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Valuation of Nike Inc.

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Master (MSc) in Finance

Supervisor:

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BUSINESS
SCHOOL

Department of Finance

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Resumo

A Nike é uma das empresas mais conhecidas do mundo e líder na indústria do vestuário e calçado desportivo. Sendo uma empresa tão importante no sector, é importante compreender o seu valor e se representa um bom investimento.

Os modelos de avaliação utilizados neste projeto estão divididos em duas abordagens diferentes: avaliação absoluta utilizando o modelo DCF e o modelo EVA, e avaliação relativa utilizando o modelo dos múltiplos.

Analisando os rácios financeiros, verificámos que a Nike aumentou a sua dívida e que o ROE da empresa aumentou devido ao efeito de alavancagem. A empresa teve um retorno do capital investido que excedeu o WACC em todos os anos analisados, criando valor de forma consistente. A Nike também apresenta boa liquidez, uma vez que é capaz de pagar continuamente o seu passivo corrente. Através desta análise verificou-se que apesar da crise pandémica ter causado um forte impacto negativo no setor e na empresa em si, a Nike foi capaz de responder de forma excelente no ano seguinte, ao contrário de alguns concorrentes.

O objetivo deste estudo era estimar o valor das ações da Nike em 31 de maio de 2021, sendo o preço de mercado nessa altura de \$136. Utilizando os modelos DCF e EVA, foi determinado o mesmo preço das ações de \$136,41 o que está bastante próximo do preço de mercado e indica que a empresa estava avaliada corretamente.

Com base nos resultados obtidos pelos diferentes modelos e na análise financeira realizada, recomenda-se aos investidores que detenham as ações.

Palavras-Chave: Nike, DCF, EVA, Múltiplos, Roupas e Calçado Desportivo, Avaliação
Classificação JEL: G30, G32

Abstract

Nike is one of the most well-known companies in the world and the leader in the sportswear and athletic footwear industry. Since it is such an important company in the industry, it is important to understand its value and whether it represents a good investment.

The valuation models used in this project are divided into two different approaches: absolute valuation using DCF model and EVA model, and relative valuation using multiples model.

Analysing the financial ratios, we found that Nike has increased its debt and that the company's ROE has increased due to leverage. The company had a return on invested capital (ROIC) that exceeded WACC in all years analysed, creating value consistently. Nike also exhibits good liquidity as it is able to continuously pay its current liabilities. Through this analysis, it is clear that although the pandemic crisis had a strong negative impact on the industry and the company itself, Nike was able to respond excellently in the following year, unlike some of its competitors.

The objective of this study was to estimate the value of Nike stock on May 31, 2021, with the market price at that time being \$136. Using the DCF and EVA models, the same stock price of \$136,41 was determined, which is quite close to the market price and indicates that the company is valued correctly.

Based on the results obtained by the different models and the financial analysis performed, investors are recommended to hold the stock.

Keywords: Nike, DCF, EVA, Multiples, Sportswear and Athletic Footwear, Valuation.

JEL Classification: G30, G32

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List of Abbreviations

CAGR – Compound Annual Growth Rate

CAPEX – Capital Expenditures

CAPM – Capital Asset Pricing Model

CEO – Chief Executive Officer

COVID-19 – Coronavirus Disease

CSR – Corporate Social Responsibility

D&A – Depreciation and Amortization

DCF – Discounted Cash Flow

EBIT – Earnings Before Interest and Taxes

EBITDA – Earnings Before Interest, Taxes, Depreciation and Amortization

EBT – Earnings Before Taxes

EV/EBITDA – Enterprise Value to EBITDA

EV/Revenue – Enterprise Value to Revenue

EVA – Economic Value Added

FCFE – Free Cash Flow to Equity

FCFF – Free Cash Flow to the Firm

Nike – Nike Inc.

NOPAT - Net operating profit after taxes

Price/Equity – Price to Equity

R&D – Research and Development

ROA – Return on Assets

ROE – Return on Equity

ROIC – Return on Invested Capital

US – United States

WACC – Weighted Average Cost of Capital

WC – Working Capital

Introduction

Business owners and managers strive to maximize the value of their business over time through business plans and specific goals. However, to achieve these goals, managers need to know what their company is worth today and why. To assess a company's performance today, we can conduct a business valuation.

The main objective of this master project is to evaluate and analyze Nike Inc. using different valuation models, comparing the different model results with market data, and finally making some recommendations for the company and its investors. Since Nike is a company that has suffered a lot in its past with scandals of bad ethical behavior and bad environmental practices as a secondary goal we will also study how Nike is now behaving ethically and environmentally and also make some recommendations in this field.

Nike was chosen as the focus of this study because of the readily available data as it is a publicly traded company, and because of its environmental and ethical controversial history.

Nike is an American multinational corporation best known for its footwear and sportswear. It has been the market leader since 1990. This company has shown resilience in the athletic footwear market, adapting to changes in consumer tastes, market structure, and to the way business is being done in the footwear market. In doing so, Nike Inc. has achieved growth commensurate with the industry over the past several decades, while maintaining a loyal customer base across generations and solidifying its influence in the sports industry.

This case study begins with a literature review that forms the basis of the project, in which we analyzed key concepts related to valuation models, green finance, and business ethics. The literature review was based on various books and papers written by different authors, mainly in the field of finance.

In the second phase, we analyze the company and the sportswear industry, paying special attention to the financial analysis, the ethical and environmental performance of the company, the competitiveness of the market and the impact that covid had on it.

After considering all internal and external factors, in the third and final phase we evaluate the company using different models: Discounted Cash Flow (both Firm and Equity), Economic Value Added and Multiples Valuation. We compare the different results with the market price and conclude on the investment possibility by recommending investors to buy, sell or hold.

This case study will be of interest to investors, portfolio managers and the company's management team.

1 Literature Review

1.1 Valuation

Valuation is considered by some authors to be at the heart of finance. Indeed, it plays a major role in some areas such as portfolio management, acquisition analysis and corporate finance. According to Fernandez (2004), the whole process of valuing a firm and its business units helps to identify the sources of economic value creation and destruction within the firm, which are of utter importance for decision-makers in defining a path forward in any company.

Damodaran (2012) affirms that there are 3 main approaches to valuation: Intrinsic Valuation, Relative Valuation or Pricing, and Contingent Claim Valuation.

Intrinsic valuation relates the value of an asset to its ability to generate future cash flows, considering the risk associated with those cash flows. A discounted cash flow valuation is the most common method of calculating the intrinsic value of a business. Another option is relative valuation or pricing, which estimates the value of an asset by comparing how much others are willing to pay for the same asset or a "comparable asset". Differently, Contingent Claim Valuation determines the value of assets whose future payoff depends on the realization of an uncertain future event.

In an efficient market, the best estimate of value is the market price. The use of valuation models in investment decisions is based on the view that markets are inefficient and make errors in valuation. (Damodaran, 2021)

1.2 Valuation methods

1.2.1 Discounted Cash Flow

The discounted cash flow model is widely used in the literature to value companies, projects, and investments. This model fits the intrinsic valuation approach and assumes that the value of an asset depends on the future cash flow that this asset can generate in the future.

In DCF valuation it is important to consider the time value of money, that means, the same amount of money now is worth more than the equivalent amount of money in any point in the future. This happens because of four aspects: inflation, uncertainty, investment possibility, and individual preference on current needs over future needs.

DCF valuation can be used in three different approaches: Firm, Equity and APV valuations. We will analyze the first two and the third one will be out of scope in this Project.

This valuation approach follows the present value rule, which states that the value of an asset is equal to the present of expected future cash flows. (Damodaran, 2012).

$$\text{Value} = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t} \quad (1)$$

Where,

n = life of the asset

CF_t = Cash Flow in period t

r = Discount rate.

The discount rate changes depending on several specific conditions associated to the project, with the risk of the estimated cash flows being the most preponderant variable. Generically, interest rates are higher, *ceteris paribus*, for riskier projects and vice versa.

Damodaran (2012) asserts that there are two paths to value a company: Equity Valuation and Enterprise Valuation. The first method values the equity portion of the company, while the second values the entire company. Both methods are different and use different cash flows and discount rates in the valuation calculation.

1.2.1.1 Free Cash Flow Model

The free cash flow model measures the financial performance of a company. It shows how much money the company can make after deducting major capital expenditures such as buying property or equipment. It measures the company's ability to produce available cash for distribution to investors.

It is important to know the free cash flow of a company as it enables management to make better decisions for future investments. When a company has a positive free cash flow value, it means that it is able to cover its operating costs.

The free cash flow model can be divided into two approaches. The first approach is to look at free cash flow to the firm (FCFF), the second approach is to estimate free cash flow to equity (FCFE).

1.2.1.2 Free Cash Flow to the Firm

According to Janiszewski (2011), free cash flows to the firm reflect cash generated by all assets of the firm, regardless of how the assets are being financed. FCFF are cash flows available to both creditors

and shareholders after meeting working capital needs and capital expenditures. Consequently, these cash flows are not leveraged.

$$FCFF = EBIT * (1 - t) + D\&A - \Delta Net WC - CAPEX \quad (2)$$

Where,

EBIT - Earnings before Interest and Taxes

t - tax rate; D&A - Depreciations and amortizations

Δ Net WC - Net change in the working capital

CAPEX - capital expenditures

In the FCF approach, the most used discount rate is the weighted average cost of capital (WACC). WACC reflects the overall risk of the company considering both equity and debt.

$$WACC = \frac{E}{D+E} * Re + \frac{D}{D+E} * Rd * (1 - T_c) \quad (3)$$

Where,

E - Market value of the firm's equity;

D - Market value of the firm's debt;

Re - Cost of equity;

Rd - Cost of debt before taxes;

Tc - Corporate tax rate.

To calculate the value of the firm:

$$Firm Value = \frac{FCFF_1}{1+WACC} + \frac{FCFF_2}{(1+WACC)^2} + \dots + \frac{FCFF_n}{(1+WACC)^n} + \frac{RV_n}{(1+WACC)^n} \quad (4)$$

Where,

n - life of the company

FCFF_n - Free cash flow to the firm on period n

WACC - Weighted average cost of capital

RV_n - Residual value of the firm on period n

Residual (or terminal) value is the value of a project's expected cash flow after the explicit forecast horizon. The correct estimation of this value is of great importance in project valuation as it generally represents a large percentage of the project value in DCF valuation. (Janiszewski, 2011) Residual value of the firm is computed as follows:

$$RV = \frac{FCFF_{n+1}}{(WACC-g)} \quad (5)$$

Where,

g – period growth rate

WACC – Weighted average cost of capital

$FCFF_{n+1}$ can also be equal to $FCFF_n * (1+g)$, in the special case where the growth rate g was also used from year $n-1$ to year n .

1.2.1.3 Free Cash Flow to Equity

Free cash flow to equity is the cash flow remaining after meeting all financial obligations, including debt payments, and after meeting capital expenditures and working capital needs. (Janiszewski, 2011)

$$FCFE = Net\ income + D\&A - CAPEX - \Delta\ Net\ WC + New\ Debt - Debt\ Repayment \quad (6)$$

Where: D&A - Depreciations and amortizations; Δ Net WC - Net change in the working capital; CAPEX - capital expenditures.

$$Equity\ Value = \frac{FCFE_1}{1+Re} + \frac{FCFE_2}{(1+Re)^2} + \dots + \frac{FCFE_n}{(1+Re)^n} + \frac{RV_n}{(1+Re)^n} \quad (7)$$

Where,

n - life of the company

FCFF $_n$ - Free cash flow to the firm on period n

Re - Required return on equity

RV $_n$ - Residual value of the equity on period n

1.2.1.4 Weighted Average Cost of Capital

To determine the enterprise value, we need to apply the present value rule of the DCF framework:

Discounting the free cash flows of the company with a rate that reflects the risk of the cash flows, which in this case is the WACC.

The weighted average cost of capital of a company is considered as a function of the combination of equity and debt and their respective costs

Fernández (2013) claims that the WACC is the discount rate at which FCFF must be discounted to obtain the same values that we would obtain with cash flows discounted at the cost of equity.

The WACC is a weighted average of the cost of debt, i.e., the effective interest rate at which a company pays its current debt, and the required return on equity, i.e., the return that the company's owners require for a project financed with internal funds as opposed to debt.

According to Goedhart et al. (2010), free cash flows should be discounted at the WACC because they represent the returns required by the firm's debt and equity investors and are therefore the firm's opportunity cost of capital. He also states that the cost of debt, the cost of equity, and the WACC should be estimated separately because they are so specific to investors.

It is important to note that WACC is a tax-adjusted rate used to measure the impact of the company's leverage and captures the tax benefits of debt.

1.2.1.5 Cost of Debt

In most cases, the cost of debt is the market interest rate the company pays on the debt.

To calculate the cost of debt, we need to take taxes into account by subtracting from the interest paid the tax savings that result from the interest payments. The cost of debt after taxes can be calculated using the following formula:

$$\textit{After - tax cost of debt} = \textit{Pre - tax cost of debt} * (1 - \textit{tax rate}) \quad (8)$$

The cost of debt is typically determined by two important variables, the first being the risk-free interest rate (return on an investment with theoretically zero risk), which ceteris paribus increases the cost of debt when a higher interest rate is used, and the second variable being the company's risk of default. (Damodaran, 2008)

The tax benefits of debt resulting from interest payments and the firm's contractual debt are included in the after-tax cost of debt. As the tax rate increases, so does the tax benefit (or shield, or shelter) from interest payments (Damodaran, 2002).

1.2.1.6 Cost of Equity

The cost of equity capital, or commonly referred to as the cost of equity, is the return required by a company's shareholders.

Typically, the cost of equity is higher than the cost of debt because the shareholders bear a greater risk than the lenders, i.e., the company is contractually obligated to repay the debt to the lenders.

The most commonly used model to estimate the cost of equity is the Capital Asset Pricing Model (CAPM), which we will use throughout the rest of this project. There are other models, including the Arbitrage Pricing Theory model and the Fama-French model.

Risk is a central issue in modern finance, and investors need to be rewarded for higher risks corresponding to higher returns. In this sense, the expected return should be considered as the sum of the risk-free rate and a risk premium corresponding to the risk taken. (Damodaran, 2010)

The Capital Asset Pricing Model (CAPM) describes the relationship between systematic risk (risk inherent in the market as a whole, rather than a particular stock or industry) and expected return (expected profit or loss to the investor).

Unlike other models, the CAPM determines the risk premium for a risky asset by calculating a beta that represents market risk multiplied by the equity risk premium.

