CATÓLICA LISBON
BUSINESS & ECONOMICS

Equity Valuation of Nike, Inc.

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Dissertation submitted in partial fulfilment of requirements for the MSc in Finance, at the Universidade Católica Portuguesa, December 30th 2022.

Abstract

With a leading position in the sportswear industry and one of the most valuable and reputable brands worldwide, Nike, Inc. is the world's largest designer and manufacturer of athletic footwear and apparel company.

Nike has kept its dominant market share position and its operations thriving despite the recent unfavorable macroeconomic situation, which was brought on by a global pandemic and escalating inflationary pressures. However, the stock market downturn of 2022 has had an impact on Nike's share price, with the company's shares declining by more than 38% since November of 2021.

Therefore, the goal of this dissertation is to determine Nike, Inc.'s target share price for the end of the firm's fiscal year of 2023 (31/05/2023) and provide a detailed investment recommendation based on the intrinsic value of Nike. A thorough research of Nike's industry, projections for the forthcoming macroeconomic environment, as well as a profound company research, were the pillars sustaining this valuation.

Based on the conciliation of the author's assumptions with the best firm valuation practices, the target value per Nike share was set at $108.68, derived from a WACC-based DCF approach, meaning a 2.6% upside potential. In the end, the results obtained were discussed through a sensitivity analysis and compared to other analyst's forecasts, which, considering the uncertainty regarding the current economic context, supported a hold recommendation.

Title: Equity Valuation of Nike Inc.

Author: Gonçalo Balsinhas

Keywords: Nike, Equity Valuation, DCF, Apparel and Footwear

Sumário Executivo

Com uma posição de liderança na indústria de roupas desportivas e uma das marcas mais valiosas e reconhecidas do mundo, a Nike, Inc. é a maior designer e fabricante mundial de calçado e roupa desportiva.

Apesar do recente contexto macroeconómico desfavorável, impulsionado por uma pandemia global e pressões inflacionárias crescentes, a Nike conseguiu defender sua posição de liderança no mercado e apresentar um forte desempenho operacional. No entanto, a queda do mercado de ações em 2022 afetou o preço das ações da Nike, desvalorizando as ações da empresa em mais de 38% desde novembro de 2021.

Portanto, o objetivo desta dissertação é determinar o valor subjacente às ações da Nike, Inc. Uma análise minuciosa da indústria da Nike, projeções para o contexto macroeconómico futuro, bem como uma pesquisa profunda sobre a empresa, foram os pilares que sustentaram esta avaliação.

Com base na conciliação das previsões do autor com as melhores práticas de avaliação de empresas, o valor-alvo por ação da Nike foi fixado em $108,68, resultado de uma análise DCF baseada no WACC, apresentando um potencial de valorização de 2,6%. No final, os resultados obtidos foram discutidos através de uma análise de sensibilidade e comparados com as previsões de outros analistas, que, face à incerteza associada ao atual contexto económico, suportaram uma recomendação de manutenção.

Título: Equity Valuation of Nike, Inc.

Autor: Gonçalo Balsinhas

Palavras-chave: Nike, Avaliação de Empresas, DCF, Roupa e Calçado

Acknowledgments

This master thesis marks the end of my five-year academic journey. It was a challenging and fast-paced adventure, but also a period that allowed me meet extraordinary people, to grow personally and to expand my knowledge that will guide me in future paths.

I would like to express my gratitude to all my professors that helped turning the learning process much more enjoyable and for providing an enriching program that met all my expectations, and to my colleagues for turning this one year and a half into a remarkable experience, by sharing all the difficulties and joys this master's brought. In addition, I thank Professor Tudela Martins for his valuable insights, availability and precious counseling throughout my dissertation writing period.

Finally, a special thank you to my family, particularly to my mother, father, brother and grandparents for their unconditional support throughout my whole life and for witnessing my evolution and achievements in first-hand. Last but not least, I am very grateful to my friends and my girlfriend for all their friendship and love and for endlessly encouraging me to reach one step further.

List of Abbreviations

BPS: Basis Points
BV: Book Value
CAGR: Compound Annual Growth Rate
CAPEX: Capital Expenditures
CAPM: Capital Asset Pricing Model
CRP: Country Risk Premium
D2C: Direct to Consumer
DCF: Discounted Cash Flow
DDM Dividend Discount Model
DIO: Days Inventory Outstanding
DPO: Days Payables Outstanding
DPS: Dividend per Share
DSO: Days Sales Outstanding
EBIT: Earnings Before Interest and Tax
EBITDA: Earnings Before Interest, Tax, Depreciation and Amortization
EBT: Earnings Before Taxes
EPS: Earnings per Share
EV: Enterprise Value
FCFE: Free Cash Flow to Equity
FCFF: Free Cash Flow to Firm
FY: Fiscal year
ICR: Interest Coverage Ratio
ITS: Interest Tax Shield
k_E: Cost of Equity
k_D: Cost of Debt
M&A: Mergers and Acquisitions
MM: Modigliani and Miller
MRP: Market Risk Premium
MV: Market Value
NA: North America
NOPAT: Net Operating Profit after Tax
NWC: Net Working Capital
PD: Probability of Default
PPE: Property, Plant and Equipment
PV: Present Value
Q: Quarter of a Year
Rf: Risk-free Rate
TV: Terminal Value
WACC: Weighted Average Cost of Capital
YTM: Yield to Maturity

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NIKE, Inc. Equity Valuation

Ticker: NKE

Sports Apparel and Footwear

Recommendation:	**HOLD**
Price (25/11/2022):	**$105.96**
Target Price (31/05/2023):	**$108.68**
Upside:	**2.6%**

Company Profile

Nike, Inc. designs, markets, distributes and sells men's, women's and kids' athletic footwear, sports apparel, equipment, accessories and services for sporting and fitness activities.

The company's operating segments comprise North America, EMEA, Greater China, APLA and Converse, by selling its goods under the Nike Brand name, Jordan and Converse.

Headquartered in Beaverton (United States), Nike has over 79,000 employees.

Market Profile

Stock Exchange:	NYSE
Market Cap:	$168,259 m
Shares Outstanding:	1,587 m
52-Week Range:	$82.2 - $173.4
Dividend Yield:	1.26%
Wall Street PT (12m):	$110.00

Investment Thesis

This report establishes a **Price Target** of **$108.68** for the end of Nike's FY2023 (31/05/2023), indicating a potential upside of 2.6% from the current price of $105.96 (25/11/2022). The target price was obtained through a DCF valuation, the WACC-based FCFF approach.

