more of their working capital and unlock cash to use for other expenses or to increase efficiency. Hence, a negative working capital has become favorable for Coca-Cola as it can cover its operating expenses through interest-free credit granted by suppliers.

To forecast working capital, the average historical percentage relationship (-6%) between working capital and revenue (2018-2020) was used as the forecast driver.²² It is assumed that Coca-Cola will show the same efficiency as in the last few years.

Figure 21: Development of Working Capital and % Relation to Revenue; Source: Annual Reports and Own Calculations



4.7 Tax Rate

The effective tax rate for the forecasting period is expected to be equal to the average of the last three years reported by Coca-Cola on its financial statements, namely 19.1%. The stable effective tax implies that TCCC will not pay deferred taxes during the forecasting period. The

²² For historical and forecasted period, see Appendices 8 and 9.

tax rate of 2017 was excluded given that a one-time tax charge occurred as a result of the tax reform act.

4.8 Weighted Average Cost of Capital (WACC)

As mentioned in the Literature Review chapter, to calculate the WACC, the cost of debt and equity as well as their weights in relation to the company's capital structure have to be estimated. The cost of debt is analyzed first, followed by the cost of equity and its components along with the weights of equity and debt.

Figure 22: All Components of the WACC

WACC	5,41%
Cost of Debt	1,16%
Cost of Equity	6,28%
D+E	273.155
MV of Equity (27.11.20)	226.452
Net Debt (D)	46.703
E/(D+E)	82,90%
D/(D+E)	17,10%
D/E	20,62%

4.8.1 Cost of Debt

In order to calculate Coca-Cola's cost of debt, the approach of Koller et al. (2005) was applied, which involved computing the cost of debt by using the YTM of Coca-Cola's outstanding bonds. A minimum rating of BBB and a debt structure that mainly consists of bonds is necessary to successfully apply this approach. Coca-Cola fulfills these criteria with a debt rating of A+. To calculate the cost of debt, the risk-free rate and the credit spread are added together.

The risk-free rate is the US government bond yield with the same maturity as the average maturity of Coca-Cola's bonds. A US Government Bond with a maturity of 11 years was chosen with a yield of 0.85% (equal to the average maturity of Coca-Cola's bonds).

The credit spread is calculated as the difference between the individual YTMs of the bonds (based on Bloomberg data) and the corresponding risk-free rate for each currency.²³ As

²³ For Credit spread calculation, see Appendix 10.

reported by Bloomberg, Coca-Cola has 41 outstanding bonds in four currencies, namely EUR, USD, CHF, and AUD, with a total volume of \$32 billion. The corresponding government bonds with the same maturity were considered according to the risk-free rates for each country (for EUR bonds, the German Government Bond was used). The overall weighted average credit spread amounts to 0.58%.

Combined with the risk-free rate, the overall pre-tax cost of debt is 1.43% for TCCC.

To arrive at the after-tax cost of debt, which is needed to calculate the WACC, the tax shield has to be included as per the following formula:

$$\text{After-Tax Cost of Debt} = \text{Cost of Debt} \times (1 - T)$$

Multiplied by one minus the above-mentioned tax rate of 19.1%, the after-tax cost of debt for TCCC amounts to 1.16%.

4.8.2 Cost of Equity

The cost of equity consists of three parameters: the risk-free rate, market risk premium, and the beta. After determining these values, the cost of equity can be defined using the following formula:

$$\text{Cost of equity} = \text{Risk free rate of return} + \text{Beta} \times \text{Market Risk Premium}$$

After calculating all components, TCCC's cost of equity amounts to

$$\text{Cost of equity} = 0.88\% + 0.81 \times 6.7\% = 6.28\%$$

4.8.2.1 Risk-Free Rate

The risk-free rate used to determine the cost of equity should be measured in line with the cash flow statement and the duration of the forecasted period. This means that as cash flows are estimated in US dollars, the risk-free rate is the US Government Bond rate. The 10-Year US Treasury rate was chosen as a proxy for the risk-free rate because the selected period is seven years and includes an infinite growth forecast afterwards. The 10-Year US Government Bond rate is 0.88% as per November 25, 2020.

4.8.2.2 Market Risk Premium

To calculate the global market risk premium, the market risk premium database from Damodaran was used. For each region, the average of the respective country-based market risk premiums (published by Damodaran) was calculated as TCCC only reports its revenue by region.

The regional market risk premiums were multiplied by the relative contribution of the regions to TCCC's overall revenue (Figure 23). For this calculation, the revenue of the globally operating segments of Global Ventures and Corporate was divided equally between all regions. The revenue of the Bottling Investments segment was allocated by 50% to Asia Pacific and 50% to Europe, Middle East and Africa because this segment only operates in Asia and Africa. The year 2019 was used for revenue weighting as this is more appropriate than 2020 due to the circumstances of the pandemic.

As TCCC has a highly diversified presence, there is no need to include a specific country risk premium (country risk premium of zero assumed). After applying the described method, the market risk premium is 6.7%.

Figure 23: Market Risk Premium; Source: Damodaran Website and Own Calculations

Segments	Weights 2019	ERP	Total (Weights*ERP)
North America	33,7%	4,9%	1,7%
Latin America	12,8%	7,8%	1,0%
Asia Pacific	24,5%	7,3%	1,8%
Europe, Middel East & Africa	29,0%	7,8%	2,2%
			6,7%

4.8.2.3 Beta

To determine the beta of Coca-Cola, a linear regression was performed. While the independent variable consists of weekly variation of Coca-Cola stock over the last three years, the variation of the S&P 500 was used as a dependent variable over the same period. The slope of the linear regression, which is equivalent to the raw beta, equals 0.71.

Because this calculation is based on historical data and raises the question of the extent to which the result is a suitable indicator for the future risk profile of TCCC, the beta needs to be

adjusted. After applying the commonly used Blume adjustment, the adjusted beta amounts to 0.81.

4.8.3 Weights of Equity and Debt

To compute the WACC, it is necessary to know the weights of equity and debt in Coca-Cola's capital structure along with the respective market values.

The market value of equity was calculated by multiplying the current stock price (\$52.70 on November 27, 2020) with the number of outstanding shares (4.297 million).

Market Value of equity: \$226,451,900,000

The overall market value of debt consists of Coca-Cola's publicly traded debt and other non-listed debt.

The market value of publicly traded debt amounts to the currently traded bond price multiplied by the amount issued (total ≈ \$39 billion).