The formula for the CAPM is the following:

$$ER_i = R_f + \beta_i (ER_m - R_f) \quad (9)$$

Where,

ER_i = Expected return on investment

R_f = risk-free interest rate

β_i = beta of investment

$(ER_m - R_f)$ = market risk premium.

Investors expect to be compensated for the risk and time value of money. The risk-free rate in the CAPM formula accounts for the time value of money. The other components of the CAPM formula account for the additional risk taken by the investor.

1.2.2 Economic Value Added

Economic value added (EVA), also known as economic profit, is a profitability indicator used to measure a company's financial performance. EVA can be calculated using the following formula:

$$EVA = NOPAT - (Invested\ Capital * WACC) \quad (10)$$

Where:

NOPAT – Net operating profit after taxes

WACC – weighted average cost of capital

Invested Capital – money raised by a company by issuing securities.

EVA is also used to identify the most profitable investments. If a company's EVA is negative, it means that the company is not generating value from the funds invested in it. If a company has a negative EVA but is expected to achieve a positive EVA in the near future, it could be a good option to invest in that company, depending on the market price of the shares. According to Grant (2003), EVA is defined in terms of the market value added (MVA) of the firm. MVA is the difference between a firm's current total market value and the capital contributed by all investors. Grant (2003) also affirms that EVA is highly related to the intrinsic value of the firm, its outstanding debt, and equity.

By using EVA, managers have the tools to make a reasonable assessment of whether their planned investments will result in positive net present value and hence wealth creation for shareholders. (Grant, 2003)

1.2.3 Multiples

A valuation multiple is an expression of market value relative to a key statistic assumed to be related to that market value. For the multiple to be useful, this statistic must be related to the observed market value. (Suozzo et al., 2001).

According to Suozzo et al. (2001), there are two basic types of multiples: Enterprise multiples, which express the value of the entire company; and Equity multiples, which express the value of shareholders. Other authors, as Shreiner (2009), assert that the objective of the multiples (or relative) valuation method is to determine the equity value of a firm based on the market's valuation of comparable firms. This approach attempts to determine the value of a company based on the market

values of a "peer group". A peer group is a group of companies that share similar characteristics. These groups must be carefully selected in order to obtain an accurate valuation using this method.

Shreiner (2009) considers, the multiples valuation method to consist of 4 important steps: Selection of value relevant metrics, identification of comparable companies, estimation of synthetic peer group multiples, and application of the synthetic peer group multiple to the corresponding value driver of the target company.

1.3 Green Finance

Green finance is a relatively new field of finance with growing importance, which reflects the benefits of environmental protection by incorporating environmental risk management strategies and sustainability plans. Green finance also focuses on the importance of promoting a green economy for which industry contributes by finding alternative ways to perform its core activity while cutting a large percentage of its carbon emissions. (Cai & Guo, 2021).

As claimed by Sachs et al. (2019) green financing is becoming more important every year for firms. Both consumers and regulators, have created enormous market pressures to ensure the pursuance of green projects and investments by firms, in order to achieve environmental and sustainable development goals. Nonetheless, in 2019, many financial institutions still invested more heavily in fossil fuel projects than in green projects due to the risks intrinsic to new technologies and the, still somewhat, lower returns of green finance projects.

The green finance market has developed many investment options in the last years with growing appeal for investors, with new financial instruments such as green bonds or carbon market instruments, supported by new market players (or by old market players with renewed investment strategies) deeply motivated by environmental concerns, giving raise to institutions such as green banks, and green funds. Tax policies have also been increasingly supportive of green investment initiatives.

According to Cai & Guo (2021), there are three main benefits from the pursuance of a green economy by firms: the role of corporate governance factors is strengthened; the green economy mentality promotes environmental awareness in the economic agents by encouraging the use of green energy and biodegradable, low-carbon products and optimization; and drives economic transformation and modernization.

1.4 Business Ethics and Corporate Social Responsibility

Business ethics focuses on the importance of assessing in moral terms what is right and what is wrong for the company and its employees, while social responsibility is about knowing what impact one business can have on the community and whether that impact is, or not, welfare increasing for the society as a whole.

The importance of corporate social responsibility (CSR) has become an increasingly important metric in business. Nearly 92% of S&P500 companies publish an annual report as part of their CSR strategy (Governance & Accountability Institute, 2021).

CSR is a practice that is respected by consumers and ensures that companies are practicing social responsibility. Companies that implement CSR strategies want to be made aware of the impact their operations have on society; as they understand the importance of their actions on this matter for their business, via the impact on brand perception and acceptance from customers, and other potential stakeholders. That way, enhancing the financial importance of CSR strategies. More than ever, CSR will have a growing importance in the post-pandemic era as consumers constantly seek to support companies that are in line with their view on morality related topics.

According to Manasakis (2018), CSR has become a common business practice that makes companies accountable for the social and environmental footprint of their activities. The author considers CSR as an important practice which creates value for companies and stakeholders.

2 Data and Methodology

To evaluate the company, we will proceed with an internal and external analysis. We will start with an analysis of the sportswear industry.

This will be followed by a SWOT analysis which will shed light on what the company is doing best and worst, and then use it to formulate an effective strategy for the firm's future. We will also use Porter's five forces analysis to identify the factors that affect profitability in this industry.

Finally, with a sound knowledge of the market situation and the company itself, we will make the valuation using different models covered in the literature review.

To value the company, we will use Nike's financial reports from the last 5 years. Since Nike is a publicly traded company, the financial reports are made available to the public. All financial data is collected from the company's website, Yahoo Finance, Macrotrends and the Nike investor website. The considered data period goes from 2017 to 2021, with annual frequency and the forecast period considered goes from 2022 to 2026.

3 Company Overview

3.1 Nike's Description

Nike is an American multinational corporation best known for its footwear and sportswear. The company's global headquarters are located near Beaverton, Oregon, in the Portland metropolitan area (USA). Nike, together with its subsidiaries, the Converse and Jordan brands, designs, develops, markets, and sells athletic footwear, apparel, equipment, and accessories worldwide. Nike, Inc. has enjoyed decent growth for the industry over the past few decades, while maintaining a loyal customer base across generations and consolidating its influence in the sports industry.

Nike trades as a component of the DJIA, S&P100 and S&P500. According to Statista it is the world's largest supplier of athletic footwear and apparel and a major manufacturer of sports equipment. In 2021, the company had 75,400 employees, sales of \$17.36 billion and the brand itself was valued at about \$30.44 billion (Statista, 2021).

The company offers NIKE brand products in six categories, including running, NIKE basketball, Jordan brand, football, training and sportswear, the latter covering a variety of sports and all types of outdoor activities.

Nike has been the market leader since 1990 and has a total market share of 38% in the sports industry (CSI Market, 2022).

The company's goal is to expand human potential. Over the years, Nike has developed breakthrough sports innovations, made its products more sustainable, built a creative and diverse global team, and made a positive impact on the communities where it lives and works.

3.2 Nike's Products

Nike designs, develops, markets and distributes athletic footwear, apparel, equipment and accessories. The most important segment for Nike is the athletic footwear segment, as it accounts for approximately 64% of Nike's total sales. Nike's sports shoes are mainly for specific sports, although there is also a large proportion of products for leisure activities. Nike's shoes are known for their quality and innovative design. Within this segment, running, basketball, children's, cross-training and women's shoes are currently the best-selling product categories.

Other product categories, such as Nike apparel and accessories, are intended primarily to complement footwear and are generally sold through the same marketing and distribution channels.

Footwear, apparel and accessories are often sold in collections with similar designs or collections for a specific sport or activity.

Another complementary segment for Nike is the equipment sector, where all types of equipment are sold, including sports balls, skates, rackets, socks, gloves and all types of equipment necessary for sports practice.

Nike also sells a range of clothing and casual clothing and footwear, these products are not designed for sports purposes, but are obviously products related to the brand and its values, providing a range of casual clothing for daily activity.

3.3 Nike's Subsidiaries and Brands

Nike's main subsidiaries are Jordan, Converse and Datalogue.

Nike made history in 1984 when it collaborated with Michael Jordan, a successful professional basketball player, to develop a shoe, the Air Jordan 1. At the time, this shoe was considered the best for the game of basketball, and people began to prefer shoes designed specifically for sports, rather than the usual sneakers. This created an opportunity in the market and Nike created Jordan with the aim of producing new versions of the original Air Jordan.

The development of Chuck Taylor All-Star Canvas basketball shoes in 1922 is the reason for the great popularity of Converse. However, in the 1990s, the shoe began to decline and in 2001 Converse had to declare bankruptcy, which led Nike to acquire the company in 2003 for \$5 million.

Nike managed to refocus Converse by using the company's original style to transform it into a sporting goods company and a lifestyle company for modern times by updating styles regularly. As a result, Converse's revenue increased from \$205 million in 2002 to as much as \$1.9 billion in 2019, and by 2021, revenue had increased up to \$2.21 billion.

In 2021, Nike acquired an integration expert called Datalogue. Based in New York, Datalogue is an integration platform that enables consumers to lead digital transformation. With Datalogue's technology, Nike can now easily integrate data from its supply chain, app ecosystem and enterprise data into a standardized and accessible platform.

Datalogue aims to transform raw data into insights for businesses in real time, across the enterprise.

Nike and its subsidiaries have a total of 29 brands, including Nike Pro, Nike Golf, Air Force 1, Air Jordan, Air Max, Nike Blazers, Nike Dunk, Nike Skateboarding and Nike CR7.

3.4 Nike in the U.S.

Nike is an American sportswear company and is headquartered in the United States in Beaverton, Oregon. In the United States, Nike is the most popular and largest athletic footwear manufacturer, ahead of its competitors Adidas and Under Armour. Nike is a popular brand among youth and adults around the world, but especially in the United States because Nike's marketing department sells the emotional benefits of their products with the idea of a healthier and younger lifestyle through the use of their shoes.

The United States is the main source of revenue for Nike and its core segment, as 40% of the company's global revenue was generated there in 2021.

In the United States, the focus is on American football, basketball, and baseball, as these sports are very popular in this region.

3.5 Nike's Marketing

3.5.1 Marketing Strategy

Nike's marketing strategies over the years have been ingenious and are a key element in differentiating the company from its competitors, and they are also important to the brand's success. Nike carefully positions its products and has a clear and strong identity as a sportswear brand. Nike appeals to the emotional side of customers by selling touching stories instead of great products, creating a sense of belonging and trust in the brand. The company is also tapping into the power of the social media market by partnering with celebrities and inviting influencers to promote the brand. Nike also sees online shopping as a great opportunity and pays attention to a striking and creative website design, intelligent product recommendations and useful product filtering.

3.5.2 Target

Nike's target audience is sports enthusiasts and young buyers, especially those with an active lifestyle, for whom the company is a trusted and "cool" brand. The company also targets different sports and categorizes its products into basketball, Jordan Brand, football training and sportswear. With the development of premium products, Nike also targets affluent buyers.

3.5.3 Positioning

Nike has positioned itself as a leader in the sportswear and athletic footwear industry, a company that presents products of the best quality, with the use of the best technology and an innovative design.

Nike also positions itself as an inspiring and innovative brand that focuses not only on the quality of the products, but also on the feeling that the products can give to the customer.

Nike's swoosh logo along with the slogan "Just do it" and collaboration with successful athletes have convinced customers that the brand stands for victory and ambition. The Nike brand is also number one in the minds of customers when it comes to sports products.

3.5.4 Nike's Mission and Vision

Nike's vision is "To bring inspiration and innovation to every athlete in the world." The company's mission statement is "Doing everything possible to expand human potential."

The company's vision and mission have an element of inspiration, making inspirational slogans that have a positive impact on people's lives as seen in the next example: "If you have a body, you are an athlete." And it also has an element of innovation, constantly breaking new ground in both design and technology.

3.6 Nike's Environmental Record

Nike has never really been considered a green company. It is part of the ever-growing textile industry, which continues to have a negative impact on the environment. In the production of textiles, Nike has impacted the planet in various ways, such as increasing water deficit, climate change, pollution, fossil fuel consumption, and raw material consumption. Nike also uses leather as a significant part of its business, the leather industry uses many harmful chemicals and contains large amounts of other pollutants.

In the late 1990s, Nike came under criticism for its environmental impact. After several failed attempts, it was not until 2008 that Nike began to address the company's environmental and sustainability practices. By then, it was obvious that the company viewed sustainability as a business risk and reputational issue and needed to change that.

Later, Nike began to understand that sustainability could be an opportunity as well as a risk, so it decided to link sustainability to one of the pillars of its brand, innovation. The idea was to innovate its products by making them more environmentally friendly. They took the first step by switching from FS6 gas to nitrogen in the famous "Air Max" and have never stopped improving thereafter. Since 2001, Nike has also reported on its environmental and social performance to publicize the sustainable innovations in the company and their development over the years.

In the last 14 years, Nike has tried to move towards a sustainable and waste-free policy by achieving:

- More efficient product design and manufacturing processes, and the reuse of factory waste, which is transformed into high-quality materials for the production of footwear and apparel.

- Energy efficiency with its energy and carbon program, which aims to reduce energy consumption per unit each year. Nike was able to reduce its energy consumption per unit by 50% from 2008 to 2016 (Digital Initiative, 2016).

- Water efficiency: by using innovative technologies that significantly reduce water consumption in factories, Nike was able to save 20 billion liters of water from 2010 to 2016 (Digital Initiative, 2016).

- Collaborations with external entities in sustainability and innovation to develop new ideas for environmentally friendly materials and reducing pollution in factories.

More recently, in 2021, Nike published its 2025 targets for carbon emissions, waste, water and chemicals.

In terms of carbon emissions, the company aims to reduce greenhouse gas emissions by 70% through the use of electricity from renewable energy sources and greener manufacturing and transportation processes. The amount of waste is to be reduced by 10% per unit through more efficient operations. In addition, the amount of waste in the supply chain is to be reduced by 100%. As for water, freshwater consumption will be greatly reduced and an amount of 13 billion liters of water will be restored through water-saving projects. In the area of chemicals, Nike aims to introduce cleaner alternatives for the 10 most important chemicals throughout the supply chain (Nike website, 2020).

All these initiatives and goals are a small step, but a step in the right direction. It is a good and solid plan that includes a lot of transparency but needs to be put into practice.

Nike's 2020 report showed that the company only met 7 of its 19 goals for the year. Nike has had some success in reducing water use in manufacturing textiles, and using sustainable materials, but it has completely failed in reducing greenhouse gas emissions.