Even though the relative valuation undervalued Nike based on its peers' forward multiples, the scenario and sensitivity analysis, along with the Wall Street analysts' PT consensus of $110.00, revealed a higher probability of an upside potential.

Considering the current uncertainty surrounding the global economy (inflation, interest rates, consumer spending) and a detailed analysis of the industry and Nike's past performance, it is cautious to issue a **HOLD** recommendation.

Valuation Summary

Growth Drivers

Nike's revenue has grown at a CAGR of over 6.3% since FY2017, while analysts anticipated a CAGR of 7% for the sportswear industry for the upcoming years.

The rise in sports practitioners and consumer demand for sportswear products in China and APAC region are expected to be the main drivers of growth for Nike outside its "home market" dominance.

Nike's brand value and constant product innovation result from constant marketing and R&D investments that allow the company to attain a top-of-mind status and a first-mover advantage.

Main Risks

Nike's sales have been (FY2022) and will continue to be impacted by the Covid-19 lockdown limitations imposed by the Chinese government. With no certainty about the date of lifting of these restrictions, it is difficult to measure their impact on Nike's most promising market.

Supply chain interruptions have led to excessive accumulated inventory in North America in FY2022 and Q1 FY2023. To offset this scenario, Nike will most likely need to incur in discounted sales, dragging down revenue per item sold.

Key Historical Ratios

	FY2018	FY2019	FY2020	FY2021	FY2022
Gross Profit Margin	43.8%	44.7%	43.4%	44.8%	46.0%
EBITDA Margin	14.3%	14.0%	10.3%	17.3%	15.8%
EBIT Margin	12.2%	12.2%	8.3%	15.6%	14.3%
Net Profit Margin	5.3%	10.3%	6.8%	12.9%	12.9%
Inventory Turnover	3.9	4.0	3.3	3.5	3.3

Summary of Financials

	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Revenue	36,397	39,117	37,403	44,538	46,710	49,303	52,823	56,994	61,345	65,618	69,825	74,040	78,468
YoY Growth %	6.0%	7.5%	(4.4%)	19.1%	4.9%	5.6%	7.1%	7.9%	7.6%	7.0%	6.4%	6.0%	6.0%
EBITDA	5,193	5,480	3,836	7,689	7,400	7,009	8,565	10,554	12,279	13,332	15,234	17,782	18,844
EBIT	4,445	4,773	3,115	6,937	6,675	6,163	7,659	9,119	10,735	11,483	13,267	15,548	16,478
Net Income	1,933	4,030	2,539	5,727	6,046	5,033	6,327	7,564	8,948	9,561	11,089	13,046	13,824
FCFF	-	-	-	-	-	4,581	6,306	6,811	8,738	8,913	11,396	12,310	14,455
EPS	1.17	2.49	1.60	3.56	3.75	3.17	4.05	4.91	5.90	6.35	7.41	8.78	9.35
DPS	0.75	0.82	0.91	1.02	1.14	0.96	1.62	2.21	2.95	3.81	4.82	5.70	6.54
ROE	19.7%	44.6%	31.5%	44.9%	39.6%	32.1%	38.6%	44.1%	49.6%	46.9%	49.0%	50.6%	48.2%
Total Debt to Capital	16.9%	14.7%	41.5%	34.0%	31.3%	30.4%	29.9%	29.4%	29.0%	27.5%	26.6%	25.0%	23.9%
Net Debt	(1,435)	(1,184)	4,228	(663)	(370)	(14)	(247)	280	155	(980)	(2,957)	(4,772)	(7,737)

1. Introduction

Several buyer-seller situations emerge in our daily lives or in a professional context, where the concept of price and value is commonly misleading. Fernández (2007) claims that the price is "the quantity agreed upon between the buyer and the seller", whereas the value of an asset may differ between subjects and depends on three fundamental factors: "cash, timing and risk" (Luehrman, 1997).

This dissertation is focused on the concept of valuation, a concept that "lies at the heart of much of what we do in finance" (Damodaran, 2006). In corporate finance, the objective is to maximize the value of the company, while in a portfolio management perspective, the goal is to find undervalued shares in the expectation of the future generation of capital gains. In M&A, before submitting a bid, the firm or individual making the offer must assess the target company's fair market value, and before deciding whether to accept or reject the offer, the target company must determine a fair value for itself. (Damodaran, 2003).

Knowing how much an asset is worth and what factors into that value is essential for any manager, analyst, or investor to enhance their decision-making. This is the main principle of Equity Valuation.

Therefore, the aim of this dissertation is to combine theoretical background with an analysis of Nike Inc's business model, build future projections and evaluate the fair value of Nike Inc.

The dissertation starts with a literature review in Chapter 2 that provides necessary tools for a company valuation as well as a debate of which methods are more appropriate for estimating a fair value for Nike. Chapters 3 and 4 evaluate the surrounding macroeconomic and industry context, while Chapters 5 and 6 are focused towards analyzing Nike's business model and past financial performance. The valuation chapters include Chapters 7 and 8, where the financial projections are built, along with all inherent assumptions utilized for the assemblage of Nike's valuation.

Finally, the dissertation valuation results are compared with two equity research reports from investment banks and ends with the issuance of an investment recommendation regarding the company's shares traded on the NYSE for the date of 31st of May 2023.

2. Literature Review

2.1. Valuation Background

Different approaches, ranging from straightforward to more complex can be used to value a company, and while they differ in terms of their underlying context and assumptions, they all share some common characteristics (Damodaran, 2003). Young, Sullivan, Nokhasteh and Holt (1999) go even further by defending that "virtually every popular valuation approach is no more than a different way of expressing the same underlying model".

This suggests that the valuation of a business can be part art, based on the capacity of combining premises into a meaningful line of thought, and part science, which can be broken down into four valuation approaches (Damodaran, 2003):

(i) Discounted Cash Flow: An asset's present value is determined by discounting its future expected cash flows at a rate that considers its risk and opportunity cost.

(ii) Liquidation and Accounting Valuation: Valuation of the existing assets based on book values. These practices will not be considered for this dissertation, since they are typically performed in bankruptcy cases.

(iii) Relative Valuation: The pricing of comparable assets in relation to a shared factor, such as earnings, cashflows, book value, or sales, is used to estimate an asset's value.

(iv) Contingent Claim Valuation: Utilizing option pricing models to determine the value of assets with identical option characteristics.