Figure 24: Market Value of Publicly Traded Debt; Source: Bloomberg and Own Calculations

Name	Price	AMT outstanding (\$)	amt issued	Amount issued * Price	(Amount issued * Price)/100
Coca-Cola Co/The	100,092	370.511.000	750.000.000	75.069.000.000	750.690.000
Coca-Cola Refreshments USA LLC	109,702	288.470.000	750.000.000	82.276.500.000	822.765.000
Coca-Cola Refreshments USA LLC	113,245	121.036.000	250.000.000	28.311.250.000	283.112.500
Coca-Cola Co/The	101,702	550.000.000	550.000.000	55.936.100.000	559.361.000
Coca-Cola Co/The	105,424	750.000.000	750.000.000	79.068.000.000	790.680.000
Coca-Cola Refreshments USA LLC	116,356	91.265.000	250.000.000	29.089.000.000	290.890.000
Coca-Cola Co/The	108,561	1.500.000.000	1.500.000.000	162.841.500.000	1.628.415.000
Coca-Cola Co/The	102,774	500.000.000	500.000.000	51.387.000.000	513.870.000
Coca-Cola Co/The	109,108	550.000.000	550.000.000	60.009.400.000	600.094.000
Coca-Cola Co/The	104,947	1.000.000.000	1.000.000.000	104.947.000.000	1.049.470.000
Coca-Cola Co/The	110,317	1.000.000.000	1.000.000.000	110.317.000.000	1.103.170.000
Coca-Cola Co/The	111,232	1.750.000.000	1.750.000.000	194.656.000.000	1.946.560.000
Coca-Cola Co/The	110,362	500.000.000	500.000.000	55.191.000.000	551.910.000
Coca-Cola Co/The	109,174	1.000.000.000	1.000.000.000	109.174.000.000	1.091.740.000
Coca-Cola Co/The	112,246	1.200.000.000	1.200.000.000	134.695.200.000	1.346.952.000
Coca-Cola Co/The	105,453	1.000.000.000	1.000.000.000	105.453.000.000	1.054.530.000
Coca-Cola Refreshments USA LLC	133,828	151.717.000	500.000.000	66.914.000.000	669.140.000
Coca-Cola Co/The	115,118	1.000.000.000	1.000.000.000	115.118.000.000	1.151.180.000
Coca-Cola Co/The	112,255	500.000.000	500.000.000	56.127.500.000	561.275.000
Coca-Cola Co/The	103,413	1.500.000.000	1.500.000.000	155.119.500.000	1.551.195.000
Coca-Cola Co/The	100,362	1.300.000.000	1.300.000.000	130.470.600.000	1.304.706.000
Coca-Cola Refreshments USA LLC	132,902	131.351.000	400.000.000	53.160.800.000	531.608.000
Coca-Cola Co/The	108,902	575.000.000	575.000.000	62.618.650.000	626.186.500
Coca-Cola Co/The	101,185	1.000.000.000	1.000.000.000	101.185.000.000	1.011.850.000
Coca-Cola Co/The	107,7	1.000.000.000	1.000.000.000	107.700.000.000	1.077.000.000
Coca-Cola Co/The	118,816	1.250.000.000	1.250.000.000	148.520.000.000	1.485.200.000
Coca-Cola Co/The	103,652	1.500.000.000	1.500.000.000	155.478.000.000	1.554.780.000
Coca-Cola Co/The	112,197	750.000.000	750.000.000	84.147.750.000	841.477.500
Coca-Cola Co/The	100,707	1.300.000.000	1.300.000.000	130.919.100.000	1.309.191.000
Coca-Cola Co/The	101,19	750.000.000	750.000.000	75.892.500.000	758.925.000
Coca-Cola Co/The	111,06	500.000.000	500.000.000	55.530.000.000	555.300.000
Coca-Cola Refreshments USA LLC	146,803	88.814.000	250.000.000	36.700.750.000	367.007.500
Coca-Cola Co/The	103,016	850.000.000	850.000.000	87.563.600.000	875.636.000
Coca-Cola Co/The	129,638	218.349.000	500.000.000	64.819.000.000	648.190.000
Coca-Cola Co/The	108,237	1.000.000.000	1.000.000.000	108.237.000.000	1.082.370.000
Coca-Cola Co/The	136,06	540.880.000	1.250.000.000	170.075.000.000	1.700.750.000
Coca-Cola Co/The	106,595	1.500.000.000	1.500.000.000	159.892.500.000	1.598.925.000
Coca-Cola Co/The	104,469	1.500.000.000	1.500.000.000	156.703.500.000	1.567.035.000
Coca-Cola Co/The	109,558	1.000.000.000	1.000.000.000	109.558.000.000	1.095.580.000
Coca-Cola Co/The	194,655	95.814.000	150.000.000	29.198.250.000	291.982.500
Coca-Cola Refreshments USA LLC	179,656	96.324.000	250.000.000	44.914.000.000	449.140.000
			Total		39.049.839.500

The market value of debt that is not listed is calculated by multiplying the non-listed debt (short-term debt and current maturities of long-term debt), interest expense, and pre-tax cost of debt based on Damodaran's approach (2012; Figure 23).

Figure 25: Market Value of Non-Listed Debt; Source: Own Calculations

MV of Debt (\$Million)	
Average Maturity	11
Interest Expense 2020	1.319
Total Debt	13.125
Cost of Debt	1.43%
Market Value	24.565

Market Value of Debt (listed + non-listed): \$63,614,533, 000

Nevertheless, net debt was used to weight debt in the WACC formula given that the amount of excess cash in relation to gross debt is very high (over 10%). Since Coca-Cola does not provide any guidance for its cash activities and its strategy aims to make fewer acquisitions, it is reasonable to include net debt as a weight in the formula. In order to calculate net debt, the following formula was applied:

Net Debt = Market Value of Debt (\$63.615 million) – Cash and liquid instruments (\$16.912 million)

The result of this calculation equals \$46.703 million.

4.9 Terminal Growth Rate

The terminal growth rate is a constant rate after the forecasted period at which Coca-Cola's expected free cash flows are assumed to grow in perpetuity; this rate is therefore an important factor for the DCF valuation. In general, the rate should not exceed the inflation rate or the real GDP growth rate.

In order to determine the terminal growth rate, the percentage weight of the segments to the revenue in 2027 was formed and multiplied by the expected GDP growth rate of the

International Monetary Fund (IMF) of the respective segments.²⁴ Since the IMF only predicts GDP rates until 2025, the same values were assumed for 2027. The Global Venture and Bottling Investments segments were included in the geographical segments as mentioned in Section 4.8.2.2. Finally, a terminal growth rate of 2.5% was obtained, which is lower than the expected global GDP rate of 3.0% and the global inflation rate of 3.2%.

4.10 Enterprise Value (EV)

After all the data were processed, it was possible to determine the EV (Figure 26). The calculated EV of \$295 billion is a measure of the company's total value. As the EV calculation includes debt, cash, and other additional items, one has to adjust for these items to reach the equity value.

Figure 26: Enterprise Value; Source: Own Calculations

Coca Cola DCF (US\$ in Millions)	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Net Operating Revenue	34.353	37.236	38.724	40.119	41.316	42.434	43.478
- COGS	13.273	14.338	14.873	15.355	15.788	16.183	16.534
- SG&A	10.753	11.895	12.328	12.733	13.072	13.386	13.673
- Other operating charges	840	560	593	620	640	650	670
EBIT	9.487	10.443	10.930	11.411	11.816	12.215	12.601
Effective Tax Rate	19,10%	19,10%	19,10%	19,10%	19,10%	19,10%	19,10%
Taxes Paid	1811,99	1994,54	2087,70	2179,45	2256,94	2333,10	2406,83
EBT	7.675	8.448	8.843	9.231	9.559	9.882	10.194
+ Depreciation and amortization	1.399	1.512	1.567	1.617	1.660	1.699	1.734
- ΔWorking Capital	638	(184)	(95)	(89)	(76)	(71)	(67)
- Capital Expenditure	1.663	1.750	1.769	1.784	1.791	1.797	1.803
Free Cash Flows to Firm	6.773	8.394	8.735	9.154	9.505	9.855	10.193
PV of FCF	6.426	7.555	7.459	7.415	7.305	7.185	7.050
Sum of PV FCF	50.395						
Terminal Value	353.155						
PV of Terminal Value	244.278						
Enterprise Value	294.672						

²⁴ For the terminal growth rate calculation, see Appendix 11.