In August 2020, Nike was given a low score in sustainability by the website "good on you", its sustainability was rated "it is a start" for the planet. The rating considered that Nike has made some positive changes in its environmental practices and initiatives, such as becoming a member of the Sustainable Apparel Coalition and reducing its use of environmentally friendly materials like organic and recycled cotton. But while the brand has set positive initiatives to reduce greenhouse gas emissions, there is no evidence that it will be able to meet these goals. Nike also has no evidence of a policy to reduce deforestation in its supply chain, as the brand heavily destroys the Amazon Forest with its leather products (Segran, 2021).

In 2022, Nike received the worst rating from Ethical Consumer for its cotton sourcing policy due to a lack of a clear approach to pesticide and herbicide use (Ethical consumer, 2022).

Nike and other brands like Adidas have introduced a new product category called "sustainable products". The only problem with these products is that Nike's definition of sustainable products is only 20% recycled materials. Comparing that to the sustainable products section of Nike's biggest competitor, Adidas, which offers more than five sustainable brands with 50% recycled materials (Adidas website, 2021), therefore Nike is not doing so great in this area.

Nike shoes and apparel in general are considered high quality and are the first choice for most people, but they really lack sustainability and environmental protection, so "sustainable consumers" prefer other brands such as Adidas.

Although the brand is moving in the right direction, "Nike still has a long way to go before it can truly be called a sustainable brand" (Robertson, 2022) (good on you).

3.7 Nike's Ethical Record

The Nike brand was founded in 1972 and since then the company has grown and grown, the brand was popularized by celebrities from the sports world and, accordingly, the popularity of Nike grew and grew, in 1980 the company went public and with all this growth the demand of the company became more and more difficult to manage.

Initially Nike used factories in South Korea, China and Taiwan, but as these economies grew and developed, labor costs were no longer as favorable and Nike chose to produce in factories in less developed countries, particularly Indonesia and Vietnam. The working conditions in these factories have always been a source of controversy and negativity towards the brand.

The first time in Nike's history when the brand stopped its impressive growth was in the 1990s, when the company began to fight allegations of labor and human rights violations in underdeveloped countries. It all started when an activist named Jeff Ballinger exposed Nike in 1991, accusing the brand of using sweatshops (workplaces where workers are employed at low wages and in unhealthy or oppressive conditions) to make its shoes. A report was published showing extremely poor working conditions and low wages in Nike's Indonesian factories. Since then, Nike has taken much criticism from human rights activists and the mainstream media for rights violations in its factories, including deficiencies in health and safety conditions, extremely low wages, and discriminative hiring and firing practices.

A few years later, in 1996, Life magazine published photos of Pakistani children making soccer balls for Nike, adidas and other sports brands. These images had a terrible impact on Nike's sales and

reputation. Customers began to develop a poor opinion of the brand. Child labor practices had huge consequences for the brand.

Nike also had problems in the factories in Vietnam when the New York Times published a front-page article about a private report that was leaked to the public. The report revealed that workers in the factories were exposed to extremely high levels of chemicals, leading to health problems and illnesses.

Universities began to cancel their contracts with Nike to manufacture branded sporting goods. In 1998, Nike's revenues and stock prices dropped by about 50 percent, and the company laid off 1,600 employees. Nike needed to change its reputation.

Although the company began to invest in improving working conditions in individual factories, this was not easy because these factories contracted out to local workers, making it difficult for Nike to monitor working conditions. Nike had to take additional measures to ensure that factories did not have illegal activities such as child labor, excessive hours, hostile work environments, and inadequate pay.

Between 2004 and 2007, as the world began to pay attention to the issue of corporate responsibility, Nike made some changes by improving its monitoring efforts, raising the minimum age of workers, increasing the number of factory audits, and promoting gender equality. Nike was able to improve its reputation and corporate image, the brand appeared in Fortune's list of "The World's Most Admired Companies" in 2013 as the most admired sportswear company. In addition, Nike was ranked 22nd among "Best Corporate Citizens" by Corporate Responsibility magazine.

Although the company has made some changes regarding its poor ethical behavior, some of the company's practices are still problematic, and to this day, the company has constantly gone through ups and downs in terms of its reputation.

In 2017, women working in Nike factories in Cambodia experienced repeated mass fainting spells, which were investigated and linked to the terrible working conditions they were subjected to. They worked 10 hours a day, 6 days a week, in temperatures of 37 degrees. Nike responded to these incidents by improving oversight of labor practices and ensuring that factories had clean air and air conditioning. This also highlights another problem with the company: it constantly acts in response to events, not before they happen, and sometimes only to protect its image rather than to act ethically in the first place.

Despite Nike's emphasis on female empowerment and inclusion in its advertising campaigns, Nike was sued in 2018 by four former female employees who accused the company of creating a culture of gender discrimination and sexual harassment.

Thirty years after the company was exposed, its reputation is still not solidified.

In 2020, Nike published its 2025 goals, some of which focus on Nike's employees and business ethics.

Nike is committed to improving compensation and benefits for its employees by providing competitive and equitable benefits to all employees while maintaining 100% pay equity at all employee levels on an annual basis. The company also plans to promote diversity and inclusion by ensuring 50% women in the global workforce and 35% racial and ethnic minorities in the U.S. workplace. It is a goal to improve health and safety by making 100% of strategic suppliers world-class safe and healthy workplaces. Nike aims to promote employee engagement and support organizations working to eliminate racial inequality (Nike website, 2020).

These new 2025 goals are evidence of good initiatives and an ethical evolution of the brand. The most important issues are being addressed. Priorities seem well defined with investments in supply chain health and safety, gender equality, environmental responsibility, diversity and equity for all workers. These goals are a good step for the brand and possibly the solution to its ethical issues and their instability for the brand's reputation.

3.8 Corporate Social Responsibility

Since 1991, Nike's corporate social responsibility practices have evolved. In the beginning, these practices were effortless and without any regulation or implementation. Manufacturers in underdeveloped countries were denied their minimum contract requirements, and the company ignored fair labor prices to get the lowest-cost suppliers possible.

According to Zadek (2004) CSR develops in five phases:

1. Defensive: "It is not our fault".
2. Compliance: "We are just doing what we have to do."
3. Managing: "It is the business."
4. Strategic: "It gives us a competitive advantage."
5. Civil: "We need to make sure everyone is doing it."

Since 1991, Nike has moved from the defensive phase to the managerial phase and entered the strategic phase a few years ago when it realized that being a leader in CSR is not only good from an ethical point of view, but can also benefit the company by providing a competitive advantage.

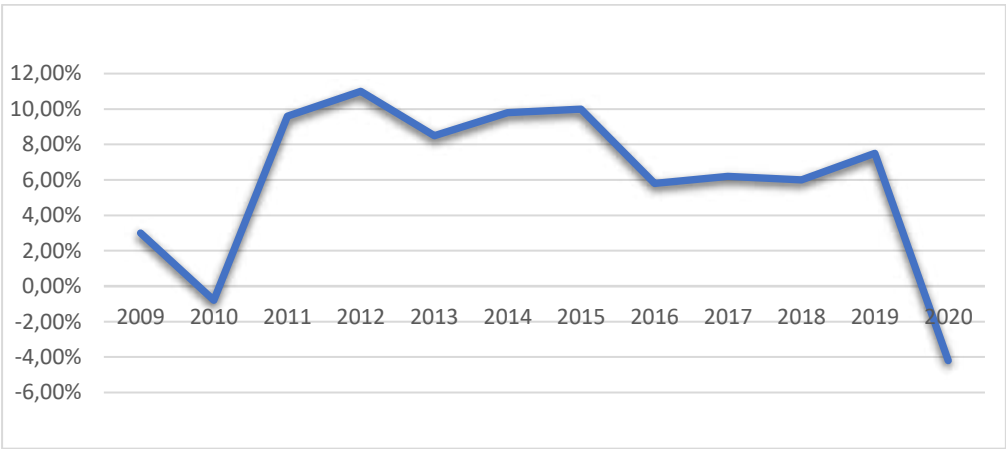
In the future, Nike should continue to develop its CSR strategies to grow and reach the fifth stage. It is very important for Nike to constantly develop its factories technologically and ethically to achieve high productivity without harming workers, thus maintaining high demand for the sector and brand to maintain its dominance in the sportswear industry. Nike must continue to use corporate

responsibility as an innovative tool by introducing new CSR initiatives to achieve the goal of being an ethical company and an industry leader in corporate social responsibility.

3.9 Covid Impact in Nike's Business

The covid pandemic and confinement were highly harmful to the sports clothing and footwear sector and Nike was no exception.

Figure 1: Nike sales growth



Source: Macrotrends

According to the figure above, business was good in the first half of 2020, with sales up 9% year-over-year, but then the Covid 19 pandemic had a big impact on Nike's business, especially in the second half of 2020. In 2020, the company's sales were down 4.2%, and it was the first time since 2010 that the company had negative sales growth.

The second half of 2020 was when the virus spread across Europe and also reached the United States, Nike's largest market. For two months, 90% of physical stores in North America, Europe and most of Asia were closed.

During the pandemic, demand for Nike products remained high, which was not the problem. The problem was that Nike suffered from supply chain and manufacturing issues in Vietnam and Indonesia. In Vietnam, Nike had to shut down production for 10 weeks because of long production stoppages in that region during the worst of the pandemic. More than half of Nike's footwear production and one-third of its apparel production was made in Vietnam, and these long shutdowns caused delays in the distribution of products from Asia to North America. A group of 80 apparel and footwear manufacturers eventually sent letters to Joe Biden to send vaccines against the coronavirus

to Vietnam as soon as possible, which was done within a short time. In 2020, Nike's stock fell by about 15%.

Although Nike, like most companies in the industry, struggled, the company managed to respond well to the pandemic and made some good decisions to mitigate its impact.

The poor results in 2020 have prompted Nike to innovate and invest more in a direct-to-consumer (D2C) strategy. On the positive side, the pandemic allowed Nike to up its digital game and online business. E-commerce went through the roof and Nike reported an 82% increase in digital sales in the first quarter of 2021.

The company had not anticipated such a positive consumer response to the expansion of its online offerings. The appetite for Nike products increased even during the crisis, and the strong uptick in online shopping helped the company respond optimally to the pandemic crisis.

In addition to its digital transformation and D2C focus, Nike also focused on the women's market, which it sees as one of its biggest growth opportunities, and on balancing supply and demand to combat the crisis.

With a stronger digital foundation and good brand momentum and financial position, Nike was able to respond to the heights of a market leader and turn the tide to become stronger as a brand in the long term.

3.10 Competition

Nike has four main competitors in the sportswear market: Adidas, Puma, Under Armour and Lululemon Athletica.

A. Adidas

Adidas is a German manufacturer of sportswear, footwear, and other sporting goods. The company has been in business since 1949, when it began manufacturing athletic footwear. Adidas is the largest sporting goods manufacturer in Europe and is second only to Nike in the world. According to Statista (2021) Adidas had a brand value of \$14.3 billion. The company is growing rapidly and reported 16% constant currency sales growth for fiscal 2021. Over the years, Adidas consistently outperforms the competition when it comes to consumer satisfaction in the eyes of American consumers (Statista, 2022). In terms of pricing, while both companies offer similar prices, Nike offers more and better discounts on footwear, while Adidas offers lower base prices. The two most important markets for Adidas are North America and Greater China, with a net sales share of 24% and 22%, respectively; Europe and Africa together account for one-third of sales (Statista, 2021).

Nike and Adidas are the two giants in the sportswear market with a wide gap between them and the rest of the players, making Adidas the strongest Nike competitor.

B. Puma

Puma SE is a company that operates under the Puma and Cobra Golf brand names in footwear, apparel and accessories, with footwear being the largest part of the brand. Puma is a German multinational company headquartered in Bavaria, Germany, and is the third largest sporting goods manufacturer in the world after Nike and Adidas. Puma has been in business since 1948 and recorded a 30% growth in 2021 compared to 2020. Facing strong competition in the market, mainly from Nike and Adidas, Puma started to diversify by entering the fashion industry. Since then, the brand has gained a good reputation as its products have evolved into a more urban look that is popular among younger generations who love a mix of sports and fashion. According to buyers, Puma has better value for money compared to Nike. Puma's main markets are North and South America, with a combined sales share of 38.7% in 2021 (Statista,2021).

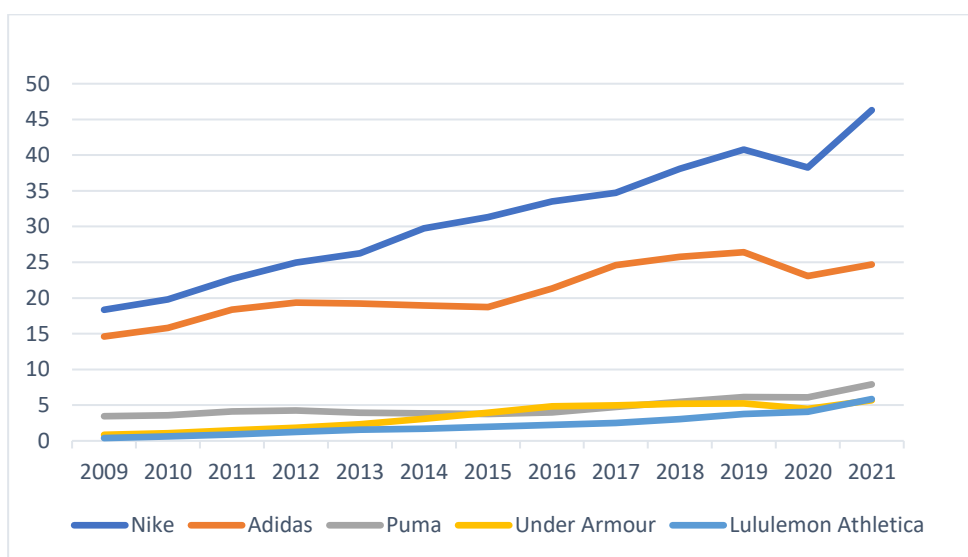
C. Under Armour

Under Armour Inc. is an American sports equipment company engaged in the development of branded performance apparel, footwear, and accessories. The company has been in existence since 1996 and has grown steadily since then. In 2021, it reported a 27% increase in sales compared to 2020. The brand is known for its innovative Moisture Transport System, an advanced technology used in Under Armour apparel that allows athletes to keep their clothes dry even when they sweat. It is impressive how big and successful the brand has become in just 25 years. Under Armour's products are cheaper than Nike's, which is due to Nike's stronger competitive position and greater financial stability. The leading market for the brand is North America, where most of its revenue is generated.