The details of the valuation techniques thought to be most relevant for valuing Nike are described in the following sections.

2.2. Discounted Cash Flow (DCF) Methods

There is an agreement that the DCF method is "the most accurate and flexible method for valuing projects, divisions, and companies." (Koller, Goedhart & Wessels, 2005) since the owners of a firm have a claim on all future cash flows generated by its assets (Schill, 2014). Modigliani and Miller (1958) and Damodaran (2003) were among the academics to defend the applicability of this valuation method, stating that the intrinsic value of the company

corresponds to the present value of its operating cash flows after taxes, as demonstrated in Equation 1 (Damodaran, 2003).

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

Therefore, the value of a firm is measured based on two parameters. The numerator of Equation 1 reflects the expected future cash flows of the company. In addition, the denominator is a discount rate that shows the appropriate risk related to the estimation of those future cash flows, "with higher rates for riskier assets and lower rates for safer projects" (Damodaran, 2003). Numerous alternative methodologies for valuing firms have been developed as a result of measurements of these two parameters (Mitra, 2010).

The next sections feature a distinction of the different DCF models, as well as enterprise and equity value approaches.

2.2.1. Enterprise Value Approaches

In the case of the discounted cash flow model from the perspective of the whole firm, the objective is to assess the company's total cash flows, whether related to shareholders or debtholders and discount them to the weighted average cost of capital (WACC among other methods), to consider the profitability required by both stakeholders.

2.2.1.1. Free Cash Flow to Firm (FCFF)

FCFF is the total incremental cash flow available to all stakeholders of the firm, including both equity holders and debt holders (Schill, 2014). FCFF is estimated from the income statement and balance sheet of the firm.

As represented in Equation 2, FCFF starts with the estimation of NOPAT, which is the earnings before interest and tax (EBIT) multiplied by (1-$t_{effective\ tax}$), to collect the post-tax returns that are accessible to all capital providers. Subsequently, the D&A amount is added, as it is a non-cash expense, and CAPEX is deducted since it reflects long-term investments that do not feature in the income statement but are necessary to sustain operations. Finally, the variation in Net

Working Capital (operational current assets minus operational current liabilities) is also deducted since an increase in NWC requires additional cash to be tied up in operations.

$$FCFF = EBIT * (1 - t) + DA - CAPEX - \Delta NWC \quad (2)$$

Since debt payments are not considered in the formula above, FCFF is often referred to as an unlevered cash flow. Consequently, it excludes all tax advantages associated with debtholder interest payments (Mitra, 2010). Nevertheless, the tax advantage is still considered in the discount rate, the after-tax WACC.

$$EV = \sum_{t=1}^{t=n} \frac{FCFF_t}{\left(1 + WACC_{after\ tax}\right)^t} + \frac{TV}{\left(1 + WACC_{after\ tax}\right)^t} \quad (3)$$

2.2.1.2. Adjusted Present Value (APV)

(Appendix VIII)

2.2.1.3. Terminal Value (TV)

In a DCF valuation, the expected cash flows are estimated over an explicit time-period, usually between 5 to 10 years, and then, a terminal value method is utilized since it is unrealistic to estimate the cash flows endlessly and the business is expected to stabilize.

"The terminal value is usually by far the most important element in any valuation estimate" (Young et al., 1999). The reason for this statement is that the terminal value comprises about 90% of the total value of a firm, when assuming a five-year explicit period and 79% for a ten-year explicit period (Young et al., 1999).

Damodaran (2003) proposes three ways to find the terminal value. First, the liquidation approach that estimates what buyers would pay for the assets of the firm at that point. Secondly, by applying an enterprise or equity exit-multiple to estimate the value in the terminal year. Finally, the perpetuity approach, for which the Gordon Growth Model is the most common methodology, expects that the company's cash flows will continue to increase indefinitely at a constant steady growth rate (Damodaran, 2003) (Equation 7).

$$Terminal\ Value = \frac{Cash\ Flow\ _{t+1}}{(discount\ rate - constant\ growth\ rate)} \quad (7)$$

2.2.1.4. Weighted Average Cost of Capital (WACC)

The discount rate that reflects the WACC demonstrates the opportunity cost of all capital invested in an enterprise and it should reflect the risk of the investment (Damodaran, 2003). It is composed by an average rate of return of equity and debt for a firm, weighted by their proportion on the firm's market value (Schill, 2014).

This approach uses the market values of both equity and debt to better "reflect the opportunity cost of the investor's position in the business" (Schill, 2014). Furthermore, for the specific case of book value of debt, some studies point that it "distorts debt-equity ratios and cost of capital calculations" (Sweeney, 1997).

$$WACC_{after\ tax} = \frac{E}{(E+D)} * k_{E(L)} + \frac{D}{(E+D)} * k_D * (1-t) \quad (8)$$

By including the after cost of debt, k_D*(1-t), the WACC considers the tax benefits of debt financing, since they are not captured when forecasting the expected cash flows.

Additionally, the WACC approach is considered better suited "when managers aim for a constant debt-to-capital-ratio over the long run" (Luerhrman, 1997). In opposite cases, the model needs continuous readjustments regarding its capital structure.

The next sections explore in detail the components of the WACC.

2.2.1.4.1. Market Values of Equity & Debt (MV Equity & MV Debt)

Since the WACC requires the weighted cost of equity and debt, it is mandatory to understand the proportion each component encompasses on the total market value of the firm. In cases when the Equity or Debt ratio are not kept constant and there is no assumption of a target capital ratio, there are ways to calculate their respective market value.

The MV of Equity can be computed by multiplying the current share price for the number of shares outstanding (Damodaran, 2003).

For the market value of Short-Term Debt, the common practice is to assume that it is equal to the book value of Short-Term Debt. Finally, the MV of Long-Term debt, composed by outstanding bonds, is priced by the market, while the remaining Book Value of LT Debt can be transformed into market values using a synthetic bond pricing formula. This approach takes the form of a single-coupon bond, with the maturity set at the debt's weighted average maturity and the coupon payments serving as the interest expense.

$$Market\ Value\ of\ Long\ Term\ Debt = C * \frac{1-(1+r)^{-n}}{r} + \frac{F}{(1+r)^n} \quad (9)$$

2.2.1.4.2. Cost of Equity (k_E)

The cost of equity is the WACC input that requires the analysis of a higher number of components and premises. Contrary to debt holders, the equity holders do not demand an explicit return. Instead, investors require an expected return in order to invest in that firm rather than elsewhere. Thus, the cost of equity is the opportunity cost of capital, which represents the expected return achieved if invested in another firm with a similar risk profile.