4.11 Additional Items

Additional items like deferred taxes, other liabilities or long-term investments were also analyzed because they could have an effect of the equity valuation of Coca-Cola.

In principle, there are two types of deferred taxes, namely deferred tax liabilities and deferred tax assets. Deferred tax liabilities occur when reported income is higher than taxable income, whereas deferred tax assets arise when taxable income is higher than reported income.

Nevertheless, as stated in the annual report of Coca-Cola 2019, the deferred tax liabilities and deferred tax assets nearly canceled each other out (the difference between the two was only \$24 million), and it is therefore assumed that the net deferred taxes (deferred tax liabilities – deferred tax assets) are not relevant for the valuation of Coca-Cola.

The long-term investments position equals the equity method investments of Coca-Cola. These include all equity holdings between 20% and 50% of Coca-Cola. The valuation of the equity investments is based on assessing the investments currently owned. To value the equity stake, the listed equity value of the different companies was multiplied by Coca-Cola's ownership percentage.

Figure 27: Equity Investments; Source: Bloomberg and Own Calculations

Equity Investment	Owned %	Smillion Equity Value (7.12.2020)	Fair Value
Coca Cola European Partners	20%	21.290	4.258
Monster	20%	46.002	9.200
Coca Cola Amatil Limited	20%	6.843	1.369
Coca Cola FEMSA	28%	2.442	684
Coca Cola HBC AG	23%	11.345	2.609
Coca Cola Japan Holding	20%	3.325	665
			18.785

Hence, the value of \$18.785 million has to be added to the equity value. Moreover, unfunded pensions at the level of \$1.603 million, which are included in other liabilities, have to be deducted from the equity value.

4.12 Equity Value

According to Figure 28, net debt, minority interest, and unfunded pensions have to be deducted and equity investments added to the EV to determine the equity value.

After all steps were followed, the final share price is \$61.28, and a BUY rating is recommended as the share price was trading at \$51.60 as of November 30, 2020. The estimated share price seems reasonable because, on the one hand, Coca-Cola has changed its structures to foster greater profitability, and on the other hand, Coca-Cola is positioned to strongly participate in future growth markets.

Figure 28: Equity Value; Source: Own Calculations

Enterprise Value	294.672
- Net Debt	46.703
- Minority Interest	1.846
- Unfunded Pension	1.603
+ Equity Investments	18.785
Equity Value	263.305
Shares outstanding	4.297
Share Price	\$61,28

4.13 Sensitivity Analysis

A DCF valuation is largely dependent on assumptions for specific input factors; thus, the final result is highly sensitive to these inputs. A small change in input parameters may lead to significantly different results. As it is very unlikely that one can forecast all factors accurately, analysts commonly define a range for the final equity value.

To find this range, a sensitivity analysis is applied to reflect different scenarios based on variations of input parameters. It is necessary to understand how different assumptions can affect the price per share and thus change the result of the equity valuation. Terminal growth rate and the WACC were chosen as variables for analysis as these parameters are the most sensitive, and small changes have a huge effect on the final share price. As Figure 26 shows, the higher the WACC, the lower the price per share and vice versa. In addition, the assumption of the terminal growth rate is of crucial importance since assuming higher or lower perpetuity growth rate significantly changes the final result.

According to the different scenarios, the value of the equity per share of Coca-Cola is set between \$55.42 and \$71.06.

Figure 29: Sensitivity Analysis; Source: Own Calculations

		Sensitivity Analysis						
		Terminal Groth Rate						
		1,9%	2,1%	2,3%	2,5%	2,7%	2,9%	3,1%
WACC	4,96%	57,97	61,84	66,29	70,09	77,55	84,82	93,66
	5,11%	57,75	61,40	65,57	69,11	75,98	82,61	90,55
	5,26%	54,81	58,10	61,83	65,02	71,06	76,85	83,71
	5,41%	52,10	55,09	58,45	61,28	66,68	71,78	77,76
	5,56%	49,66	52,37	55,42	57,96	62,79	67,34	72,56
	5,71%	47,41	49,89	52,65	54,95	59,29	63,32	67,97
	5,86%	45,78	48,07	45,78	52,72	56,68	60,33	64,51

4.14 Relative Valuation

Relative valuation is often seen as a useful supplement in assessing the consistency of the assumptions, although for many scientists and authors, the DCF method is more accurate. In general, relative valuation is based on the comparison of the performance multiples of the evaluated company (Coca-Cola) with comparable companies in the same industry. The aim is to estimate a price range of values using multiples to verify the plausibility of the price-per-share as determined using the DCF approach. The following section first explains the peer group selection, followed by the multiples chosen to determine Coca-Cola's equity value.

Peer Group

In relative valuation, selection of the correct peer group is very important. The aim is to find a group of representative companies within the non- alcoholic beverage industry that have a similar operating structure, financials, and footprint as TCCC.

Thus, for the selection of the peer group, variables such as size, revenue growth, profitability, and capital structure are analyzed.

Figure 30: Peer Group; Source: Thomas Reuters (30.11.2020)

Company Name	Market Cap(usd)	Revenue Growth	EBIT Margin	D/E	ROIC
Coca-Cola Co	221.747.625.979	8,6%	27%	225%	16%
PepsiCo Inc	199.319.583.832	4,0%	15%	217%	13%
Constellation Brands Inc	39.642.800.316	2,8%	28%	100%	0,1%
Molson Coors Beverage Co	9.991.802.849	-1,8%	12%	67%	1%
Keurig Dr Pepper Inc	42.850.862.802	15%	21%	65%	8%
National Beverage Corp	4.571.347.508	-0,2%	18%	0%	30%
Colgate-Palmolive Co	73.407.938.687	1,1%	24%	67%	27%

Figure 27 illustrates the list of comparable companies according to Thomas Reuters. The yellow highlighted numbers are the most similar to those of Coca-Cola. As shown, only Pepsi has more than one metric in a similar range to Coca-Cola.

Moreover, due to the very low market cap, National Beverage and Molson Coors Beverage were excluded. According to their business activities, Constellation Brands (alcoholic beverages) and Colgate (mainly personal care products) were not included in the peer group valuation.

Finally, only two companies, Pepsi and Keurig Dr Pepper, were suitably for the peer group, although for Keurig especially there are significant differences in the metrics shown.

However, Keurig has a very similar product portfolio (focus CSD) to TCCC as well as global operations and can thus still be included. The non-alcoholic beverage industry and especially the CSD industry, in which Coca-Cola mainly operates, is based on few big market players with high market shares, which explains the small number of comparable firms.

Multiples

The multiples that are considered most useful based on the available data are P/E (price/earnings), EV/EBITDA and EV/EBIT. Price/earnings was chosen because the multiple indicates how many dollars investors are willing to pay for one share from earnings, while the enterprise value multiples were considered because they are not influenced by capital structure. All multiples were used from Thomas Reuters Eikon (November 30, 2020).

Figure 31: Multiples; Source: Thomas Reuters (30.11.2020) and Own Calculations

	P/E	EV/EBITDA	EV/EBIT
PepsiCo Inc	28,5	19,2	24,7
Keurig Dr Pepper Inc	33,2	19,9	22,8
Average	30,8	19,6	23,8
Coca-Cola (DCF based)	28,4	23,3	28,2
Coca Cola Share Price (based on average peer multiples)	\$67,5	\$50,3	\$50,4

Forward-looking multiples were used as the EV equals the present value of the future cash flows, and one-time effects are not included (Goedhardt et al., 2005).