D. Lululemon Athletica

Lululemon Athletica is a Canadian company founded in 1998. It began as a retailer of yoga apparel and expanded into sportswear, lifestyle apparel and personal care products. Today, the company is a provider of technical sportswear focused on yoga, running and training. Lululemon offers high-quality and technical products for these activities, which are expensive to manufacture, which is why the products are expensive. The brand is known for its iconic Align yoga line, which includes leggings, trousers, sweatpants and sports bras, and is very successful among its female target audience. Although it is a Canadian company, the U.S. region accounts for the majority of the brand's revenue.

Figure 2: Revenues from Nike and its competitors, in billions of dollars



Source: Author, Macrotrends

Nike and Adidas are at a different level in terms of revenue than the other three players, who have similar revenues. It should be noted that the revenues of Nike and Adidas have increased sharply in recent years, with the exception of 2020 due to the pandemic crisis. In 2021, Nike again shows strong growth, providing a good response to the closure. It should be noted that the sales of Under Armour and Puma have converged since 2009. Nike, Lululemon Athletica and Puma showed impressive growth in 2021, responding fantastically to previous year's crisis.

4 Industry Overview

4.1 Market Economic Growth

Nike is part of the sporting goods industry. This is a multi-billion-dollar industry that encompasses a wide range of products, with apparel and footwear being the most important. The global sporting goods market is estimated at \$53.7 billion in 2021 (Genius Sports, 2021). The United States is the most important market for sports apparel and footwear, accounting for more than 30% of the total world. Sales of sporting goods stores in the U.S. amount to \$45 billion per year (Statista, 2021).

The global sporting goods market has shown decent growth over the years. The market size of the sporting goods industry in the U.S. has grown at an average annual rate of 5.9% between 2017 and 2022 (IBISWorld, 2022). According to market research by "Research and Markets", the global sporting

goods and equipment market will grow at a compound annual growth rate (CAGR) of 9.32%, reaching a market size of \$91.77 billion by 2027.

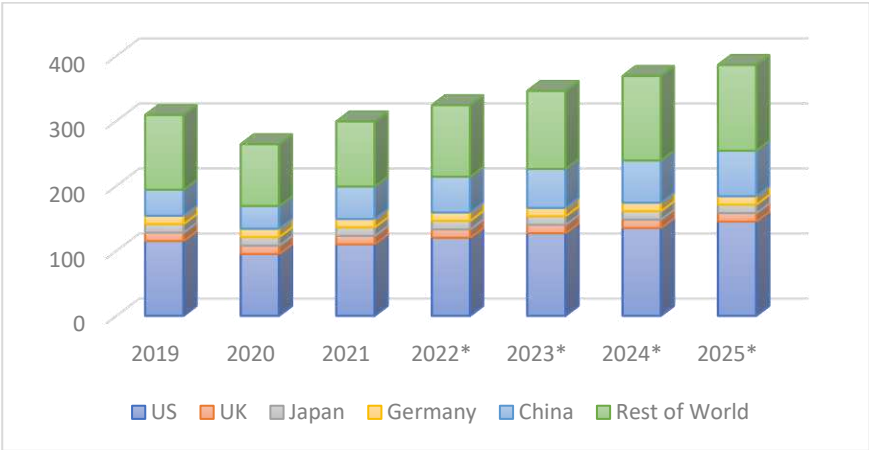
4.2 Impact of the Pandemic Crisis

Although the pandemic crisis negatively impacted the sector in 2020, decreasing the market size by 13.9%, the market recovered quickly in 2021 and is expected to continue growing at an average growth rate of 8.8% through 2025. This recovery was only possible due to an important change that took place during the Covid pandemic: the investment and development of online selling and e-commerce platforms. The digital revolution on the part of companies in the sector, combined with the continuous increase in demand for sporting goods, has greatly helped the sector, as it was a necessary innovation at the beginning of the pandemic, but today it is the new normal in the sector and the market continues to grow.

4.3 Most Important Regions

The global sportswear industry is sold in various regions such as US, UK, Japan, Germany and China.

Figure 3: Global Sportswear Market Size per region



Source: Author, Euromonitor

North America is the leading market with a volume of approximately €110 billion in 2021. These figures are strongly related to the large number of high school students playing sports in the United States, resulting in a constant growth in demand for sportswear products. According to the National

Federation of High School Associations, 7.9 million students were involved in high school sports in the U.S. during the 2018-2019 school year. The U.S. market is expected to grow at a CAGR of 7.8% through 2025.

Europe is also an important market for the industry. It is expected to show growth in the coming years as more funding is made available to reduce inactivity in Europe, leading to the older population becoming more involved in physical activities and inspiring young people to be more active in their daily lives. The European population is also becoming more engaged in sports and physical activities, leading to greater demand for sporting goods. According to the Play the Game organization, 40% of Europeans played sports at least once a week in 2018.

Asia has shown decent growth in the recent past, and it is expected to show the highest growth among all geographies where this industry operates in the coming years. China and India are the two main countries contributing to this growth, with a high percentage of young population and an increasing desire to improve their lifestyle, which increases the demand for foreign brands, some of them from the sportswear sector. With a large number of initiatives to promote active participation in sports in China, the market is growing at a high rate and has huge potential. Some experts believe that China will replace the United States as the leading market in the future. China is expected to grow at a compound annual growth rate of 13.7% through 2025.

Another interesting market is South America. This market is expected to show growth soon, as the unemployment rate in this region is falling and the population has higher purchasing power.

4.4 Market trends

Nowadays there are six key trends shaping the sporting goods industry, according to McKinsey & Company:

- Online Fitness, most consumers expect to continue using online fitness and wellness programs and digital exercise as attitudes and behaviors change. With health awareness on the rise, consumers will continue to engage in different and innovative ways.
- E-commerce, from social media to social commerce, more than 80% of consumers use online channels to search for products. Although social media continues to be an effective platform for influencers and digital communities, companies that have been able to combine social media and social commerce activities have been able to significantly increase their profits.
- Sustainability, as two out of three consumers consider sustainability an important factor when purchasing sportswear. As consumer expectations for sustainable products continue to rise,

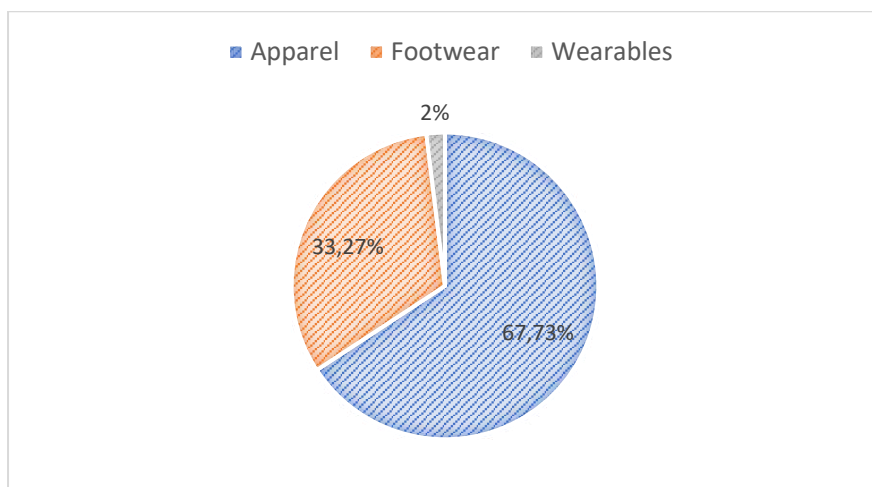
companies must differentiate themselves from the competition and introduce innovations that focus on sustainable practices.

- Changes on Distribution channels, with approximately 45% of sales coming from online channels in 2021, even as stores reopen after closing. Players are shifting to direct-to-consumer sales, creating a strong digital presence, and leaving competitors behind.
- Fashion, people are starting to look for fashionable clothing, and some key players are taking advantage of this by developing innovative, technologically advanced products. The demand for fashionable color combinations in sports activities continues to grow
- Growing awareness of health issues related to lack of physical activity, driving demand for sportswear products.

4.5 Industry by Product Type

In the sportswear industry, the market can be divided into athletic footwear, apparel, and wearables.

Figure 4: Global Sportswear Market Share by product type, 2020



Source: Fortune Business Insights

The apparel segment dominates with the largest share due to the high demand for quality apparel for various sports such as football, basketball, baseball, and others. The use of sportswear as fitness apparel also contributes to the high share of apparel.

Footwear has a decent weight with a share of 33.27%. In the United States, this type of product is much more prevalent due to the sport of basketball, NBA success, and Jordans, which are a highly sought-after product known for their quality and design.

The wearables segment represents only 2%, but its demand is increasing because it is helpful in reducing muscle soreness and improving flexibility.

5 Porter Five Forces Analysis

This analysis looks at the five competitive forces in the sportswear industry, the industry structure, the strengths and weaknesses of the sector, and Nike's competitive landscape.

This analysis is divided into 5 points (forces): Threat of New Entrants, Power of Suppliers, Power of Customers, Threat of Substitutes, and Competition in the Industry.

5.1 Threat from new entrants

In the sportswear industry, new entrants are always considered as a potential threat. New entrants need to offer something new to successfully enter the market. They usually try to put pressure on existing players like Nike by lowering prices and cutting costs, and offer different value to customers through innovation with new products and new technologies. However, it is very difficult for new companies to enter the sporting goods industry because of how difficult it is to survive and compete with the market leaders Nike and Adidas.

Nike has been excellent at dealing with new entrants by consistently developing new products and services, investing heavily in research and development, and achieving economies of scale (cost advantages that companies take advantage of when production becomes more efficient). Existing small companies and new entrants do not stand a chance against Nike, which is a financially stable company. Nike, as an industry leader for many years, has an established brand name and high customer loyalty, which also makes market entry difficult.

Even if new entrants focus on online selling, which is already well explored by the market leader, these new entrants would have to deal with supply chain issues and logistical difficulties that the big players have already overcome.

Overall, the threat from new entrants in this industry is weak and poses little threat to large companies like Nike.

5.2 Power of Suppliers

Most players in the sportswear industry source their raw materials from a variety of different suppliers. In a dominant position, suppliers may have the power to influence prices and resource availability. The more a company depends on its supplier, the greater the supplier's bargaining power. On the other hand, if the supplier is the one who is dependent on the company, the supplier becomes powerless.

There are many suppliers of rubber, cotton, artificial leather, etc., with little difference among them, so their bargaining power is very low. Companies such as Puma, Adidas, and Nike, which are known and recognized worldwide and whose brands have high value, are companies that suppliers want to be associated with. Suppliers are easily replaceable, as the example of Nike shows. The company has suppliers in various countries, some of which are small suppliers located near Nike factories because Nike is their main customer.

Overall, players in the sporting goods industry have a power advantage over their suppliers because it is easy for them to switch between suppliers quickly and cheaply. The power of suppliers is a weak force in this sector.

5.3 Power of Customers

Customers want products of the best quality, but at the lowest possible price. The main strength of customers is the ease with which they can switch to a competing brand without incurring any costs. On the other hand, there are only a limited number of players in this market, which, combined with the very low contribution of individual customers, weakens the power of customers.

It is important to remember that buying behavior is highly influenced by how strong the brand identity is, because a strong brand identity gives consumers a sense of loyalty and trust.

There are consumers who are more price conscious and choose to buy cheaper products, which can be a problem for larger suppliers with more expensive products like Nike and Adidas. However, these big brands are known for their quality products and consumers are aware of this.

Large companies like Puma and Adidas have a large customer base, well-known brands and big names in the industry. When consumers are asked about sportswear brands, they always think of these brands. The demand for these brands is very high and customers are loyal.

Considering all these aspects, although the power of customers is great, it is only moderate in this industry.

5.4 Competition in the industry

When competition in an industry is intense, it can lower prices and reduce the industry's profitability.

The sportswear industry has grown rapidly in recent years, and so has competition in the sector. High market penetration and overall saturation have intensified competition among suppliers, who are constantly fighting for space and growth in the industry. This intense competition has made it difficult for top brands such as Nike and Adidas to continue to grow as in previous years.

All players are investing heavily in marketing campaigns, strong brand identity and capital expenditures, which intensifies competition. Especially in the footwear industry, competition is even more aggressive as new products with new features and specifications are developed every month.

The top brands have also expanded into Internet marketing and e-commerce due to the pandemic crisis, resulting in a new rivalry in the online selling market that is as big as the regular selling in the industry.

Although the number of competitors and direct competitors is not large, the competition is very intense. The competition in the industry can be considered as a strong force in this industry.

5.5 Threat of Substitute Products

When a different or new product or service satisfies a similar need, the industry's profitability for the substituted product declines. In the case of athletic shoes, apparel, and accessories, there are no true substitutes. Basketball players do not play with normal shoes, sandals or boots, but with special sports shoes, because they are the best and most optimal footwear for this sport. Sports equipment and accessories are also specific for each sport. Even if it is possible to play, for example, football without equipment, only with casual clothing, it cannot be considered a substitute, because it does not meet the requirements of high-quality specific equipment for professional or recreational sports. The threat of substitute products in the sportswear industry is a very weak force.

6 SWOT Analysis

SWOT Analysis is a well-known method for evaluating a company's competitiveness, identifying the company's internal strengths and weaknesses, as well as external opportunities and threats in the marketplace.

A. Strengths:

- Strong and competitive brand: The Nike brand has a value of \$42.5 billion (Interbrand, 2020) and is one of the most recognized brands in the whole world.
- Nike is the market leader: This company has been the world's leading sporting goods brand since 1990, with a total market share of 38% in 2022.
- Strong subsidiaries: Converse and Jordan are important subsidiary brands in the shoes market.
- Low manufacturing costs: Nike manufactures high-quality products at minimal cost by producing in countries like Vietnam, China and Indonesia.
- Focus on sustainability: Nike is improving its sustainability and actively working to become greener.
- Exceptional marketing strategy: Every Nike advertisement inspires people to be more confident and pursue their dreams while having an active lifestyle.
- Strong research and development department, which can produce innovative and excellent products using advanced technologies.
- Strong partnerships with famous athletes: Nike has several prominent brand ambassadors in each sport, for example, Michael Jordan in basketball, Cristiano Ronaldo in football and Rafael Nadal in tennis.
- Globalized company: Nike is a multinational company that operates in 200 countries ensuring worldwide dominance in the industry.
- Successful online business and digital presence: Nike's E-commerce is a success, and the company aims for digital sales to account for 50% of total sales in the next 5 years.
- High-quality products, with carefully selected materials and innovative designs.
- Large customer base: Nike has millions of customers worldwide who participate in Nike events and provide customer feedback to the company.