Since expected rates of return are not directly available, an asset-pricing model that converts risk into expected returns can be employed (Mitra, 2010). For instance, according to the Fama-French (1992) three factor model, risk is the sensitivity of a stock to three separate portfolios, including the stock market, firm size, and book-to-market ratio.

However, due to its practicality, the most common asset-pricing model is the capital asset pricing model (CAPM), as Bruner, Eades, Harris, and Higgins (1998) depicted by surveying 27 well-regarded firms, reaching to the conclusion that 81% of the firms examined used the CAPM to estimate the cost of equity.

CAPM was first introduced by Sharpe (1964), then followed Treynor (1965) and Jensen (1969) who have created portfolio evaluation models that are either built on top of this asset pricing model or closely resemble it.

$$CAPM: \quad k(E_L) = R_f + \beta_L * MRP \quad (10)$$

According to this method, the expected return of any risky asset is a function of the risk-free rate and the risk premium. Thus, the risk premium is equivalent to the product of the asset's beta, that is the volatility of the asset compared to the risk of holding the market portfolio (Koller et al., 2005), with the market risk premium, which is equal to the difference between the market portfolio's predicted excess return and the return on riskless assets (Bruner et al., 1998).

2.2.1.4.3. Risk-free Rate (R_f)

An asset is considered to have no risk if the projected return is known from the start and with certainty. This implies that there is no risk of bankruptcy and no risk associated with reinvestment (Damodaran, 2003). Furthermore, the return on a portfolio or asset with no correlation with the market is known as the risk-free rate. (Koller et al., 2005).

Since only governments have the authority to issue money, the assets that fit these requirements are zero-coupon sovereign bonds issued by governments without a bankruptcy risk and, ideally, each risk-free rate with a duration equal as the cash flow being discounted (Damodaran, 2003).

However, for simplicity reasons, the most common practice is to choose a single yield to maturity from one government bond and apply it to the entire cash flow stream being valued. In this case, for a US company valuation, the most typical proxy is the 10-year US Government Bond (Koller et al., 2005).

2.2.1.4.4. Levered Beta

The sensitivity of the return on an asset/portfolio compared to the return on the market portfolio is known as the beta, and it is assumed in the CAPM model to be a risk measure that reflects the systematic risk of the asset to a diversified investor (Koller et al., 2005).

Beta must be estimated since it cannot be observed in the market directly, which demands the creation of a set of guidelines and assumptions. The most common method for estimating beta, according to Damodaran (2003), is to run a regression of stock returns versus market returns.

However, there are several parameters arising from this approach that demand some premises for their estimation: the estimation period's duration, the return interval, and the market index.

$$\beta_L = \frac{Cov(R_i; R_M)}{Var(R_M)} \tag{11}$$

Standard & Poor's uses five years of data, whereas Bloomberg uses two (Damodaran, 2003). Even though a larger estimation period provides more data, it means that the firm had more time to change its characteristics and be exposed to a series of events that might distort the sample. Regarding the return interval, the most common practice is to use weekly or monthly returns, since smaller firms when using daily returns can suffer from nontrading biases. Nonetheless, the chosen index should be the market in which the company's stock trades. On the other hand, in a cross-border investor's perspective it would be prudent to use an international index (Damodaran, 2003).

Koller et al. (2005) believe that using industry-specific betas rather than company-specific betas will increase the accuracy of beta calculation since "companies in the same industry face similar risks, so they should have similar operating betas". This approach, also denominated "Bottom-Up Betas" (Damodaran, 2003), involves the regression of each pear against the market index and estimate their respective unlevered beta:

$$\beta_U = \frac{\beta_L}{\left[1 + (1 - t) * \frac{D}{E}\right]} \tag{12}$$

After taking a weighted average of the unlevered betas, one estimates the market values of Equity and Debt for the firm being analyzed and re-levers the beta (Damodaran, 2003):

$$\beta_L = \beta_U * \left[1 + (1 - t) * \frac{D}{E}\right] \tag{13}$$

Finally, Blume (1975) proposed that historical betas would adjust toward the "market beta" of 1.0, such that it is more robust and closer to the future's expected beta:

$$\beta_a = \frac{2}{3} * \beta_{est} + \frac{1}{3} * 1 \tag{14}$$

2.2.1.4.4. Market Risk Premium (MRP)

The market risk premium corresponds to the "additional premium required by investors, relative to a risk-free asset like U.S. Treasury bonds, to invest in a globally diversified market portfolio" (Zenner, Hill, Clark & Mago, 2008).

The MRP, seen from a macroeconomic point, represents the broader picture on the entire economy (Zenner et al., 2008). Geopolitical stability, economic growth projections, consumer demand, inflation and interest rates are some of the variables that have an impact on investors' perceptions of market risk. Despite its importance, there is no consensus over the method used to estimate MRP. However, Zenner et al. (2008) considered various approaches and timeframes and stated that the MRP should be within the range of 5-7%.

To estimate the cost of equity of Nike, the MRP values provided by Damodaran were weighted considering the revenue importance of each region where the firm operates.

Lastly, Nike, as well as its peers, are multinational companies, operating in many emerging market countries. Thus, Damodaran (2003) advocates adding a country risk premium to account for the increased risk that comes with investing in a foreign nation. The approach chosen for this dissertation was to add the CRP to the cost of equity, weighted by the revenue share for each operating region.

2.2.1.4.5. Cost of Debt (k_D)

The pre-tax cost of debt of a firm can be obtained by using the long-term debt yield to maturity of the company (assuming that all coupon payments and debt payments are paid in full). The yield to maturity for companies with publicly traded debt can be calculated using the bond's price and projected cash flows (Koller et al., 2005).

On the other hand, for companies with illiquid debt, the alternative is to estimate a synthetic rating based on its historical performance and financial ratios (Damodaran, 2003). When a synthetic rating has been assigned, it can be used to calculate a default spread, which when combined with the risk-free rate equals a company's pre-tax cost of debt. Nonetheless, the WACC approach requires the after-tax cost of debt, which is computed by the product of the pre-tax k_D and the tax shield effect (1-t).

2.3. Equity Valuation Models

(Appendix IX)

2.4. Relative Valuation

In DCF valuation, the objective is to find the intrinsic value of a firm based on their cash flow stream, projected growth, company and industry characteristics. Alternatively, in relative valuation, the goal is to determine an asset's value using market prices for comparable assets (Damodaran, 2003).