After determining the peer average of the ratios, the average comparable multiples were multiplied with the earnings/EBITDA/EBIT of 2022 as this is the first year in which the pandemic will not have an impact on the relevant financials. After adjusting the EV for net debt and additional items, a price-per-share from \$50.30 to \$67.50 is observable.

Compared to the DCF valuation, the relative valuation for PER is within the defined range, while according to both EV ratios, the price-per-share would be below the previously calculated share price range. One possible reason for the low EV multiples could be that the peer group is not appropriate for evaluating Coca-Cola because Coca-Cola has such a high market share. Particularly with regard to the CSD segment (Coca-Cola holds roughly 45% of the market shares), there is no real peer group reflecting Coca-Cola's product, market strength, and diversity. Furthermore, the growth potential due to increased profitability/efficiency, portfolio optimization, and growth opportunities—especially in emerging markets—drives the higher EV multiples for Coca-Cola compared to its peers. Thus, the share price of \$50.35 based on the average comparable EV multiples seems too low and does not reflect TCCC's true potential.

Overall, the lower end of the DCF range at \$55.42 per share better reflects the true value of TCCC. The upper end of the range (\$71.06) is confirmed by the PER multiple.

5. Results Comparison with the Investment Bank Report

The valuation in this dissertation is compared with the report from Deutsche Bank from August 28, 2020. In the valuation of Coca-Cola, the analyst of Deutsche Bank stated a target share price of \$57.

In general, the Deutsche Bank analyst considered TCCC to be on the right track with restructuring/reorganization, which enables cost efficiencies, participation in growth markets, and the generation of new revenue opportunities.

Figure 32: Results Comparison with the Investment Bank; Source: Own Calculations and Deutsche Bank Report

	Dissertation	Deutsche Bank
Period	2021-2027	2021-2022
Forecasted Price per Share	\$61.28	\$57
Share price at the time of valuation	\$51.6	\$49.2
Growth Potential	18,76%	15,85%

As displayed in the table, the Deutsche Bank analyst set a lower target price but a similar growth potential than the dissertation. Therefore, the main differences are evaluated in the following section.

An obvious and relevant difference for the result is the explicit period length. While the Deutsche Bank report uses a two-year forecast, the dissertation uses a seven-year forecast. The longer approach was chosen in this dissertation because long-term growth potential is assumed, especially in the emerging markets, and profitability can be increased by cost efficiency over time.

Figure 33: Different Forecasts; Source: Own Calculations and Deutsche Bank Report

	2021	2022
Revenues/ Dissertation	34.353	37.236
Revenues/ Deutsche Bank	36.508	38.721
Operating Profit/ Dissertation	9.487	10.443
Operating Profit/ Deutsche Bank	10.379	11.095
Operating Profit Margin/ Dissertation	27,6%	28,0%
Operating Profit Margin/ Deutsche Bank	28,4%	28,7%

In terms of expected revenue, the Deutsche Bank analyst was more optimistic than the dissertation. Since the report was made at the end of August 2020, the analyst may not have anticipated a second wave of the pandemic, which will continue to affect Coca-Cola's business in 2021; this could have led to a possible overvaluation of the revenue. In this dissertation, it is expected that Coca-Cola will return to 2019 revenue levels in 2022, after which a gradual growth acceleration is assumed. Conversely, the Deutsche Bank report assumes that 2022 revenue will be higher than 2019.

Regarding operating profit and the corresponding margin, both analyses expect that Coca-Cola can further increase its operating margin through the outlined cost and supply chain efficiencies. The report from Deutsche Bank is again more optimistic than the dissertation in the short run and expects that Coca-Cola will increase its profitability even faster, while the dissertation expects TCCC to arrive at a margin of 29.0% only by 2027.²⁵

Finally, having similar assumptions regarding the company's strategic focus but slightly different approaches, both valuations clearly recommend buying Coca-Cola stock.

²⁵ For more comparisons, see Appendix 12.

Conclusion

The aim of this dissertation was to estimate a share price of Coca-Cola, the world's leading player in the non-alcoholic beverage industry.

An accurate valuation of a company begins with the proper choice of the valuation approach. Four main valuation approaches have prevailed in Finance over the last decades: DCF methods, asset-based valuation, relative valuation and contingent claim valuation.

To value Coca-Cola, the DCF method using the FCFF model was the most suitable approach, given the steady capital structure of Coca-Cola. Additionally, a relative valuation was applied to test and complement the accuracy of the DCF valuation.

The growth of the FCFF was mainly driven by the assumptions that TCCC can generate growth in the coming years through both increasing and gradual cost efficiency as well as through revenue growth along participation in growing markets (Asia Pacific) and segments (Bottled Water). Using the DCF model, the target price achieved for Coca-Cola was \$61.28, suggesting a buy recommendation for Coca-Cola (compared to current price of \$51.60). Since the DCF valuation is highly dependent on individual assumptions, a sensitivity analysis was conducted resulting in an equity value between \$55.42 and \$71.06.

The relative valuation approach led to a price-per-share range of \$50.30 to \$67.50 based on equity (PER) and EV multiples (EV/EBITDA and EV/EBIT). The PER (\$67.50) confirms the range of the DCF, while the EV multiples (average of \$50.35) are below the range. The peers show lower EV multiples than TCCC because they are not as cost efficient and lack scale as well as a strong market positioning compared to TCCC. Thus, the EV multiples do not reflect TCCC's full potential and should be neglected for the final share price range.

After all, the dissertation faced a limitation that prevented an even more accurate DCF valuation. The biggest limitation was the impact of currency exchange rates on revenue, which could not be predicted. This limitation highlights the risks of the model and may ultimately lead to different results.