B. Weaknesses:

- Dependence on the U.S. market: Despite its global popularity, Nike is heavily dependent on the U.S. market for sales and revenue. In 2021, 39% of Nike's revenue came from North America (Statista, 2022).
- Pending debt: Nike's total long-term debt is \$9.4 billion in 2021.
- Weak diversification: There is a dependence on athletic footwear and apparel. Nike is also too focused on the footwear market and has a lot of diversity in this sector, but not in the other sectors.

- Power of retailers: Retailers have a lot of power, and since Nike is very sensitive to its pricing, this makes the brand very vulnerable to retailers.
- Outsourcing of production: Despite the lower costs associated with outsourcing production, good organization and control of the manufacturing process is required to ensure that the quality of the products does not suffer.
- Limited growth of market share: Competition in the sports sector is constantly increasing, and as the market leader with a significant market share, it is difficult for Nike to increase its market share due to smaller companies that are constantly trying to find their space in the industry.
- Bad brand image and reputation: There are several allegations and lawsuits against Nike that damage its brand image. In the past, Nike has been accused of, children labor, poor working conditions, discrimination, gender inequality and sexual harassment.

C. Opportunities:

- Diversifying business: People are very aware of big companies like Nike and Adidas, which makes it easier for these companies to move forward with new business ideas, such as opening sports academies around the world or marketing premium products like sporty sunglasses and jewelry, expensive products that can generate high profits.
- The opportunity to become green: Demand for environmentally friendly products in the sporting goods industry is increasing, giving players the opportunity to produce sustainable and recyclable products.
- Emerging markets: Emerging markets such as Brazil, China and India. These new markets are becoming more affluent and are showing increasing demand for U.S. brands and sportswear products, providing opportunities for brands like Nike to expand their reach, reduce dependence on the U.S. market, and increase sales.
- Investment in innovation and R&D: In this industry, innovation is highly rewarded and is a must for a player to remain competitive.
- Becoming a responsible manufacturer: Many countries, especially those in the West, have become more aware of the origin of their products and how they treat workers and the environment, and have become responsible manufacturers. Companies can take advantage of this by improving their ethical and environmental practices to distinguish themselves as responsible sporting goods manufacturers and achieve better market penetration among ethically conscious customers.

- Investing in artificial intelligence: Large companies like Nike have extensive resources, and investing in artificial intelligence could help the company better predict consumer behavior and further develop digital selling.
- Fashion market: Nowadays, people wear sportswear for various occasions, not only for sports, which gives sportswear companies the opportunity to enter the fashion market.
- Direct consumer strategy, by expanding B2C channels, focusing on digital business and e-commerce, resulting in a better customer experience and a more loyal customer base.
- The industry is growing: The sporting goods industry is constantly growing, and demand is very high. Top players like Nike are able to capture a large portion of this growing demand and expand their business.

D. Threats:

- Economic uncertainty, due to the recent pandemic crisis and war in Ukraine.
- Government regulations: new rules, and regulations imposed by the government in the United States can pose a threat to sporting goods companies.
- Patent Disputes: There are many patent disputes in the industry, especially between Nike and Adidas, the two largest players. These disputes do not seem to end anytime soon, and regardless of whether a company is in the right or not, a lot of resources are wasted on these lawsuits.
- Counterfeiting: Companies such as Nike, Adidas, and Puma are affected by counterfeit products on a large scale. Counterfeit products are available in retail stores and online. The value of counterfeit goods in global trade is \$461 billion and rising.
- Increasing competition in the market: There is fierce competition in the sports industry with very well-known brands. Although Nike is the market leader, the brand is constantly under pressure as small emerging companies try to increase their market share and pose a potential threat to the big companies.
- Currency fluctuations: Since Nike is a global brand, it is exposed to fluctuating exchange rates as it buys and sells in different currencies, so there is a risk that the company will sell at a currency loss.

7 Financial Analysis

This financial analysis is of great value for the valuation of the company. It is an extremely important analysis for investors as it gives them a better insight into the financial situation of the company. This analysis also helps to get an idea about the current situation of the company and its credibility and reliability. The financial analysis will also include Adidas, which is Nike's direct competitor in the sporting goods industry, to understand not only how Nike is doing financially, but also to compare its financial position with that of its largest competitor.

The analysis is based on Nike's financial statements for the last five years (2017-2021). It is divided into four parts: Profitability, Liquidity, Solvency and Growth.

7.1 Profitability Analysis

A profitability analysis helps keep track of how the business is performing. It also allows decision makers to identify ways to maximize profits. Net profit itself does not tell enough, but understanding the various factors that contribute to it can give investors a better idea of how certain financial aspects are performing.

This analysis is based on profitability ratios, which measure a company's ability to generate margins and profits. These ratios provide a better view of how well a company is using its assets to generate profits and value for shareholders.

There are two categories of profitability ratios: Margin ratios and Return ratios. Margin ratios show the company's ability to convert sales into profits, and return ratios measure the company's ability to create value for shareholders.

Table 1: Profitability Ratios, Nike and Adidas

Profitability ratios	2017		2018		2019		2020		2021	
	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas
Gross Profit Margin	44.58%	50.44%	43.84%	51.85%	44.67%	52.00%	43.42%	49.66%	44.82%	50.70%
Operating Profit Margin	13.83%	9.76%	12.21%	10.81%	12.20%	11.25%	8.33%	3.78%	15.58%	9.36%
Net Profit Margin	12.34%	5.17%	5.31%	7.77%	10.30%	8.36%	6.79%	2.18%	12.86%	9.97%
Return on Capital Employed	26.70%	25.15%	26.95%	26.98%	30.11%	22.30%	13.51%	6.13%	24.72%	15.08%
Return on Sales	13.83%	9.76%	12.21%	10.81%	12.20%	11.25%	8.33%	3.78%	15.58%	9.36%
Return on Assets	18.23%	9.32%	8.58%	10.95%	16.99%	9.27%	8.10%	2.04%	15.17%	6.74%
Return on Invested Capital	26.70%	20.40%	25.60%	23.70%	30.90%	20.00%	15.80%	4.60%	26.70%	11.60%
Return on Equity	34.17%	17.05%	19.70%	26.74%	44.57%	28.00%	31.52%	6.46%	44.86%	27.00%

Source: Author

The first three ratios in the above table are margin ratios, all of which measure the company's return on sales. Looking at the metrics, we can confirm that for Nike, all three metrics have increased slightly from 2017 to 2021, although they have had ups and downs over the 5 years.

Gross profit margin measures the profit made on sales after deducting the cost of goods sold. Nike showed a consistent gross profit margin of around 44% over the 5 years. Adidas also showed constant values, but at 50%.

Operating profit margin measures the profit made on sales after deducting production costs but before paying interest and taxes. For this metric, Nike saw an increase from 13.8% in 2017 to 15.58% in 2021, with the lowest value in 2020, the year most affected by the pandemic crisis, at 8.33%, but recovering significantly in 2021. Adidas' operating profit margin decreased slightly from 2017 to 2021, reaching the worst value of 3.78% in 2020.

Net profit margin is the final metric that evaluates a company's overall performance and measures how much profit is generated as a percentage of sales. Over the 5 years, Nike's value increased slightly, reaching a value of 12.86% in 2021, with low values in 2018 and 2020. Adidas showed a good increase from 5.17% in 2017 to 9.97% in 2021, recovering well from the lowest value of 2.18% in 2020.

In 2021, the Return on sales of Nike was 15.58%, indicating that for every dollar generated from sales, Nike can maintain about 15.6 cents while Adidas only gets about 9.4 cents.

ROCE shows how well a company is making a profit on its employed capital. Nike's ROCE declined slightly from 26.7% in 2017 to 24.72% in 2021, but showed a good growth trend except for 2020, when the Covid pandemic negatively impacted Nike's business. Nike showed an impressive recovery from 13.5% in 2020 to 24.7% in 2021. Adidas saw a decline from 25.15% in 2017 to 15.08% in 2021. Adidas also showed a good recovery in 2021, but Adidas' overall ROCE values are significantly lower than Nike's.

ROA measures a company's profitability relative to its assets. Both Nike and Adidas ended the 5-year period with lower ROA than at the beginning, with Nike showing significantly better ROA values with the exception of 2018. In 2021, Nike showed a return on equity of 15.17%, while Adidas achieved 6.74%. Nike shows more efficiency in managing its balance sheet to generate profits than its direct competitors. Adidas has a lower ROA, suggesting that there is room for improvement in this area. In 2021, Nike generated \$0.15 in profit for every dollar invested in assets.

ROIC is the amount a company earns with its invested capital, which should be above the average cost of its debt and equity, when the company is creating value for its shareholders. Nike experienced growth in every year except 2020, indicating a growth trend under normal circumstances. Adidas has seen ups and downs over the last five years, but in the end ROIC dropped from 20.4% in 2017 to 11.6% in 2021, with 2020 at around 4%, showing how much ROIC has been affected by the crisis. In 2021, the

difference between the ROICs of the two companies is 15%, which means that Nike is one step ahead of Adidas. A company is value-creating when its return on invested capital (ROIC) exceeds its cost of capital (WACC), which is the case for Nike in every single year.

Return on equity (ROE) represents the profit generated by the company compared to the invested capital of the shareholders. This ratio is very important to investors because the higher the ratio, the higher the dividend that shareholders may receive. Nike's return on equity increased from 34.17% in 2017 to 44.9% in 2021, showing great growth and exciting values from ROE. Adidas also showed a growth of ROE in the last five years, but with values always below 30%, while Nike reached 45% in some years. In 2021, Nike is generating \$0.45 in profit for every dollar of equity.

It is important to note that a rising ROE is not necessarily a good sign for an investor. An increase in ROE can be caused by increasing profitability, but it can also be caused by increasing debt. It is important for investors to analyze the real reasons for the rise of ROE. For this reason, we will perform a ROE decomposition using Dupont analysis.

7.1.1 Decomposition of ROE – The Dupont Analysis

Dupont analysis is a technique used to decompose ROE. This decomposition leads investors to better understand the reasons behind the values of ROE.

There are three key financial metrics that are critical to ROE: Operating Efficiency, Asset Utilization Efficiency, and Financial Leverage.

Operating efficiency is represented by net profit margin, asset utilization efficiency by asset turnover, and financial leverage by equity multiplier. ROE is calculated by multiplying these three ratios.

Table 2: Decomposition of ROE, Dupont Analysis

Dupont analysis	2017		2018		2019		2020		2021	
	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas
Net Profit Margin	12.34%	5.17%	5.31%	7.77%	10.30%	8.36%	6.79%	2.18%	12.86%	9.97%
Asset Turnover	1.48	1.46	1.62	1.40	1.65	1.14	1.19	0.94	1.18	0.96
Equity Multiplier	1.87	2.26	2.30	2.45	2.62	2.93	3.89	3.15	2.96	2.82
Return on Equity	34.17%	17.05%	19.70%	26.74%	44.57%	28.00%	31.52%	6.46%	44.86%	27.00%

Source: Author

A look at the table shows that the growth of Nike ROE from 2017 to 2021 is explained by the increase in the equity multiplier, i.e., financial leverage.

It is important to note that this increase in financial leverage is not necessarily bad, but can even be good, as the company's operating profit also increases.

7.2 Liquidity Analysis

Liquidity analysis is used to determine the company's ability to meet its short-term obligations. In this analysis, three liquidity ratios were calculated to give investors an idea of Nike's operational efficiency. The three ratios used are the current ratio, the quick ratio and the cash ratio.

Table 3: Liquidity Ratios, Nike and Adidas

Liquidity ratios	2017		2018		2019		2020		2021	
	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas
Current ratio	2.93	1.37	2.51	1.44	2.10	1.25	2.48	1.38	2.72	1.56
Quick ratio	1.80	0.79	1.45	0.93	1.14	0.78	1.39	0.88	1.85	1.11
Cash ratio	1.13	0.25	0.87	0.39	0.59	0.29	1.06	0.45	1.39	0.43

Source: Author

The current ratio is calculated by dividing a company's current assets by its current liabilities and measures a company's ability to cover its current liabilities with its current assets.

Current assets include all assets that can be converted to cash in less than one year, and current liabilities are all liabilities due within one year.

A current ratio is considered good if it is between 1.5 and 3 (Kibet, 2021).

Nike has good current ratio values that are between 2 and 3 in the five years, which shows that the company is able to pay its current liabilities over the years. From 2017 to 2019, there was a decreasing trend, but in the following two years, the value increased again, reaching a value of 2.72 in 2021. On the other hand, Adidas showed only a current ratio above 1.5 in 2021, with a ratio of 1.56. The values of Adidas were not the best in most years and were very poor compared to Nike, but the positive growth trend in recent years is worth mentioning.

The Quick Ratio or Acid Test Ratio also measures the liquidity of a company and is very similar to the Current Ratio, with the difference that the calculations exclude inventories from current assets. This can be explained by the fact that in a lot of businesses the inventory is the less liquid asset in the current assets, and it can be harder to transfer inventories into cash to repay all current liabilities.

A good quick ratio is any number greater than 1, if a company has a ratio greater than 1, it usually means that the company is healthy and can repay its liabilities. The higher the number, the better the ability to pay current liabilities (Dewitt, 2017).

Looking at the above table, it is easy to see that the behavior of the Quick Ratio is very similar to the Current Ratio for both companies. Nike has a ratio greater than 1 in every year, while Adidas has 4 values below 1 and only the last value above 1, which shows that Nike has a healthy business and has much better liquidity values than its competitor.

The Cash ratio is similar to the other two ratios, with the difference that for this ratio only cash is divided by current liabilities instead of current assets. This ratio is more conservative than the other two liquidity ratios because it only considers the most liquid assets of the company. The liquidity ratio is used by investors to evaluate the short-term risk of a company.

A cash ratio greater than 1 means that the company has more cash "on hand" than current liabilities, and vice versa.

Nike had a cash ratio greater than 1 in 2017, 2020 and 2021. Despite the worse value of 0.59 in 2018, the 5-year period ended very well with a much better cash ratio of 1.39, showing good performance and good liquidity in the last year. Adidas' cash ratio was always below 0.5 during the five years, which means high short-term risk and weak ability to pay short-term liabilities with the most liquid assets.

7.3 Solvency Analysis

A solvency analysis provides investors with more information about a company's ability to meet long-term debt and continue operations into the future. A solvent company is one that can pay all its bills, and with the help of some solvency ratios, it is possible to understand how likely it is that Nike will be able to continue meeting its debt obligations.