Koller et al. (2005) argue that, out of all the valuation tools, a DCF valuation delivers the most accurate results, however, every valuation should include a comprehensive multiples assessment. Relative valuation has been widely adopted as Pinto, Robinson and Stowe (2019) reported, with 92.8% of experts using market multiples, with most acquisition valuations and equity research reports grounding their conclusions on a comparison of a company to similar businesses using a multiple such as PE or EV/EBITDA as the benchmark (Damodaran, 2003).

The widespread practice of relative valuation can be attributed to several factors. Firstly, compared to DCF, a valuation based on multiples may be accomplished far more quickly and with significantly fewer explicit assumptions. Moreover, a relative valuation is simpler to comprehend and convey to others by being much simpler to characterize an asset as cheap or expensive versus a comparable. Finally, since a relative valuation seeks to gauge relative rather than intrinsic value, it is considerably more likely to capture the present market sentiment (Damodaran, 2003) and to be less impacted by each company's capital structure (Koller et al., 2005).

Notwithstanding, this valuation approach requires the identification of an appropriate comparable peers' group. Schreiner (2007) claims that the criteria for choosing the right analogous firms should be the operating in the same industry, have a similar size and region, have akin growth perspectives, financial and operating ratios and, lastly, the group should contain between 4 to 8 comparable firms. Additionally, Liu (2002) defends that for the correct use of multiples they should be forward-looking since they are based on future performance, and given their higher accuracy versus historical multiples.

2.5. Conclusion

After a careful review of the existing valuation methodologies, this section encompasses the selection of the most pertinent methods for Nike's valuation.

A study regarding the importance of free cash flow valuation claimed that there are two most popular methods of valuing a company: multiples and DCF approach. Pinto et al. (2019) discovered that 78.8% of experts use a discounted cash flow approach, with FCFF being used twice as often as FCFE models. Even though analysts frequently employ many techniques to value equities, it is evident that free cash flow analysis is most often used. (Pinto, Robinson & Stowe, 2019).

Since it considers the flow of money into and out of the business, according to Koller et al. (2005), the Enterprise DCF continues to be the preferred method by many practitioners and researchers. For businesses whose present cash flows are positive and can be reasonably predicted for future periods, DCF valuation, based on anticipated future cash flows and discount rates, is more adequate (Koller et al., 2005), which corresponds to Nike's current situation and stable industry it is inserted in. Furthermore, a DCF valuation allows the analysis of the different revenue streams of business units and regions of Nike with a consistent methodology (Koller et al., 2005).

Furthermore, according to Damodaran (2003), FCFF is preferred for companies that have very high or low leverage, the second one the case of Nike. Even though the firm saw a rise in its debt load with the impact of Covid-19, driven primarily by an issuance of $5.9 billion in bonds that occurred in the final quarter of FY2020, Nike's total debt to total capital ratio (book values) has been kept within the 15% to 30% range (23% in FY2022). With no further information from the management and unlikelihood of an increase in this figure, in this dissertation the author assumed a constant capital structure for future projections, for which the FCFF approach is better suited (Koller et al., 2005).

Finally, the multiples approach will also be examined as a comparison tool since it is a common practice by analysts when analyzing Nike's industry. Forward-looking multiples such as P/E and EV/EBITDA will be employed.

3. Macroeconomic Overview

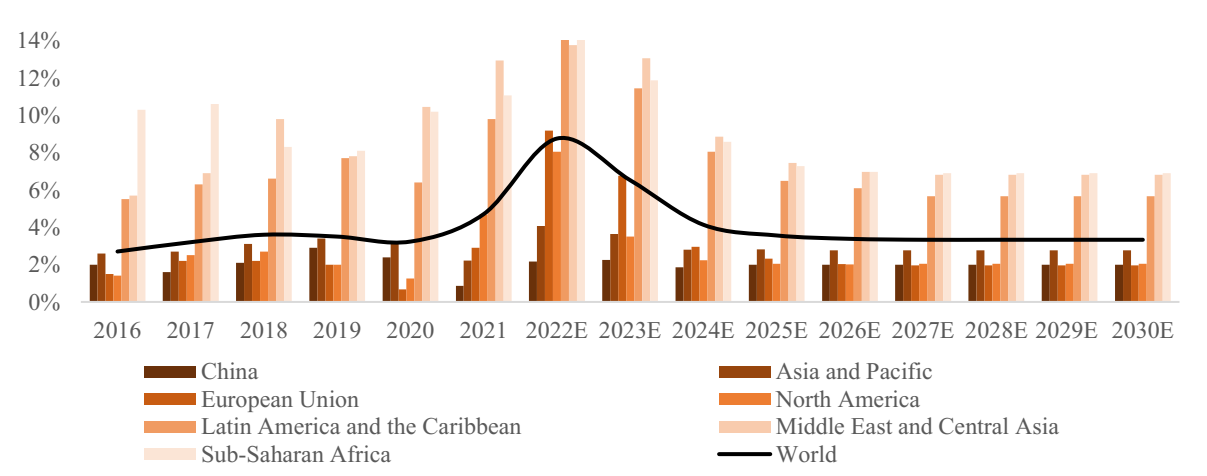
3.1. Inflation

Between 2021 and 2022, US's inflation rate reached its highest point since 1982 (CNBC, 2022), reaching 8.2% for the 12 months ended in September 2022. Even though economists disagree on the precise cause of the increase in prices, most blame the Covid-19 pandemic that brought global supply chain issues, causing product shortages. Strong consumer demand and the over-extensive stimulus package implemented to speed up the worldwide pandemic recovery are two additional factors.

In addition, the global economy has been struck by Russia's invasion of Ukraine that started in February of 2022. Energy and food costs have significantly increased, escalating inflationary pressures at a time when the global cost of living was already growing quickly. In many economies, inflation is now widespread. In 2023, inflation pressures should be reduced by a tighter monetary policy imposed by central banks. After their meeting in November 2022, the US Federal Reserve voted to increase rates for a fourth time in a row, this time by three quarters of a percentage point, increasing the target overnight lending rate to a range of 3.75%-4.00%, since the Fed's preferred inflation measure (Core CPI) was moving at more than three times its 2% target (Reuters, 2022).

Despite the efforts to cool down the galloping inflation, increasing energy and labor costs are anticipated to impede the rate of fall, since in the G20 economies, headline inflation is predicted to decrease from 8.2% in 2022 to 6.5% in 2023 (OECD, 2022).