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Appendices

Appendix 1: Worldwide Consumer Spending

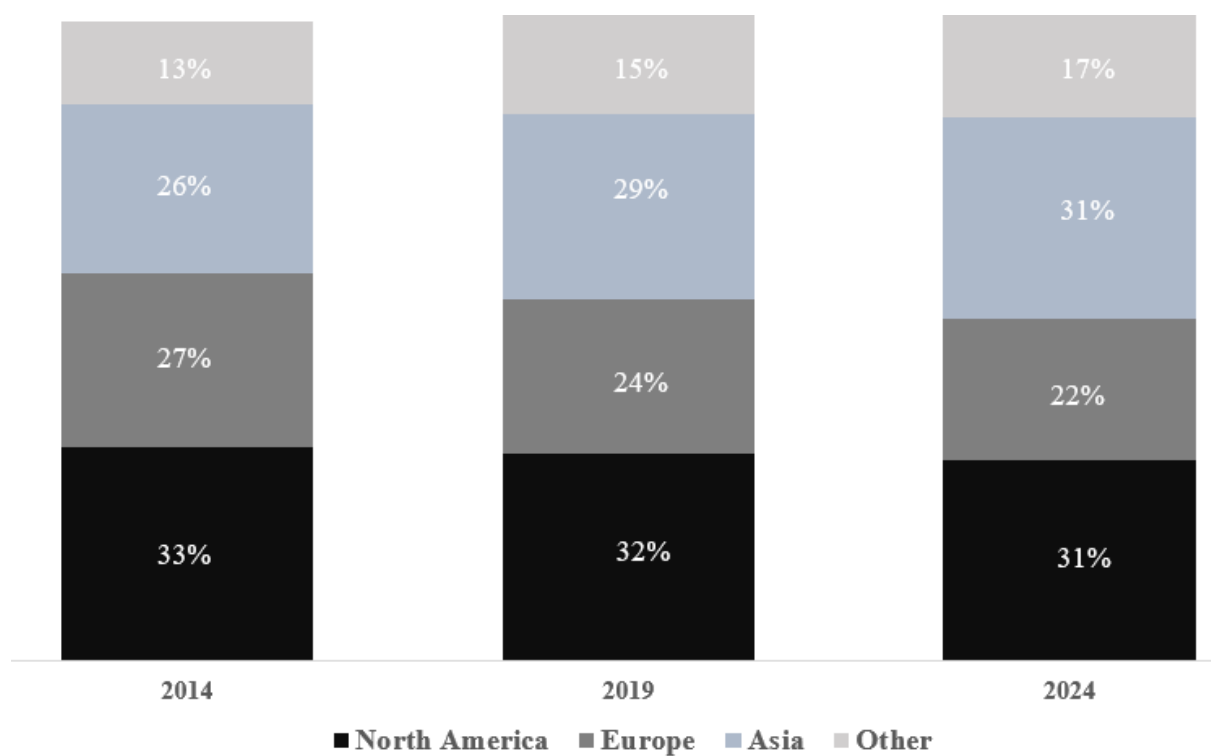


Figure 34: Worldwide Consumer Spending; Source: Statista

Appendix 2: Development Other Operating Charges

	A2017	A2018	A2019	A2020	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Other operating charges	1.902	1.079	458	995	840	560	593	620	640	650	670
% of revenue	5,3%	3,1%	1,2%	3,2%	2,4%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%

Figure 35: Development Other Operating Charges; Source: Annual Reports Coca-Cola and Own Calculations

Appendix 3: Historical Gross PP&E and Intangible Assets

Coca Cola (US\$ Millions)	A2017	A2018	A2019	A2020	Average
Gross PPE	16.449	17.611	18.921	20.015	
% of Revenues	45,4%	51,3%	50,8%	64,1%	52,9%
Land	334	485	659	552	
% of gross PPE	2,0%	2,8%	3,5%	2,8%	2,8%
Buildings and Improvement	3.917	4.322	4.576	4.840	
% of gross PPE	23,8%	24,5%	24,2%	24,2%	24,2%
Machinery and equipment	12.198	12.804	13.686	14.624	
% of gross PPE	74,2%	72,7%	72,3%	73,1%	73,1%
Intangible Assets	7.667	7.799	10.402	11.712	
% of Revenues	23,9%	25,1%	29,1%	37,5%	28,9%

Figure 36: Actual period Gross PP&E and Intangible Assets; Source: Annual Reports Coca-Cola

Appendix 4: Forecasted Gross PP&E and Intangible Assets

Coca Cola (US\$ Millions)	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Gross PPE	18.173	19.623	20.330	20.982	21.526	22.023	22.478
% of Revenues	52,9%	52,7%	52,5%	52,3%	52,1%	51,9%	51,7%
Land	509	549	569	587	603	617	629
% of gross PPE	2,8%	2,8%	2,8%	2,8%	2,8%	2,8%	2,8%
Buildings and Improvement	4.398	4.729	4.900	5.078	5.198	5.319	5.429
% of gross PPE	24,2%	24,2%	24,2%	24,2%	24,2%	24,2%	24,2%
Machinery and equipment	13.265	14.346	14.861	15.317	15.724	16.088	16.421
% of gross PPE	73,1%	73,1%	73,1%	73,1%	73,1%	73,1%	73,1%
Intangible Assets	9.928	10.761	11.191	11.594	11.940	12.263	12.565
% of Revenues	28,9%	28,9%	28,9%	28,9%	28,9%	28,9%	28,9%

Figure 37: Explicit period Gross PP&E and Intangible Assets; Source: Own Calculations

Appendix 5: Historical D&A

Coca Cola (US\$ Millions)	A2017	A2018	A2019	A2020	Average
Depreciation (PP&E)	1260	1086	1365	1420	
% of gross PP&E	7,7%	6,3%	7,2%	7,1%	7,1%
Amortization (Intangible Assets)	68	49	120	130	
% of gross Intangible Assets	0,9%	0,7%	1,3%	1,2%	1,1%
Total D&A	1328	1135	1485	1550	

Figure 38: Actual period D&A; Source: Annual Reports Coca-Cola

Appendix 6: Forecasted D&A

Coca Cola (US\$ Millions)	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Depreciation (PP&E)	1290	1393	1443	1490	1528	1564	1596
% of gross PP&E	7,1%	7,1%	7,1%	7,1%	7,1%	7,1%	7,1%
Amortization (Intangible Assets)	109	118	123	128	131	135	138
% of gross Intangible Assets	1,1%	1,1%	1,1%	1,1%	1,1%	1,1%	1,1%
Total D&A	1399	1512	1567	1617	1660	1699	1734

Figure 39: Explicit period D&A Source: Own Calculation

Appendix 7: Capex/D&A Ratio

	A2017	A2018	A2019	A2020	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Capex	1750	1548	2054	1.474	1663	1750	1769	1784	1791	1797	1803
D&A	1.328	1.135	1.485	1.550	1.446	1.530	1.575	1.618	1.655	1.694	1.734
Ratio	1,32	1,36	1,38	0,95	1,15	1,14	1,12	1,10	1,08	1,06	1,04

Figure 40: Capex/D&A Ratio

Appendix 8: Historical Working Capital

Coca Cola (US\$ Millions)	A2017	A2018	A2019	A2020	Average (2018-2020)
Working Capital	5.179	(1.129)	(2.490)	(2.831)	
% of Revenues	14%	-3%	-7%	-9%	-6%
Trade accounts receivable	3.667	3.685	3.971	3.710	
Inventories	2.655	3.071	3.379	3.505	
Prepaid expenses and other assets	9.548	2.059	1.886	2.060	
Accounts payable and accrued expenses	8.572	9.361	11.220	11.244	
Other current liabilities	2.119	583	506	862	
Change in WC		(6.308)	(1.361)	(341)	

Figure 41: Actual period Working Capital; Source: Annual Reports Coca-Cola

Appendix 9: Forecasted Working Capital

Coca Cola (US\$ Millions)	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Working Capital	(2.193)	(2.377)	(2.472)	(2.561)	(2.637)	(2.709)	(2.775)
% of Revenues	-6%	-6%	-6%	-6%	-6%	-6%	-6%
Trade accounts receivable	3.874	3.954	4.089	4.223	4.384	4.517	4.644
Inventories	3.849	4.151	4.428	4.743	5.081	5.451	5.632
Prepaid expenses and other assets	2.168	2.177	2.240	2.282	2.359	2.389	2.412
Accounts payable and accrued expenses	11.258	11.680	12.086	12.594	13.017	13.405	13.517
Other current liabilities	826	978	1.143	1.214	1.444	1.661	1.946
Change in WC	638	(184)	(95)	(89)	(76)	(71)	(67)