Table 4: Solvency Ratios, Nike and Adidas

Solvency ratios	2017		2018		2019		2020		2021	
	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas	Nike	Adidas
Debt/Equity ratio	0.88	1.26	1.3	1.45	1.62	1.93	2.89	2.15	1.96	1.83
Debt/Assets ratio	0.47	0.56	0.56	0.59	0.62	0.66	0.74	0.68	0.66	0.65
Equity/Assets ratio	0.53	0.44	0.44	0.41	0.38	0.34	0.26	0.32	0.34	0.35
Interest coverage ratio	55.20	33.30	35.80	57.30	36.40	16.70	20.60	4.80	24.40	17.90

Source: Author

The D/E ratio is calculated by dividing the company's liabilities by its equity to measure how leveraged the company is. Nike's debt to equity ratio increased from 0.88 in 2017 to 1.96 in 2021, showing an upward trend in leverage. The highest value of this ratio was reached in 2020, which is noticeable with the damage caused by the pandemic in the apparel sector that year. In 2021, Nike's creditors provided \$1.96 of assets for every dollar provided by shareholders. Adidas has shown very similar behavior over the past five years with a growth trend in debt levels, with debt levels not increasing as much in 2020.

For both companies, the D/A and E/A ratios indicate that the share of equity has decreased over the years, which also means that the share of debt has increased. Both companies have a higher leverage at the end of the 5-year period.

The interest coverage ratio measures how well a company can pay its interest obligations on outstanding debt. Nike declined to a ratio of 24.4 from a IC ratio of 55.2 in 2017. Although Nike saw a decline of more than 50% at IC, the company still presented better ability to meet its interest obligations in every year except 2018, when Adidas had an excellent ratio of 57.3.

7.4 Growth Analysis

Growth analysis is usually performed for a company to determine the company's growth pattern.

For this analysis, we calculated a 5-year growth rate for eight different items: Sales, EBITDA, EBIT, Net Income, Earnings per Share, Assets, Equity and Liabilities.

It should be noted that these CAGR values are strongly influenced by the negative impact of the crisis in 2020, as the growth of the first five items was negative in that same year.

Table 5: 5-year Compound Growth Rates

	Nike	Adidas
Sales	6.71%	1.17%
EBITDA	9.07%	6.47%
EBIT	9.94%	0.12%
Net Income	7.81%	19.20%
EPS	9.13%	20.68%
Assets	12.86%	12.39%
Equity	0.72%	6.26%
Liabilities	23.17%	16.64%

Source: Author

As we have seen in previous analysis, Nike has increased its liabilities over the last 5 years, which can also be seen in the table above: the 5-year liabilities CAGR of 23.2% shows strong debt growth. This debt growth is not followed by equity growth, as the equity CAGR is only 0.72%, which means that almost 100% of the asset growth in the last 5 years corresponded to liabilities growth, which explains the increase in leverage.

Adidas has a higher equity CAGR with the same asset CAGR as Nike.

Adidas reported a net income CAGR of 19.20%, a figure much higher than its sales and EBIT CAGRs. The reason for this difference in growth is that Adidas was able to reduce its costs, as in the last 5 years profit grew while sales remained almost flat.

Adidas EPS CAGR was 20.68%, showing a great growth in the last 5 years.

8 Valuation

8.1 Key Assumptions

In order to calculate the value of the company using different models, it is necessary to make future forecasts, and for this we must also make several assumptions. We used the real values of the last five years (2017 to 2021) to make a forecast for the next 4 years (2022-2025).

8.1.1 Income Statement Projections

Table 6: Income Statement Projections

Millions of US \$	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	\$34 350.00	\$36 397.00	\$39 117.00	\$37 403.00	\$44 538.00	\$ 46 710.00	\$ 50 510.00	\$ 55 710.00	\$ 60 038.12
Cost of Goods Sold	\$19 038.00	\$20 441.00	\$21 643.00	\$21 162.00	\$24 576.00	\$26 015.46	\$28 131.89	\$31 028.07	\$33 438.64
Gross Profit	\$15 312.00	\$15 956.00	\$17 474.00	\$16 241.00	\$19 962.00	\$ 20 694.54	\$ 22 378.11	\$ 24 681.93	\$ 26 599.47
Operating fixed cost	\$9 847.00	\$10 737.00	\$11 982.00	\$12 007.00	\$12 228.00	\$13 859.27	\$14 986.77	\$16 529.65	\$17 813.84
EBITDA	\$5 465.00	\$5 219.00	\$5 492.00	\$4 234.00	\$7 734.00	\$ 6 835.27	\$ 7 391.34	\$ 8 152.28	\$ 8 785.63
Dep & Amort	\$716.00	\$774.00	\$720.00	\$1 119.00	\$797.00	\$1 012.00	\$1 094.33	\$1 206.99	\$1 300.77
EBIT	\$4 749.00	\$4 445.00	\$4 772.00	\$3 115.00	\$6 937.00	\$ 5 823.27	\$ 6 297.01	\$ 6 945.28	\$ 7 484.86
Interest expenses	\$137.00	-\$120.00	\$29.00	-\$228.00	-\$276.00	-\$274.78	-\$297.13	-\$327.72	-\$353.18
EBT	\$4 886.00	\$4 325.00	\$4 801.00	\$2 887.00	\$6 661.00	\$ 5 548.49	\$ 5 999.88	\$ 6 617.56	\$ 7 131.68
Income Taxes	\$646.00	\$2 392.00	\$772.00	\$348.00	\$934.00	\$ 768.15	\$ 830.64	\$ 916.16	\$ 987.33
tax rate	13.22%	55.31%	16.08%	12.05%	14.02%	13.84%	13.84%	13.84%	13.84%
Net Income	\$4 240.00	\$1 933.00	\$4 029.00	\$2 539.00	\$5 727.00	\$ 4 780.34	\$ 5 169.23	\$ 5 701.40	\$ 6 144.35

Source: Author, Nike Annual Reports

For 2022, 2023, and 2024, Nike's revenue was projected based on forecasts from 28 analysts on Yahoo Finance, and the final value for 2025 was calculated using the average revenue growth rate for the last three years.

Cost of goods sold, fixed operating costs, and Depreciation & Amortization were forecasted by calculating the following ratios.

Table 7: Ratios used in forecast

Ratio	2017	2018	2019	2020	2021	Average
COGS/Revenue	0.554236	0.561612	0.553289	0.565783	0.551798	55.7%
OFC/Revenue	0.286667	0.294997	0.306312	0.321017	0.274552	29.7%
D&A/Revenue	0.020844	0.021265	0.018406	0.029917	0.017895	2.2%

Source: Author

The average of the last 5 years is then used to calculate the values for the next 4 years by multiplying these averages by the projected revenues for each subsequent year.

To forecast total interest expense, we calculated the following ratio for 2021:

$$\text{Interest expense} / \text{Interest-bearing debt} = 2.78\%$$

Using this ratio, we projected interest expense for future years by multiplying it by the interest-bearing debt for each forecasted year.

Table 8: Corporate tax rate forecast

	2017	2018	2019	2020	2021	forecasted years
tax rate	13.22%	55.31%	16.08%	12.05%	14.02%	13.84%

Source: Author

The corporate tax rate used in the following years is 13.84% and represents an average of the 5 tax rates used in recent years, with the exception of the 2018 tax rate. This year's tax rate was excluded due to the fact that Nike had used tax evasion strategies and with the arrival of Donald Trump as president, a new law went into effect, causing Nike to pay a large amount of taxes for prior periods.

8.1.2 Working Capital

The Working Capital Needs of the 5 last years were calculated according to the following formula and tables:

$$WC = \text{Accounts Receivable} + \text{Inventories} + \text{Prepaid expenses} - \text{Accounts Payable} - \text{Current portion of operating lease liabilities} - \text{Accrued liabilities} - \text{Income taxes payable} \quad (11)$$

Table 9: Working Capital Calculation

Working Capital calculation	2017	2018	2019	2020	2021
Accounts receivable, net	\$ 3 677.00	\$ 3 498.00	\$ 4 272.00	\$ 2 749.00	\$ 4 463.00
Inventories	\$ 5 055.00	\$ 5 261.00	\$ 5 622.00	\$ 7 367.00	\$ 6 854.00
Prepaid expenses and other current assets	\$ 1 150.00	\$ 1 130.00	\$ 1 968.00	\$ 1 653.00	\$ 1 498.00
Accounts payable	\$ 2 048.00	\$ 2 279.00	\$ 2 612.00	\$ 2 248.00	\$ 2 836.00
Current portion of operating lease liabilities	\$ -	\$ -	\$ -	\$ 445.00	\$ 467.00
Accrued liabilities	\$ 3 011.00	\$ 3 269.00	\$ 5 010.00	\$ 5 184.00	\$ 6 063.00
Income taxes payable	\$ 84.00	\$ 150.00	\$ 229.00	\$ 156.00	\$ 306.00
Working Capital	\$ 4 739.00	\$ 4 191.00	\$ 4 011.00	\$ 3 736.00	\$ 3 143.00

Source: Author

Table 10: Investments in WC Calculation

	2017	2018	2019	2020	2021	2022	2023	2024	2025
WC/Revenues	13.80%	11.51%	10.25%	9.99%	7.06%	9.10%	9.10%	9.10%	9.10%
Working Capital	\$4 739.00	\$ 4 191.00	\$ 4 011.00	\$ 3 736.00	\$ 3 143.00	\$4 250.49	\$4 596.28	\$5 069.47	\$5 463.32
Working Capital Investment		\$ -548.00	\$ -180.00	\$ -275.00	\$ -593.00	\$1 107.49	\$ 345.79	\$ 473.19	\$ 393.85

Source: Author

For the forecast of working capital for the following years we decided to use a WC /revenue ratio.

The ratio used for the working capital forecast is the average of the ratios WC /revenues for the last 3 years and reaches a value of 9.10%. The reason why we decided to ignore 2017 and 2018 is that this ratio has a downward trend and the values of the first two years are too high to be taken into account.

8.1.3 Capex

Table 11: Capex calculation

	2017	2018	2019	2020	2021	2022	2023	2024	2025
Long-term assets/Revenue	20.95%	20.34%	18.39%	28.84%	25.71%	27.27%	27.27%	27.27%	27.27%
Long-term assets	\$ 7 198.00	\$ 7 402.00	\$ 7 192.00	\$ 10 786.00	\$ 11 449.00	\$ 12 738.61	\$ 13 774.94	\$ 15 193.06	\$ 16 373.41
Net capex		\$ 204.00	\$ -210.00	\$ 3 594.00	\$ 663.00	\$ 1 289.61	\$ 1 036.32	\$ 1 418.13	\$ 1 180.35
Dep & Amort	\$ 716.00	\$ 774.00	\$ 720.00	\$ 1 119.00	\$ 797.00	\$ 1 012.00	\$ 1 094.33	\$ 1 206.99	\$ 1 300.77
CAPEX investment		\$ 978.00	\$ 510.00	\$ 4 713.00	\$ 1 460.00	\$ 2 301.61	\$ 2 130.66	\$ 2 625.12	\$ 2 481.12

Source: Author

Capex Investment calculation followed the following steps:

- Calculation of the Long-term assets/Revenue ratio and using an average of the 2020 and 2021 ratios to find the long-term assets of the forecasting period.
- Calculation of the Net Capex by subtracting the current year's long-term assets value from the previous year's value.
- Calculation of the Capex investment by adding the Net capex to the Depreciation & Amortization of each year.

8.2 Discounted Cash Flow Model

8.2.1 Weighted Average Cost of Capital

To proceed with the Discounted Cash Flow Valuation model, we needed to calculate the weighted average cost of capital to determine the continuity value and later the equity value and implied share price.

The WACC was calculated using the following formula:

$$WACC = Wd * Rd * (1 - t) + We * Re \quad (12)$$

Where: Wd – Weight of debt; Rd – Cost of debt; t – Corporate tax rate; We – Weight of equity and Re – Cost of equity

8.2.1.1 Cost of Equity

The cost of equity was calculated using the following formula:

$$Re = Rf + adjusted \beta * (Rm - Rf) \quad (13)$$

With: Rf – Risk free rate; Rm – Market return; β – Beta

Table 12: Cost of equity calculation

Risk free rate	2.91%
Adjusted beta	1.01
US equity risk premium	4.24%
Average CRP	1%
Cost of equity	8.19%

Source: Author, Yahoo Finance, Damodaran website

The risk-free rate used is the U.S. 10 years treasury. The Beta came from yahoo finance and is the beta based on a linear regression performed considering the Nike stock and the S&P500 prices of the last 5 years, monthly. The US equity risk premium came from the Damodaran website, and the Average CRP is the average country risk premium of the regions where Nike has high revenue values except the United States. Therefore, by the CAPM, we reached a Cost of equity of 8.19%.

The average Country risk premium was calculated based on the average CRPs of the regions where Nike has the highest revenue (apart from North America) and considering the percentage of revenue by region, as it is shown in the table below.

Tabela 13 - CRP calculation

Region	Revenue %	Weighted Average CRP	Added CRP per region
Europe, middle east and Africa	27%	2,11%	0,57%
Greater china	20%	0,70%	0,14%
Asia Pacific e latin america	13%	0,33%	0,33%
			1%

Source: Author, Damodaran website

8.2.1.2 Cost of Debt

The cost of debt was calculated by following the formula:

$$R_d = \text{Interest expense} / (\text{Short term debt} + \text{long term debt}) \quad (14)$$

Table 14: Cost of debt calculation

Interest Expense	262.00
Short term debt	2.00
Long term debt	9 413.00
Cost of debt	2.78%

Source: Author, Nike Annual Reports

The values of Interest expense, short- and long-term debts were all gathered on the Nike financial statements of 2021.

8.2.1.3 Weights

The value of total debt was determined by summing short-term and long-term debt. Market capitalization was calculated by multiplying the number of shares outstanding in May 2021 (1609 million shares) by the share price on the same date (\$136). We considered the date of May 2021 because Nike's fiscal year ends in may 31st.

The percentages shown in the table below represent the weighting of equity and debt used in the WACC calculation.

Table 15: Equity and Debt Weights calculation

Total debt	\$ 9 415.00	4.13%
Market Capitalization	\$ 218 824.00	95.87%
Total	\$ 228 239.00	100%

Source: Author, Nike Annual Reports

8.2.1.4 WACC Conclusions

After calculating all components, we finally have our WACC to use in the valuation model.