Figure 1: Inflation Rate Forecast per region (OECD & Own Analysis)



Even though apparel and footwear prices are moving with recent CPI increases, they are moving at a slower rate. Historically, the US apparel and footwear industry's price realization has fallen far short of inflation rates and increases in household income (McKinsey, 2022). Before the Covid-19 pandemic, between 2010 and 2019, US apparel prices increased at a CAGR of just 0.4 % and US footwear prices increased at a CAGR of 0.7%, trailing both the overall CPI (CAGR of 1.8 percent) and the median household income (CAGR of 3.8 percent) (McKinsey, 2022). Although the relative difference has recently narrowed, apparel and footwear pricing increases in the U.S. still lag 2022's CPI growth by around 1 to 2 percent.

Figure 2: Apparel and Footwear Inflation in July 2022 in US (McKinsey)

Further information regarding the evolution of prices of commodities utilized to produce footwear and apparel can be seen in Appendix XIII.

3.2. Gross Domestic Product

Nike's business activity is considered a consumer discretionary industry, meaning its goods are non-essential by consumers. Henceforth, the willingness for purchasing items such as apparel and footwear is directly associated to the evolution of consumer spending, a large indicator of GDP (Eurostat, 2022).

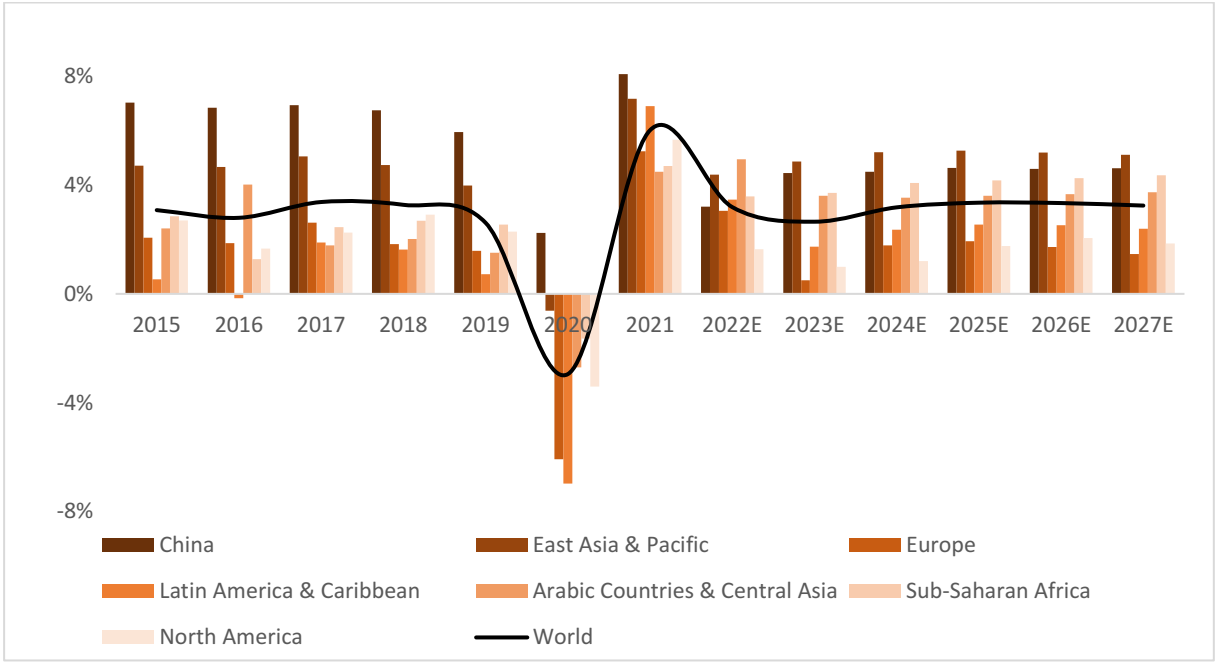
After the decline in GDP caused by the global pandemic in 2020, the World economy started to recover as restrictions were being lifted and consumers changed their consumption patterns to "revenge buying" (Park, 2022), which helped real GDP growth to surpass the 6% level in 2021.

However, as of 2022, the global economy remains facing some challenges: Ukraine's invasion by Russia, a rise in cost of living due to high inflationary pressures, and the economic slowdown

in China caused by supply-chain and its zero-Covid lockdown constraints. GDP in 2022 had the weakest growth since 2001, excluding the 2008 global financial crisis and the outbreak of the Covid-19 pandemic. This effect was more significant for the largest economies, with the US GDP contracting in the first half of 2022, the Eurozone contracting in the second half of 2022 and about a third of the world economy facing two consecutive quarters of hinder in economic development (OECD, 2022).

OECD's October 2022 forecasts project a global growth in 2022 of 3.2% and a fall to 2.7% in 2023, with China suffering its biggest slowdown in growth for the past decade, which will have a significant impact on global trade and activity given China's economic size and its importance for global supply networks. Euro Zone and US are forecasted to register a 0.5% and 1% increase in real GDP in 2023, respectively, with Europe suffering the biggest effects from the war in Ukraine and the US with its recent climbs in interest rates taking a significant impact on consumer spending.

Figure 3: Real GDP Growth Forecast (OECD & Own Analysis)