Figure 42: Explicit period Working Capital; Source: Own Calculations

Appendix 10: Credit Spread Calculation for the cost of debt

Figure 43: Credit Spread calculation; Source: Own Calculations and Bloomberg

Name	Kupon	Maturity	S&P	Maturity Type	Land	Currency	Price	AMT_outstanding	amt_issued	YTM	Risk Free	Spread	Spread*Weights	Weights	mt_yeas	Weight*Maturity
Coca-Cola ColThe	0	08.03.2021	A+	AT MATURITY	US	EUR	100,032	370.511.000	750.000.000	-0,18%	-0,76%	0,58%	0,007%	1,15%	0,3	0,003
Coca-Cola Refreshments USA LLC	8,5	01.02.2022	A	AT MATURITY	US	USD	109,702	288.470.000	750.000.000	0,65%	0,10%	0,55%	0,005%	0,83%	1	0,009
Coca-Cola Refreshments USA LLC	8	15.09.2022	A	AT MATURITY	US	USD	113,245	121.036.000	250.000.000	0,73%	0,15%	0,58%	0,002%	0,38%	2	0,008
Coca-Cola ColThe	0,25	22.12.2022	A+	AT MATURITY	US	CHF	101,702	550.000.000	550.000.000	-0,35%	-0,80%	0,45%	0,008%	1,70%	2	0,034
Coca-Cola ColThe	2,5	01.04.2023	A+	AT MATURITY	US	USD	105,424	750.000.000	750.000.000	0,32%	0,15%	0,17%	0,004%	2,32%	2	0,046
Coca-Cola Refreshments USA LLC	6,75	15.09.2023	A	AT MATURITY	US	USD	116,356	91.265.000	250.000.000	1,13%	0,19%	0,94%	0,003%	0,28%	3	0,008
Coca-Cola ColThe	3,2	01.11.2023	A+	AT MATURITY	US	USD	108,561	1.500.000.000	1.500.000.000	0,32%	0,19%	0,13%	0,006%	4,65%	3	0,139
Coca-Cola ColThe	0,5	08.03.2024	A+	AT MATURITY	US	EUR	102,774	500.000.000	500.000.000	-0,27%	-0,80%	0,53%	0,008%	1,55%	3	0,046
Coca-Cola ColThe	3,25	11.06.2024	A+	AT MATURITY	US	AUD	109,108	550.000.000	550.000.000	0,73%	0,19%	0,54%	0,009%	1,70%	4	0,068
Coca-Cola ColThe	1,75	06.09.2024	A+	AT MATURITY	US	USD	104,347	1.000.000.000	1.000.000.000	0,53%	0,28%	0,25%	0,008%	3,10%	4	0,124
Coca-Cola ColThe	2,95	25.03.2025	A+	AT MATURITY	US	USD	110,317	1.000.000.000	1.000.000.000	0,62%	0,28%	0,34%	0,011%	3,10%	4	0,124
Coca-Cola ColThe	2,875	27.10.2025	A+	AT MATURITY	US	USD	111,232	1.750.000.000	1.750.000.000	0,65%	0,37%	0,28%	0,015%	5,42%	5	0,271
Coca-Cola ColThe	2,55	01.06.2026	A+	AT MATURITY	US	USD	110,382	500.000.000	500.000.000	0,75%	0,37%	0,38%	0,006%	1,55%	5	0,077
Coca-Cola ColThe	2,25	01.09.2026	A+	AT MATURITY	US	USD	109,174	1.000.000.000	1.000.000.000	0,75%	0,49%	0,26%	0,008%	3,10%	6	0,186
Coca-Cola ColThe	1,875	22.09.2026	A+	AT MATURITY	US	EUR	112,246	1.200.000.000	1.200.000.000	-0,15%	-0,76%	0,61%	0,023%	3,72%	6	0,223
Coca-Cola ColThe	0,75	22.09.2026	A+	AT MATURITY	US	EUR	105,453	1.000.000.000	1.000.000.000	-0,12%	-0,76%	0,64%	0,020%	3,10%	6	0,186
Coca-Cola Refreshments USA LLC	6,95	15.11.2026	A	AT MATURITY	US	USD	133,828	151.717.000	500.000.000	1,23%	0,49%	0,74%	0,003%	0,47%	6	0,028
Coca-Cola ColThe	3,375	25.03.2027	A+	AT MATURITY	US	USD	115,118	1.000.000.000	1.000.000.000	0,99%	0,49%	0,50%	0,016%	3,10%	6	0,186
Coca-Cola ColThe	2,9	25.05.2027	A+	AT MATURITY	US	USD	112,255	500.000.000	500.000.000	1,07%	0,49%	0,58%	0,009%	1,55%	6	0,093
Coca-Cola ColThe	1,45	01.06.2027	A+	AT MATURITY	US	USD	103,413	1.500.000.000	1.500.000.000	0,99%	0,49%	0,50%	0,023%	4,65%	6	0,279
Coca-Cola ColThe	1	15.03.2028	A+	AT MATURITY	US	USD	100,362	1.300.000.000	1.300.000.000	1,03%	0,61%	0,42%	0,017%	4,03%	7	0,282
Coca-Cola Refreshments USA LLC	6,75	15.09.2028	A	AT MATURITY	US	USD	132,302	131.351.000	400.000.000	2,30%	0,68%	1,62%	0,007%	0,41%	8	0,033
Coca-Cola ColThe	1	02.10.2028	A+	AT MATURITY	US	CHF	108,302	575.000.000	575.000.000	0,00%	-0,62%	0,62%	0,011%	1,78%	8	0,143
Coca-Cola ColThe	0,125	15.03.2029	A+	AT MATURITY	US	EUR	101,185	1.000.000.000	1.000.000.000	0,03%	-0,70%	0,73%	0,023%	3,10%	8	0,248
Coca-Cola ColThe	2,125	06.09.2029	A+	AT MATURITY	US	USD	107,7	1.000.000.000	1.000.000.000	1,31%	0,75%	0,56%	0,017%	3,10%	9	0,279
Coca-Cola ColThe	3,45	25.03.2030	A+	AT MATURITY	US	USD	118,816	1.250.000.000	1.250.000.000	1,39%	0,75%	0,64%	0,025%	3,87%	9	0,349
Coca-Cola ColThe	1,65	01.06.2030	A+	AT MATURITY	US	USD	103,652	1.500.000.000	1.500.000.000	1,32%	0,75%	0,57%	0,027%	4,65%	9	0,418
Coca-Cola ColThe	1,25	08.03.2031	A+	AT MATURITY	US	EUR	112,197	750.000.000	750.000.000	0,12%	-0,59%	0,71%	0,016%	2,32%	10	0,232
Coca-Cola ColThe	1,375	15.03.2031	A+	AT MATURITY	US	USD	100,707	1.300.000.000	1.300.000.000	1,38%	0,84%	0,54%	0,022%	4,03%	10	0,403
Coca-Cola ColThe	0,375	15.03.2033	A+	AT MATURITY	US	EUR	101,19	750.000.000	750.000.000	0,33%	-0,53%	0,86%	0,020%	2,32%	10	0,232
Coca-Cola ColThe	1,1	02.09.2036	A+	AT MATURITY	US	EUR	111,06	500.000.000	500.000.000	0,44%	-0,40%	0,84%	0,013%	1,55%	16	0,248
Coca-Cola Refreshments USA LLC	6,75	15.01.2038	A	AT MATURITY	US	USD	146,803	88.814.000	250.000.000	3,31%	1,14%	2,17%	0,006%	0,28%	17	0,047
Coca-Cola ColThe	0,8	15.03.2040	A+	AT MATURITY	US	EUR	103,016	850.000.000	850.000.000	0,68%	-0,38%	1,06%	0,028%	2,63%	19	0,500
Coca-Cola ColThe	4,125	25.03.2040	A+	AT MATURITY	US	USD	129,638	218.349.000	500.000.000	2,31%	1,33%	0,98%	0,007%	0,68%	19	0,129
Coca-Cola ColThe	2,5	01.06.2040	A+	AT MATURITY	US	USD	108,237	1.000.000.000	1.000.000.000	2,04%	1,33%	0,71%	0,022%	3,10%	19	0,589
Coca-Cola ColThe	4,2	25.03.2050	A+	AT MATURITY	US	USD	136,06	540.880.000	1.250.000.000	2,55%	1,55%	1,00%	0,017%	1,68%	29	0,486
Coca-Cola ColThe	2,6	01.06.2050	A+	AT MATURITY	US	USD	106,595	1.500.000.000	1.500.000.000	2,36%	1,55%	0,81%	0,038%	4,65%	29	1,348
Coca-Cola ColThe	2,5	15.03.2051	A+	AT MATURITY	US	USD	104,469	1.500.000.000	1.500.000.000	2,33%	1,57%	0,76%	0,035%	4,65%	30	1,395
Coca-Cola ColThe	2,75	01.06.2060	A+	AT MATURITY	US	USD	109,558	1.000.000.000	1.000.000.000	2,47%	1,57%	0,90%	0,028%	3,10%	39	1,209
Coca-Cola ColThe	7,375	29.07.2093	A+	AT MATURITY	US	USD	194,655	95.814.000	150.000.000	3,78%	1,57%	2,21%	0,007%	0,30%	73	0,217
Coca-Cola Refreshments USA LLC	7	15.05.2098	A	AT MATURITY	US	USD	179,656	96.324.000	250.000.000	3,94%	1,57%	2,37%	0,007%	0,30%	77	0,230
Total								32.269.531.000					0,584% Spread			11,2 Average Maturity