Table 16: WACC calculation

Re	8.19%
Rd	2.78%
t	14.02%
We	95.87%
Wd	4.13%
WACC	7.95%

Source: Author

We arrived at a final WACC value of 7.95%. With Nike's equity at almost 96%, the weighted average cost of capital is almost fully represented by the cost of equity, which is why the WACC and cost of equity values are so close (0.24% difference).

Nike's beta value of 1.01 also means that the volatility of Nike's stock is average and that it moves in line with the market.

8.2.2 Free Cash Flow to the Firm

In the first approach to the DCF model, the first step is to calculate the estimate of free cash flows for the company. The calculation was made using the following formula:

$$FCFF = EBIT(1 - t) + Dep \& Amort - CAPEX investment - WC investment \quad (15)$$

Table 17: FCFF calculation

Discounted Cash Flow Firm (millions)	2021	2022	2023	2024	2025	2026
EBIT (1-t)	\$ 5.964,30	\$ 5.017,07	\$ 5.425,23	\$ 5.983,75	\$ 6.448,63	\$ 6.835,55
Dep & Amort	\$ 797,00	\$ 1.012,00	\$ 1.094,33	\$ 1.206,99	\$ 1.300,77	
CAPEX investment	\$ 1.460,00	\$ 2.301,61	\$ 2.130,66	\$ 2.625,12	\$ 2.481,12	
Working capital investment	\$ -593,00	\$ 1.107,49	\$ 345,79	\$ 473,19	\$ 393,85	\$ 327,80
FCFF	\$ 5.894,30	\$ 2.619,97	\$ 4.043,11	\$ 4.092,44	\$ 4.874,43	\$ 5.525,35

Source: Author, Nike Annual Reports, Yahoo Finance

For the year 2022, it is possible to see a sharp decrease in free cash flow, mainly due to the increase in investments in WC and CAPEX. In the following years, the cash flow shows a positive growth, explained by the increase in EBIT and the lower values of WC investments.

To determine the enterprise value, equity value and implied share price, we had to calculate the continuity value using a WACC of 7.95% and a perpetual growth rate of 6% (3% corresponds to economic growth, 2% to inflation and 1% to compensate the countries risk premiums, as they have a growth rate above average).

After discounting the free cash flows and the continuity value to the year 2021, we were able to determine the enterprise value by summing the discounted cash flows and the discounted continuity value.

Table 18: Share price calculation (FCFF)

Discounted Cash Flow Firm (milions)	2021	2022	2023	2024	2025	2026
FCFF discounted	\$ 5.894,30	\$ 2.427,00	\$ 3.469,47	\$ 3.253,15	\$ 3.589,38	
Continuity value discounted						\$ 208.559,79
Enterprise Value	\$221.298,80					
Market Value Extra-Operation Assets	\$ 13.476,00					
Firm Value	\$234.774,80					
Market value of debt	\$ 15.299,00					
Equity Value	\$219.475,80					
Implied share price	\$ 136,41					

Source: Author

The sum of the free cash flows discounted with the continuity value gives us the value of the enterprise value, to which we add the market value extra non-operation assets and subtract the value of the debt to obtain the equity value which is then divided by the number of shares.

Using the free cash flow model, the value of equity is \$ 219475.80 million and the share price is \$136.41. The difference between the value of the stock according to this model and the market price of the stock is (\$ +0.41), which is a difference of (+0.3%). This difference shows that the company is slightly undervalued.

8.2.3 Free Cash Flow to Equity

The second approach of the DCF model is the free cash flow to equity approach. The first step to valuation using this method is to calculate FCFE from FCFF. The forecast of interest expense was based on the 2021 ratio of interest expense to interest-bearing debt, using the same value (2.78%) as the

ratio for subsequent years. The FCFE was calculated by subtracting the after-tax interest expense from the FCFF and then adding the interest-bearing debt variation.

Table 19: FCFE calculation

DCF Equity (millions)	2021	2022	2023	2024	2025	2026
FCFF	\$ 5.894,30	\$ 2.619,97	\$ 4.043,11	\$ 4.092,44	\$ 4.874,43	\$ 5.525,35
Interest-bearing debt variation	\$ -242,00	\$ 459,14	\$ 803,29	\$ 1.099,24	\$ 914,93	\$ 761,50
int expense/int bearing debt	2,78%	2,78%	2,78%	2,78%	2,78%	2,78%
interest expense after taxes	\$ 225,26	\$ 236,74	\$ 256,00	\$ 282,35	\$ 304,29	\$ 322,54
FCFE	\$ 5.427,04	\$ 2.842,38	\$ 4.590,41	\$ 4.909,33	\$ 5.485,08	\$ 5.964,30

Source: Author

In this approach the Continuity value calculation was executed using the g of 6% and the Re (Cost of equity) of 8.19%.

Table 20: Share price calculation (FCFE)

DCF Equity (millions)	2021	2022	2023	2024	2025	2026
FCFE	\$ 5.427,04	\$ 2.842,38	\$ 4.590,41	\$ 4.909,33	\$ 5.485,08	\$ 5.964,30
Continuity value						\$ 272.342,48
FCFE discounted	\$ 5.427,04	\$ 2.627,21	\$ 3.921,72	\$ 3.876,69	\$ 4.003,45	
Continuity value discounted						\$ 198.777,36
Present value of FCFE	\$213.206,43					
Market Value Extra-Operation Assets	\$ 13.476,00					
Equity Value	\$226.682,43					
Implied share price	\$ 140,88					

Source: Author

After discounting the cash flows and continuity value to 2021, the equity value is \$226682,43 million, and the implied stock value is \$140,88.

This implies a difference between the value of the stock according to the FCFE model and the market price of the stock of (+\$4,88) and a percentage difference of (+3,6%). This difference means that the company is slightly undervalued.

8.2.4 Sensitivity Analysis

Sensitivity analysis is a tool commonly used in finance to analyze how different values of an independent variable affect a dependent value under a set of assumptions.

In valuation, the discount rate and growth rate are very important and make up a large part of the valuation itself. This demonstrates the importance of estimating the correct WACC and perpetual growth rate.

The goal of this sensitivity analysis is to understand what happens to Nike's stock value in the discounted cash flow model (both firm and equity) when we change WACC and growth rate.

Table 21: DCF Firm Sensitivity Analysis (millions of \$)

		WACC				
Share Value	136,41	7,50%	8,00%	7,95%	9,00%	9,50%
g	6,50%	260,43	172,71	178,66	102,54	85,01
	6,25%	211,15	150,01	154,43	94,43	79,48
	6,00%	178,30	132,98	136,41	87,68	74,74
	5,75%	154,83	119,74	122,48	81,96	70,63
	5,50%	137,23	109,15	111,40	77,06	67,04

Source: Author

As we can see in the table above, the share value estimated with the DCF firm, the value in the middle of the table is the estimated stock price with the estimated WACC of 7.95% and g of 6%. This middle value corresponds to a stock price of \$ 136.41 and is the value closest to the market price in the entire table.

The stock value increases as the WACC and g converge, in this case as the WACC decreases and g increases. This makes perfect sense because of the way the continuity value is calculated (by dividing the estimated cash flow for 2026 by the difference between WACC and g).

Table 22: DCF Equity Sensitivity Analysis (millions of \$)

		Re				
Share Value	140,88	7,50%	8,00%	8,19%	9,00%	9,50%
g	6,50%	297,95	200,91	179,10	123,30	103,90
	6,25%	240,70	173,89	157,53	113,16	96,81
	6,00%	202,54	153,62	140,88	104,70	90,73
	5,75%	175,28	137,85	127,65	97,55	85,46
	5,50%	154,84	125,24	116,88	91,42	80,85

Source: Author

In the case of DCF equity, the share value achieved was \$140.88, which is the value found in the middle of the table and in white. In the table above, the value of \$137.85 is the closest to the market

price of \$136 when using a Re of 8% and a g of 5.75%. Under the DCF equity approach, the smaller the difference between Re (cost of equity) and g, the higher the stock price. The highest share value calculated in this table is the greenest value, \$ 297,95, almost double the market price.

The prediction of the future cash flows is very sensitive to the parameters used and assumptions made. This can be viewed in this sensitivity analysis because of how much the share value change by changing the WACC, Re or g by less than 1 percentual point.

8.3 Economic Value Added

The Economic Value Added is a model used to understand if the company is creating value to its investors and if the company is generating enough income to support its investment.

The formula used to calculate EVA is the following:

$$EVA = EBIT(1 - t) - Invested\ Capital(boy) * WACC \quad (16)$$

Table 23: Share price calculation (EVA)

EVA (millions)	2020	2021	2022	2023	2024	2025	2026
EVA		\$ 4.809,68	\$ 3.856,88	\$ 4.074,45	\$ 4.523,09	\$ 4.837,59	\$ 5.099,34
Continuity Value							\$261.390,43
EVA discounted		\$ 4.809,68	\$ 3.572,82	\$ 3.496,36	\$ 3.595,48	\$ 3.562,25	
Continuity Value discounted							\$192.479,89
MVA		\$206.706,80					
Invested Capital (eoy)		\$ 14.592,00					
Enterprise Value		\$221.298,80					
Market Value Extra-Operation Assets		\$ 13.476,00					
Firm Value		\$234.774,80					
Market value of debt		\$ 15.299,00					
Equity Value		\$219.475,80					
Share price		\$ 136,41					

Source: Author

EVA measures a company's financial health, and Nike presents positive values of EVA, meaning the company can generate more than enough income to support its investments. This is a key factor for the future of a firm in the long run.

After the Eva calculation, we discounted the values of EVA and the continuity value. Adding the discounted EVAs from 2022 to 2026 and adding the continuity value, also discounted, we got the MVA value.

Using the Economic Value Added valuation model, the equity value and share price are exactly the same as we obtained in the DCF model with the FCFF approach, indicating a slight undervaluation of Nike.

8.4 Relative Valuation Model (Multiples)

A multiples valuation model consists of determining the value of a company based on the market values of a selected "peer group".

In this approach, we have carefully selected the peer group to provide the most accurate valuation results by selecting companies with similar characteristics to Nike. The companies selected are Adidas, Puma, Lululemon Athletica, and Under Armour.

We chose two Enterprise multiples (EV/Revenue and EV/EBITDA) and one equity multiple (Price/Equity) to have different types of multiple usage and different valuation perspectives.

Table 24 : Multiples calculation

Company	Market Data			Financials				Valuation			
	Share Price	Shares Outstanding	Equity Value	Net Debt	Enterprise Value	Revenue	EBITDA	Net Income	EV/Revenue	EV/EBITDA	Price/Equity
Nike	136.00	1 609	218 824	816	260 120	44 540	7 734	5 727	5.8x	33.6x	38.2x
Adidas	299.00	388	116 012		53 900	21 230	3 066	1 490	2.5x	17.6x	77.9x
Puma	93.00	149	13 857		14 640	6 810	770	310	2.1x	19.0x	44.8x
Lululemon Athletica	329.00	130	42 770		51 690	4 402	1 005	589	11.7x	51.4x	72.6x
Under Armour	19.00	468	8 892		9 570	5 683	644	360	1.7x	14.9x	24.7x
									2.3x	18.3x	55.0x

Source: Author, Yahoo Finance

After gathering all the important data from the different companies in the peer group, we estimated the three different multiples for each company and were able to find the average of each multiple for the peer group (2.3x, 18.3x, and 55x).

Table 25: Share price calculation (Multiples)

Relative Valuation	EV/Revenue	EV/EBITDA	P/E
Implied Enterprise Value	\$ 201 710.52	\$ 198 930.04	\$ 314 888.72
Net Debt	\$ 816.00	\$ 816.00	\$ 816.00
Implied Market Value	\$ 200 894.52	\$ 198 114.04	\$ 314 072.72
Shares Outstanding	\$ 1 609.00	\$ 1 609.00	\$ 1 609.00
Implied Share Price	\$ 124.86	\$ 123.13	\$ 195.20

Source: Author

Using the calculated averages, we were able to identify these three implied stock prices for Nike, each corresponding to a different multiple used.

For the two relative valuations based on enterprise value multiples, the stock prices of \$124.86 and \$123.13 indicate an overvalued stock price of \$136 (market price in May, 2021).

In contrast, relative valuations based on the price-to-equity ratio indicate an undervaluation of the company's market value.

8.5 Comparison Between Different Method Results

In this section, we are comparing the results obtained by the different models, as well as the market price in May 2021.

Table 26: Share prices comparison

Valuation Model	Implied Share Price	Market price considered	Difference	% Difference	Comment
DCF - FCFF	\$ 136,41	\$ 136,00	\$ 0,41	0,30%	Undervalued
DCF - FCFE	\$ 140,88	\$ 136,00	\$ 4,88	3,59%	Undervalued
EVA	\$ 136,41	\$ 136,00	\$ 0,41	0,30%	Undervalued
Multiples - EV/Revenue	\$ 124,86	\$ 136,00	\$ -11,14	-8,19%	Overvalued
Multiples - EV/EBITDA	\$ 123,13	\$ 136,00	\$ -12,87	-9,46%	Overvalued
Multiples - Price/Equity	\$ 195,20	\$ 136,00	\$ 59,20	43,53%	Undervalued

Source: Author

In general, the prices estimated by the models are close to the stock value in May 2021. Both the DCF model (both Firm and Equity) and EVA produced stock prices that differ by less than 4% from the market price of the stock.

Since the relative valuation models are less accurate, they naturally have larger differences relative to the market price. The two relative valuations based on company multiples resulted in an overvaluation of Nike by about 10%, while the valuation based on equity resulted in an undervaluation of about 40%.

On average, these 3 methods show a difference of 8% to the market price.

In summary, the three more reliable methods (FCFF, FCFE and EVA) produce equity values that are very close to the market price, which should mean that the company is fairly well valued in the market. The relative valuation approaches show results that are further away from the market price, both downward and upward.

Conclusions and Recommendations

Following the rising trend of stock price in recent years and the general market uncertainty, this case study aimed to provide a realistic estimate of Nike Inc. price as of May 31, 2021 and comparing it to the closing price of \$136.00 to determine whether the company was overvalued or not at that time.

To value the company, we used three different models: Discounted Cash Flow (both Equity and Firm approaches), Economic Value Added, and Relative Valuation using multiples. It should be noted that different valuation models lead to different results for the same company and the same time. During this study, it was possible to see the importance of the assumptions in the different valuation methods and the importance of choosing these very well in order to reflect the value of the company as accurately as possible.