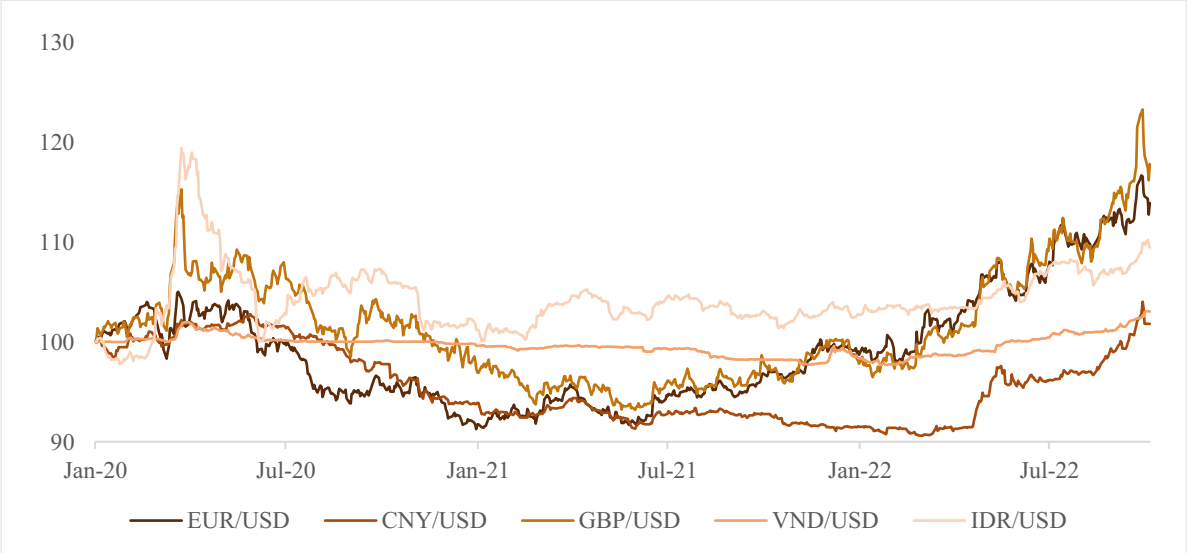
3.3. Exchange Rates

Most Nike products are produced and sold outside of the United States, which implies performing purchases and sales in a variety of currencies, exposing Nike to the turbulence of the global economic environment, including changes in inflation and currency exchange rates.

Since 2020 there has been a weakening of the currencies of Nike's biggest manufacturing nations (China, Vietnam and Indonesia) versus the US dollar. The Vietnamese dong reached an historic low in November 2022, while the Chinese yuan has reached its lowest point since the 2008 Financial Crisis, when compared to the US dollar (Bloomberg, 2022).

Due to Nike's global operations, revenues and expenses are frequently recorded in foreign currencies, and, as a result, currency fluctuations have an impact on these numbers. When the consolidated financial statements are reported, amounts that were initially recorded in foreign currencies are converted into US dollars. Foreign currency sales and earnings of the Company are negatively impacted by a weakening of those currencies in relation to the U.S. Dollar. Furthermore, variations in foreign exchange rates can affect the operations of independent producers that fabricate Nike's products by making their purchases of raw materials more expensive and financially unfeasible (Nike Annual Report, 2022).

Figure 4: Exchange Rates versus USD since Jan-2020 (Refinitiv)

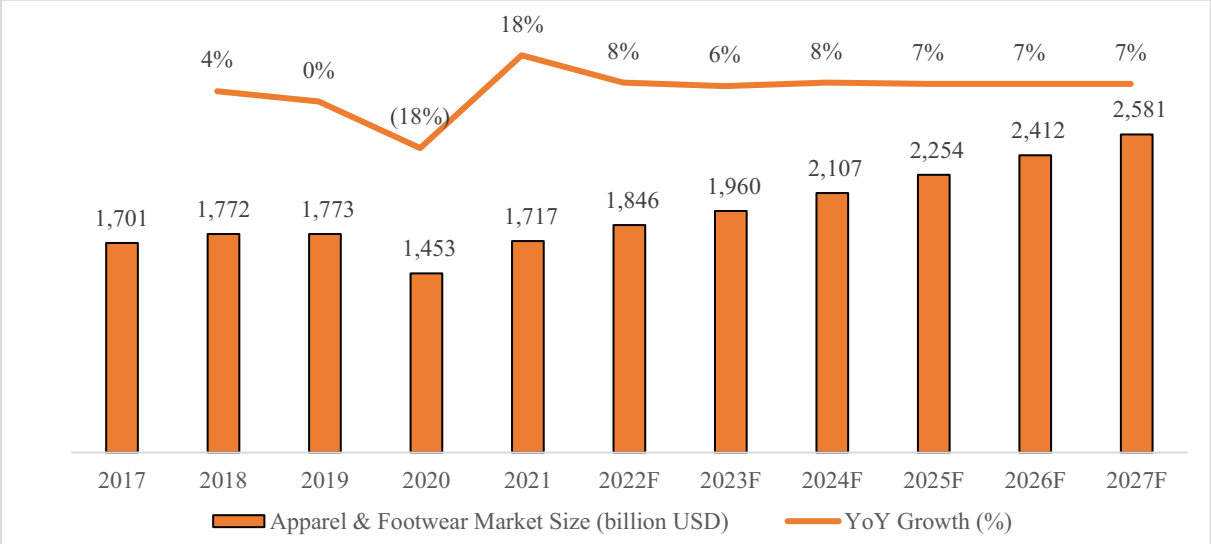


4. Industry Analysis

Nike operates in the apparel and footwear industry. By being one of the most important industries in the world in terms of revenue and the 5th in terms of employment (IBISWorld, 2022), it is a large contributor to the world economy.

As of 2021, this industry reached 1.72 trillion USD in revenue, and it is estimated to generate 1.85 trillion USD in 2022. However, this sector was severely impacted with the arrival of the global pandemic as revenues declined by 18% in 2020, with its figures only returning to pre-pandemic levels in 2022. Even though projections indicate a slowdown in growth in 2023 due to a possible reduction in consumer spending, it was forecasted that the fashion industry will remain growing at a CAGR of nearly 7% over the period of 2022-2027 (Euromonitor, 2022).

Figure 5: Apparel and Footwear Industry Evolution (Euromonitor)