Appendix 11: Terminal Growth Rate

Segment	% of Total Revenue 2027	Real GDP Growth 2027	Total
Latin America	12%	2,5%	0,3%
USA	32%	1,8%	0,5%
Europe, Middle East & Africa	29%	2,0%	0,5%
Asia Pacific	27%	5,0%	1,2%
			2,5%

Figure 44: Terminal Growth Rate; Source: Own Calculations and IMF

Appendix 12: Comparison with the Deutsche Bank report

Smillion	2021	2022
D&A/ Dissertation	1.399	1.512
D&A/ Deutsche Bank	1.420	1.492
Capex/ Dissertation	1.663	1.750
Capex/ Deutsche Bank	1.831	1.742
Chg. Working capital/ Dissertation	638	-184
Chg. Working capital/ Deutsche Bank	436	-230
Net Income/ Dissertation	8.790	9.396
Net Income/ Deutsche Bank	9.046	9.868

Figure 45: Comparison with the Deutsche Bank report; Source: Own calculations and Deutsche Bank

Appendix 13: Historical Income Statement

Coca Cola Income Statement in million \$	A2017	A2018	A2019	A2020
Net Operating Revenues	36.212	34.300	37.266	31.222
Cost of goods sold	13.721	13.067	14.619	12.387
Gross Profit	22.491	21.233	22.647	18.835
Selling, general and administrative expenses	12.834	11.002	12.103	9.039
Other operating charges	1.902	1.079	458	971
Operating Income	7.755	9.152	10.086	8.825
Interest Income	677	689	563	396
Interest Expense	841	950	946	1.317
Equity Income (loss)-net	1.071	1.008	1.049	943
Other Income (loss)-net	(1.764)	(1.674)	34	382
Income before Tax	6.898	8.225	10.786	9.228
Income taxes from continuing operations	5.560	1.749	1.801	1.244
Net Income after tax	1.338	6.476	8.985	7.984
Income from discontinued operations	101	-	-	-
Consolidated Net Income	1.439	6.476	8.985	7.984
Less: Net Income attributable to noncontrolling interest	35	42	65	8
Net Income	1.404	6.434	8.920	7.977

Figure 46: Actual period Income Statement; Source: Annual Reports Coca-Cola

Appendix 14: Forecasted Income Statement

Coca Cola Income Statement in million \$	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Net Operating Revenues	34.353	37.236	38.724	40.119	41.316	42.434	43.478
Cost of goods sold	13.273	14.338	14.873	15.355	15.788	16.183	16.534
Gross Profit	21.080	22.898	23.851	24.764	25.528	26.251	26.944
Selling, general and administrative expenses	10.753	11.895	12.328	12.733	13.072	13.386	13.673
Other operating charges	840	560	593	620	640	650	670
Operating Income	9.487	10.443	10.930	11.411	11.816	12.215	12.601
Interest Income	589	669	701	707	748	768	787
Interest Expense	936	947	992	987	1.017	1.040	1.027
Equity Income (loss)-net	979	1.081	1.133	1.174	1.209	1.242	1.272
Other Income (loss)-net	29	67	55	57	59	61	62
Income before Tax	10.481	11.313	11.989	12.546	12.981	13.408	13.877
Income taxes from continuing operations	1.656	1.849	1.923	1.992	2.052	2.107	2.159
Net Income after tax	8.824	9.463	10.066	10.554	10.929	11.300	11.718
Income from discontinued operations	-	-	-	-	-	-	-
Consolidated Net Income	8.824	9.463	10.066	10.554	10.929	11.300	11.718
Less: Net Income attributable to noncontrolling interest	34	67	51	53	54	55	57
Net Income	8.790	9.396	10.015	10.501	10.874	11.245	11.661

Figure 47: Explicit period Income Statement; Source: Own Calculations

Appendix 15: Revenue by Quarter

	CY 17 Q1	CY17 Q2	CY17 Q3	CY17 Q4	CY 18 Q1	CY18 Q2	CY18 Q3	CY18 Q4	CY 19 Q1	CY19 Q2	CY19 Q3	CY19 Q4	CY 20 Q1	CY20 Q2	CY20 Q3	CY20 Q4	Total Year	Q1 CY21	Q2 CY21	Q3 CY21	Q4 CY21	Total Year
Net Operating Revenues	9.118	9.702	9.078	8.314	8.298	9.421	8.775	7.806	8.694	9.997	9.507	9.068	8.719	7.230	8.704	6.569	31.222	7.162	8.841	9.289	9.062	34.353
North America	2.417	2.903	2.781	2.649	2.652	3.080	3.091	2.807	2.683	3.162	3.138	2.932	2.850	2.648	3.088	2.435	11.021	2.378	2.925	3.162	2.946	11.412
Bottling Investments	3.836	2.998	2.392	1.234	1.051	1.855	1.565	1.493	1.810	2.026	1.828	1.920	1.658	1.263	1.475	991	5.387	1.166	1.459	1.665	1.898	6.187
Europe, Middle East & Africa	1.632	2.037	1.959	1.746	1.686	2.008	1.826	1.579	1.772	1.930	1.684	1.528	1.725	1.210	1.693	1.276	5.904	1.496	1.759	1.630	1.528	6.413
Asia Pacific	1.208	1.507	1.432	1.029	1.215	1.514	1.420	1.036	1.187	1.540	1.462	1.138	1.128	1.183	1.334	897	4.542	1.081	1.420	1.348	1.068	4.918
Latin America	926	950	1.035	1.118	997	1.030	1.002	981	896	1.003	1.045	1.174	930	755	809	653	3.147	761	844	999	1.060	3.665
Global Ventures	—	—	—	—	194	211	183	182	585	635	629	713	573	295	513	392	1.773	513	557	609	648	2.328
Corporate	29	45	48	16	11	57	17	7	32	23	24	15	31	-12	6	3	28	8	24	26	12	71
Elimination	(930)	(738)	(569)	522	492	(334)	(329)	(279)	(271)	(322)	(303)	(352)	(176)	(112)	(214)	(78)	-580	(241)	(150)	(151)	(99)	-641