In the first method, using the DCF model, we obtained a stock value of \$136.41 in the FCFE approach and \$140.88 in the FCFE approach. Using EVA, we obtained a stock price of \$136.41, which is exactly the value obtained using the DCF firm approach. Using relative valuation with multiples, we obtained share prices of \$124.86 and \$123.13 for the approaches based on enterprise value multiples, and \$195.20 for the approach based on equity multiples.

Although each model has its own limitations, the absolute valuation models (DCF and EVA) are always more reliable compared to the relative valuation models (multiples). The latter are more volatile and uncertain, mainly because these models are based on what a company is worth compared to its competitors. Therefore, we based our recommendation mainly on the results of DCF and EVA models.

Since these valuation methods produced different results, but were always close to the market price of \$136. This proximity of prices made us confident that the company is valued correctly. The recommendation is to hold the stock.

In terms of the environment, Nike has been working to become more sustainable as a company. Although the efforts are apparent, Nike still has a long way to go and still has a lot of work to do to become a sustainable company. Even though Nike recent environment goals are a big and important step to sustainability, the company has been lacking execution.

On the ethical front, the most important issues are being addressed and priorities seem to be well defined, with great ideas and goals to achieve in the future.

Nike is a huge company and a highly successful brand, the only thing standing in its way is its poor brand image in terms of ethics and the environment. In this regard, we strongly recommend that Nike stop looking at these issues with the goal of "not looking bad" and actually change in order to do what

is right and be a brand that people respect and look up to. This starts with the company not only doing a better job of implementing its 2025 ethical and environmental goals, but also ensuring that these measures are met globally through proper internal controls.

We also recommend that the company keep investing in corporate social responsibility, Nike is now one of the CSR leaders in the whole world and this is something very positive for Nike's brand and image and very important as well to the Nike employees to be able to feel respected and valued in their workplace.

We also recommend investing in a more sustainable production, even if it means higher production costs, and trying to enter the market with many more environmentally friendly products, which are increasingly being sought after by consumers

Despite Nike being a mature and leading company and not a new and rising one, the company still shows some growth opportunity windows. In this industry the opportunities are endless, for instance, with the Covid pandemic, it was possible to see a huge development of e-commerce and online sales, which shows that the demand for this market is very high and promising, and it continues to grow. Another recommendation is for Nike to focus on any kind of business to consumer (B2C) to make the most profit possible. In-store sales are proving less profitable due to the power of retailers, and with people willing to buy online directly from Nike, this is a great opportunity to explore.

The limitations of this study are mainly the limitations of the models used and the assumptions on which they are based.

For future studies, it would be important to analyze some of Nike's subsidiaries to better understand which companies affect Nike's value in a positive or negative way. It would also be interesting to look more closely at Nike's competitors, especially its largest competitor, Adidas.

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Appendix

Appendix 1 – Nike Financial Ratios

Key Financial Ratios NIKE	2017	2018	2019	2020	2021
Current ratio	2,9341	2,5056	2,1008	2,4814	2,7177
Long-Term Debt/Capital	0,2186	0,2611	0,277	0,5387	0,4244
Debt/Equity Ratio	0,3064	0,3883	0,3848	1,1989	0,7374
Gross Margin	44,5764	43,8388	44,6711	43,4217	44,8202
Operating Margin	13,8253	12,2125	12,1993	8,3282	15,5755
EBIT Margin	13,8253	12,2125	12,1993	8,3282	15,5755
EBITDA Margin	15,9098	14,3391	14,0399	11,32	17,365
Pre-Tax Profit Margin	14,2242	11,8829	12,2734	7,7186	14,9558
Net Profit Margin	12,3435	5,3109	10,2999	6,7882	12,8587
Asset Turnover	1,4768	1,6151	1,6493	1,1934	1,1801
Inventory Turnover Ratio	3,7662	3,8854	3,8497	2,8725	3,5856
Receivable Turnover	9,3419	10,4051	9,1566	13,606	9,9794
Days Sales In Receivables	39,0715	35,079	39,862	26,8263	36,5754
ROE - Return on Equity	34,1743	19,7004	44,5686	31,5208	44,8578
Return on Tangible Equity	35,3776	20,6231	46,8325	33,5935	46,7281
ROA - Return on Assets	18,2295	8,5774	16,9878	8,101	15,1749
ROI - Return on Investments	26,7036	14,5557	32,2217	14,541	25,8206
Book Value Per Share	7,5514	6,1287	5,7653	5,1701	8,0906
Operating Cash Flow Per Share	0,3225	0,7135	0,6608	-2,0861	2,575
Free Cash Flow Per Share	0,3273	0,7392	0,5891	-2,077	2,8255

Source: Author, Macrotrends

Appendix 2 – Adidas Financial Ratios

Key Financial Ratios Adidas	2017	2018	2019	2020	2021
Current ratio	1,3742	1,4359	1,249	1,3769	1,5554
Long-Term Debt/Capital	0,1325	0,2018	0,1843	0,2706	0,2393
Debt/Equity Ratio	0,174	0,2632	0,2321	0,4735	0,3184
Gross Margin	50,443	51,8503	52,0008	49,6624	50,697
Operating Margin	9,7559	10,8054	11,2521	3,7795	9,3576
EBIT Margin	9,7559	10,8054	11,2521	3,7795	9,3576
EBITDA Margin	12,037	13,0413	16,3875	10,6833	14,7688
Pre-Tax Profit Margin	9,5344	10,851	10,8206	2,8976	8,7219
Net Profit Margin	5,1701	7,7664	8,3587	2,177	9,9652
Asset Turnover	1,4611	1,4037	1,1431	0,9426	0,9592
Inventory Turnover Ratio	2,8478	3,063	2,7777	2,272	2,6114
Receivable Turnover	8,8927	8,8869	8,6944	9,6283	9,3707
Days Sales In Receivables	41,0449	41,0719	41,9812	37,9089	38,9512
ROE - Return on Equity	21,0412	26,8584	27,1787	6,4116	19,0355
Return on Tangible Equity	36,0874	41,8975	41,363	9,5738	23,8415
ROA - Return on Assets	9,3238	10,9467	9,2747	2,0377	6,7398
ROI - Return on Investments	18,2529	21,4348	22,1657	4,6768	14,4812
Book Value Per Share	17,8393	18,8679	20,1689	19,5911	24,1968
Operating Cash Flow Per Share	0,9421	3,1731	0,2556	-3,64	5,3757
Free Cash Flow Per Share	0,631	3,2959	0,3455	-3,0416	4,9331

Source: Author, Macrotrends

Appendix 3 – Income Statement Forecast

Millions of US \$	2021	2022	2023	2024	2025
Revenue	\$44.538,00	\$ 46.710,00	\$ 50.510,00	\$ 55.710,00	\$ 60.038,12
Cost of Goods Sold	\$24.576,00	\$26.015,46	\$28.131,89	\$31.028,07	\$33.438,64
Gross Profit	\$19.962,00	\$ 20.694,54	\$ 22.378,11	\$ 24.681,93	\$ 26.599,47
Operating fixed cost	\$12.228,00	\$13.859,27	\$14.986,77	\$16.529,65	\$17.813,84
EBITDA	\$7.734,00	\$ 6.835,27	\$ 7.391,34	\$ 8.152,28	\$ 8.785,63
Dep & Amort	\$797,00	\$1.012,00	\$1.094,33	\$1.206,99	\$1.300,77
EBIT	\$6.937,00	\$ 5.823,27	\$ 6.297,01	\$ 6.945,28	\$ 7.484,86
Interest expenses	-\$276,00	-\$274,78	-\$297,13	-\$327,72	-\$353,18
EBT	\$6.661,00	\$ 5.548,49	\$ 5.999,88	\$ 6.617,56	\$ 7.131,68
Income Taxes	\$934,00	\$ 768,15	\$ 830,64	\$ 916,16	\$ 987,33
tax rate	14,02%	13,84%	13,84%	13,84%	13,84%
Net Income	\$5.727,00	\$ 4.780,34	\$ 5.169,23	\$ 5.701,40	\$ 6.144,35

Source: Author, Nike Annual Reports

Appendix 4 – Discounted Cash Flow Calculation: Firm

Discounted Cash Flow Firm (millions)	2021	2022	2023	2024	2025	2026
EBIT (1-t)	\$ 5.964,30	\$ 5.017,07	\$ 5.425,23	\$ 5.983,75	\$ 6.448,63	\$ 6.835,55
Dep & Amort	\$ 797,00	\$ 1.012,00	\$ 1.094,33	\$ 1.206,99	\$ 1.300,77	
long term assets	\$ 11.449,00	\$ 12.738,61	\$ 13.774,94	\$ 15.193,06	\$ 16.373,41	
net capex	\$ 663,00	\$ 1.289,61	\$ 1.036,32	\$ 1.418,13	\$ 1.180,35	\$ 982,40
CAPEX investment	\$ 1.460,00	\$ 2.301,61	\$ 2.130,66	\$ 2.625,12	\$ 2.481,12	
working capital	\$ 3.143,00	\$ 4.250,49	\$ 4.596,28	\$ 5.069,47	\$ 5.463,32	
Working capital investment	\$ -593,00	\$ 1.107,49	\$ 345,79	\$ 473,19	\$ 393,85	\$ 327,80
FCFF	\$ 5.894,30	\$ 2.619,97	\$ 4.043,11	\$ 4.092,44	\$ 4.874,43	\$ 5.525,35
Continuity value						\$ 283.227,16
Discount Factor	1,00	0,93	0,86	0,79	0,74	
FCFF discounted	\$ 5.894,30	\$ 2.427,00	\$ 3.469,47	\$ 3.253,15	\$ 3.589,38	
Continuity value discounted						\$ 208.559,79
Enterprise Value	\$221.298,80					
Market Value Extra-Operation Assets	\$ 13.476,00					
Firm Value	\$234.774,80					
Market value of debt	\$ 15.299,00					
Equity Value	\$219.475,80					
Implied share price	\$ 136,41					

Source: Author, Nike Annual Reports

Appendix 5 – Discounted Cash Flow Calculation: Equity

DCF Equity (millions)	2021	2022	2023	2024	2025	2026
FCFF	\$ 5.894,30	\$ 2.619,97	\$ 4.043,11	\$ 4.092,44	\$ 4.874,43	\$ 5.525,35
interest-bearing debt	\$ 9.415,00	\$ 9.874,14	\$ 10.677,44	\$ 11.776,68	\$ 12.691,61	\$ 13.453,10
Interest-bearing debt variation	\$ -242,00	\$ 459,14	\$ 803,29	\$ 1.099,24	\$ 914,93	\$ 761,50
int expense/int bearing debt	2,78%	2,78%	2,78%	2,78%	2,78%	2,78%
interest expense	\$ 262,00	\$ 274,78	\$ 297,13	\$ 327,72	\$ 353,18	\$ 374,37
interest expense after taxes	\$ 225,26	\$ 236,74	\$ 256,00	\$ 282,35	\$ 304,29	\$ 322,54
FCFE	\$ 5.427,04	\$ 2.842,38	\$ 4.590,41	\$ 4.909,33	\$ 5.485,08	\$ 5.964,30
Continuity value						\$ 272.342,48
Re	8,19%					
Discount Factor	1,00	0,92	0,85	0,79	0,73	
FCFE discounted	\$ 5.427,04	\$ 2.627,21	\$ 3.921,72	\$ 3.876,69	\$ 4.003,45	
Continuity value discounted						\$ 198.777,36
Present value of FCFE	\$213.206,43					
Market Value Extra-Operation Assets	\$ 13.476,00					
Equity Value	\$226.682,43					
Implied share price	\$ 140,88					

Source: Author, Nike Annual Reports

Appendix 6 – Economic Value Added

EVA (millions)	2021	2022	2023	2024	2025	2026
EBIT(1-t)	\$ 5.964,30	\$ 5.017,07	\$ 5.425,23	\$ 5.983,75	\$ 6.448,63	\$ 6.835,55
Invested Capital (boy)	\$ 14.522,00	\$ 14.592,00	\$ 16.989,10	\$ 18.371,22	\$ 20.262,53	\$ 21.836,73
ROIC	26,70%	27,48%	27,48%	27,48%	27,48%	27,48%
WACC	7,95%	7,95%	7,95%	7,95%	7,95%	7,95%
ROIC-WACC	18,75%	19,52%	19,52%	19,52%	19,52%	19,52%
EVA	\$ 4.809,68	\$ 3.856,88	\$ 4.074,45	\$ 4.523,09	\$ 4.837,59	\$ 5.099,34
Continuity Value						\$ 261.390,43
Discount Factor	1,00	0,93	0,86	0,79	0,74	
EVA discounted	\$ 4.809,68	\$ 3.572,82	\$ 3.496,36	\$ 3.595,48	\$ 3.562,25	
Continuity Value discounted						\$ 192.479,89
MVA	\$206.706,80					
Invested Capital (eoy)	\$ 14.592,00					
Enterprise Value	\$221.298,80					
Market Value Extra-Operation Assets	\$ 13.476,00					
Firm Value	\$234.774,80					
Market value of debt	\$ 15.299,00					
Equity Value	\$219.475,80					
Share price	\$ 136,41					

Source: Author, Nike Annual Reports

Appendix 7 – Multiples

Company	Market Data				Financials				Valuation		
	Share Price	Shares Outstanding	Equity Value	Net Debt	Enterprise Value	Revenue	EBITDA	Net Income	EV/Revenue	EV/EBITDA	Price/Equity
Nike	136,00	1.609	218.824	816	260.120	44.540	7.734	5.727	5,8x	33,6x	38,2x
Adidas	299,00	388	116.012		53.900	21.230	3.066	1.490	2,5x	17,6x	77,9x
Puma	93,00	149	13.857		14.640	6.810	770	310	2,1x	19,0x	44,8x
Lululemon Athletica	329,00	130	42.770		51.690	4.402	1.005	589	11,7x	51,4x	72,6x
Under Armour	19,00	468	8.892		9.570	5.683	644	360	1,7x	14,9x	24,7x
Average									4,5x	25,7x	55,0x
Relative Valuation									EV/Revenue	EV/EBITDA	P/E
Implied Enterprise Value									\$201.710,52	\$198.930,04	\$ 314.888,72
Net Debt									\$ 816,00	\$ 816,00	\$ 816,00
Implied Market Value									\$200.894,52	\$198.114,04	\$ 314.072,72
Shares Outstanding									\$ 1.609,00	\$ 1.609,00	\$ 1.609,00
Implied Value Per Share									\$ 124,86	\$ 123,13	\$ 195,20

Source: Author, Nike Annual Reports, Macrotrends