Figure 48: Revenue by Quarter 2017 – 2021; Source: Annual Reports Coca-Cola and own calculations

Appendix 16: Forecasted Revenue by Segment

Coca Cola Operating Revenue in millions \$	E2021	E2022	E2023	E2024	E2025	E2026	E2027
Net Operating Revenues	34.353	37.236	38.724	40.119	41.316	42.434	43.478
North America	11.412	11.869	12.106	12.348	12.570	12.797	13.027
Bottling Investments	6.187	7.425	7.648	7.877	8.074	8.276	8.483
Europe, Middle East & Africa	6.413	6.862	7.137	7.386	7.608	7.798	7.915
Asia Pacific	4.918	5.262	5.552	5.857	6.179	6.519	6.813
Latin America	3.665	3.903	4.118	4.303	4.454	4.565	4.679
Global Ventures	2.328	2.677	2.944	3.153	3.295	3.411	3.530
Corporate	71	92	110	113	116	118	121
Eliminations	(641)	(854)	(890)	(920)	(980)	(1.050)	(1.090)

Figure 49: Explicit period revenue by segment; Source: Own Calculations

Appendix 17: Historical Revenue by Segment

Coca Cola Operating Revenue in millions \$	A2017	A2018	A2019	A2020
Net Operating Revenues	36.212	34.300	37.266	31.222
North America	10.750	11.630	11.915	11.021
Bottling Investments	10.460	5.964	7.584	5.387
Europe, Middle East & Africa	7.374	7.099	6.914	5.904
Asia Pacific	5.176	5.185	5.327	4.542
Latin America	4.029	4.010	4.118	3.147
Global Ventures	-	770	2.562	1.773
Corporate	138	92	94	28
Eliminations	(1.715)	(450)	(1.248)	(580)

Figure 50: Actual period revenue by segment; Source: Annual Reports Coca-Cola

Appendix 18: Historical Balance Sheet

Coca Cola Balance Sheet (US\$ Millions)	A2017	A2018	A2019	A2020
ASSETS				
Current assets:				
Cash, Cash Equivalents and short term investments	15.358	11.102	7.947	14.548
Marketable securities	5.317	5.013	3.228	2.364
Trade accounts receivable	3.667	3.685	3.971	3.710
Inventories	2.655	3.071	3.379	3.505
Prepaid expenses and other assets	9.548	2.059	1.886	2.060
Total current assets	36.545	24.930	20.411	26.188
Long Term Investments	21.952	20.279	19.879	18.862
Other Long Term assets	4.560	6.822	8.487	8.580
Property, plant and equipment, net	8.203	9.598	10.838	11.343
Intangible assets, net	7.235	7.478	10.002	11.310
Goodwill	9.401	14.109	16.764	16.825
TOTAL ASSETS	87.896	83.216	86.381	93.108
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Accounts payable and accrued expenses	8.572	9.361	11.220	11.244
Loans and notes payable	13.205	13.835	10.994	5.963
Current maturities of long-term debt	3.298	5.003	4.253	7.163
Other current liabilities	2.119	583	506	862
Total current liabilities	27.194	28.782	26.973	25.232
Long-term debt	31.182	25.376	27.516	37.419
Other liabilities	8.021	7.646	8.510	9.759
Minority Interest	1.905	2.077	2.117	1.846
Deferred income tax liabilities	2.522	2.354	2.284	1.563
Total liabilities	70.824	66.235	67.400	75.819
Shareowners Equity:				
Common stock	1.760	1.760	1.760	1.760
Capital surplus	15.864	16.520	17.154	17.755
Retained earnings	60.430	63.234	65.855	66.024
Accumulated other comprehensive (loss)	(10.305)	(12.814)	(13.544)	(15.944)
Treasury stock, at cost	(50.677)	(51.719)	(52.244)	(52.306)
Equity Attributable to Shareowners	17.072	16.981	18.981	17.289
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	87.896	83.216	86.381	93.108

Figure 51: Actual period Balance Sheet; Source: Annual Reports Coca-Cola

Appendix 19: Forecasted Balance Sheet

Coca Cola Balance Sheet (US\$ Millions)	E2021	E2022	E2023	E2024	E2025	E2026	E2027
ASSETS							
Current assets:							
Cash, Cash Equivalents and short term investments	13.434	12.870	12.600	12.630	12.867	13.110	13.126
Marketable securities	2.210	2.209	2.115	2.103	2.025	1.987	1.945
Trade accounts receivable	3.874	3.954	4.089	4.223	4.384	4.517	4.644
Inventories	3.849	4.151	4.428	4.743	5.081	5.451	5.632
Prepaid expenses and other assets	2.168	2.177	2.240	2.282	2.359	2.389	2.412
Total current assets	25.535	25.361	25.495	25.981	26.716	27.436	27.759
Long Term Investments	18.637	18.692	18.743	18.840	18.854	18.908	18.913
Other Long Term assets	10.628	11.354	12.980	13.832	14.509	15.195	15.329
Property, plant and equipment, net	10.238	10.833	11.144	11.446	11.707	11.974	12.252
Intangible assets, net	10.190	10.612	10.959	11.298	11.600	11.909	12.232
Goodwill	17.016	17.005	17.223	17.550	17.750	17.834	17.903
TOTAL ASSETS	92.201	93.857	96.544	98.946	101.136	103.256	104.390
LIABILITIES AND STOCKHOLDERS' EQUITY							
Current liabilities:							
Accounts payable and accrued expenses	11.258	11.680	12.086	12.594	13.017	13.405	13.517
Loans and notes payable	5.340	4.414	4.390	4.267	4.193	3.999	3.851
Current maturities of long-term debt	7.973	8.124	9.225	10.172	11.105	12.073	12.531
Other current liabilities	826	978	1.143	1.214	1.444	1.861	1.946
Total current liabilities	25.397	25.197	26.843	28.248	29.760	31.338	31.845
Long-term debt	37.438	37.555	37.449	37.505	37.769	37.626	37.786
Other liabilities	9.208	9.819	10.287	10.792	10.980	11.220	11.565
Minority Interest	1.804	1.835	1.874	1.882	1.905	1.939	1.964
Deferred income tax liabilities	1.349	1.732	1.877	1.633	1.285	1.250	1.188
Total liabilities	75.196	76.138	78.331	80.059	81.699	83.373	84.348
Shareowners Equity:							
Common stock	1.760	1.760	1.760	1.760	1.760	1.760	1.760
Capital surplus	17.960	18.629	19.315	20.013	20.758	21.529	21.931
Retained earnings	67.131	68.290	69.597	71.314	72.243	72.448	72.732
Accumulated other comprehensive (loss)	(16.983)	(17.710)	(18.870)	(20.177)	(20.907)	(21.042)	(21.356)
Treasury stock, at cost	(52.862)	(53.249)	(53.589)	(54.024)	(54.417)	(54.812)	(55.025)
Equity Attributable to Shareowners	17.006	17.720	18.213	18.887	19.437	19.883	20.042
TOTAL LIABILITIES AND STOCKHOLDERS'	92.201	93.857	96.544	98.946	101.136	103.256	104.390

Figure 52: Explicit period Balance Sheet; Source: Own Calculations

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