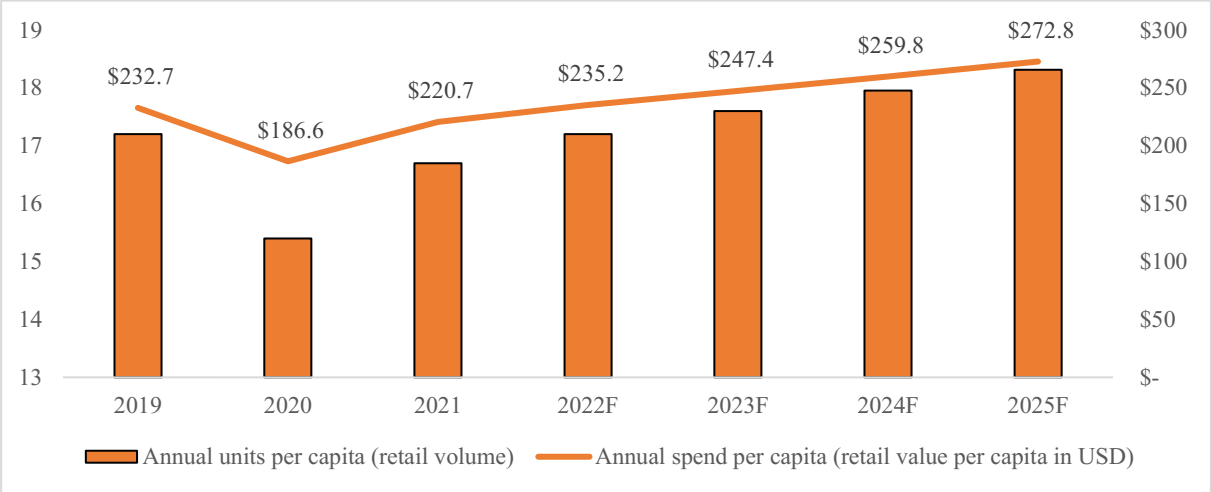


The US and China account for the largest portion of the apparel and footwear industry, with 25% and 21% of the total market share, respectively (Euromonitor, 2022). Moreover, China as well as the rest of APAC are expected to be the fastest growing markets. Nevertheless, this is also the most fragmented region, since international brands are competing for the surge in demand with local businesses that attempt to attract domestic and lower-income customers with cheaper solutions.

On the other hand, a study conducted by Euromonitor showed that in 2021, on average consumers purchased 16.7 units of apparel and footwear worldwide, spending 220.7 USD on

average. The quantity of items purchased and the annual spend suffered a significant decrease in 2020 due to the arrival of the pandemic but are expected to surpass pre-pandemic levels in 2022, with the average spend per capita and annual units purchased growing more than 5% and 2% per year, respectively.

Figure 6: World Consumption of Apparel & Footwear (Euromonitor)



4.1. Sports Apparel & Footwear Industry

Nike's focus inside the overall apparel and footwear industry is sportswear. This segment generated around €295 million in 2021, corresponding to around 17.2% of the total apparel and footwear industry (McKinsey, 2022).

The sporting goods industry was flourishing until the arrival of the global pandemic. The market saw a decline of 14% in 2020 across all regions due to lockdowns and the closure of physical points of sale. However, the segment saw a standout recovery in 2021, recovering almost to pre-pandemic levels, driven by the extraordinary growth in China and the US, the world's biggest clients of sporting goods, of 23% and 15% respectively.

However, the pandemic has drastically changed the panorama of fashion shopping. Several previously unreceptive consumers have now fully embraced online shopping. According to McKinsey, about 45% of sales are through digital online channels, even after the full reopening of stores.

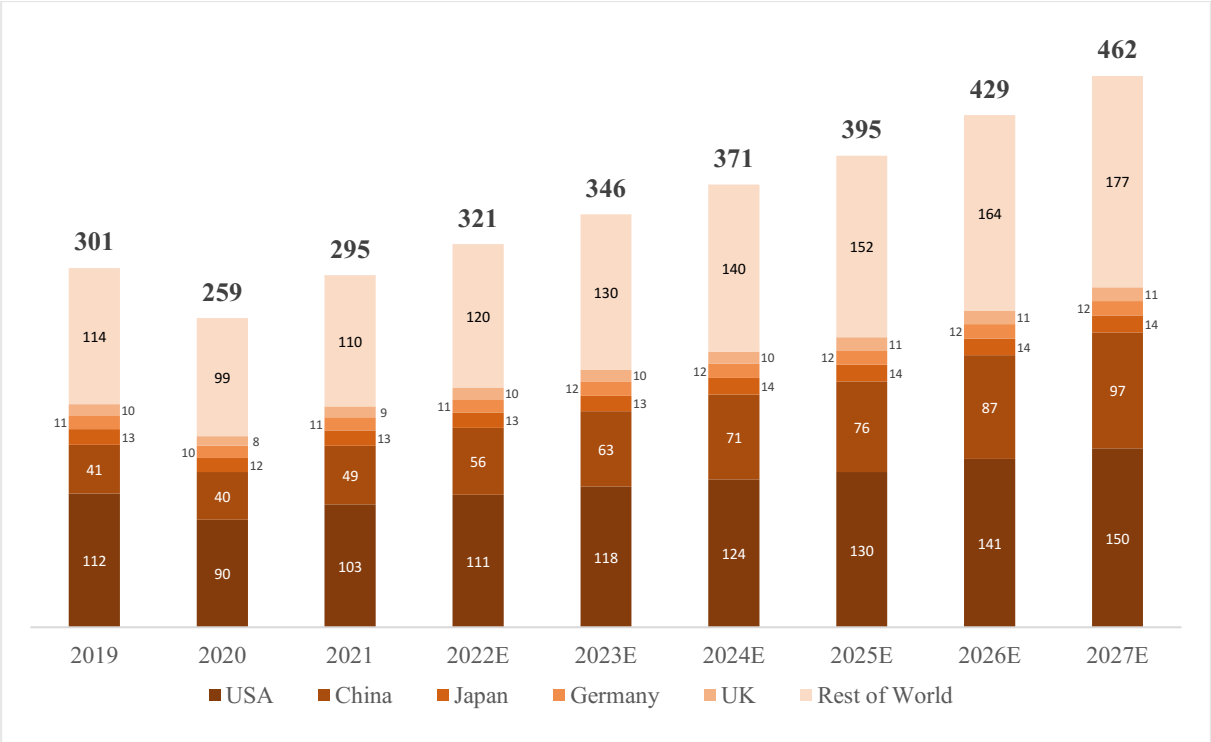
Increased health awareness and the trend of digital-enabled exercise accelerated the demand for the practice of physical activity and, consequently, casual and sports clothes. With the increased popularity of remote working in most professional environments, many now opt for more

comfortable and casual clothing while spending more time at home, solidifying new habits in consumer shopping (McKinsey, 2022).

In addition, many brands are taking advantage of growing user numbers in social media to focus their e-commerce strategies, as more than 80% of consumers now use online channels to search for new products. More athlete influencers and sports institutions, sponsored by sportswear brands are contributing to blur the lines between social media and e-commerce, exposing more potential consumers to this genre of products (McKinsey, 2022).

Sportwear is one of the fastest-growing segment in the global sports apparel market, with the market forecasted to expand at a CAGR of 7% between 2021-2025 (McKinsey, 2022), with China and US being the biggest growth drivers. China is expected to grow the fastest, with its annual growth to average 12%, while the US and UK are forecasted to grow at a CAGR of 6.5% and 4%, respectively, for the same period.

Figure 7: Sportswear Industry Revenue in EURbn (McKinsey & Own Analysis)



Information regarding the competitive frame of the industry is present in Appendix XIV.

5. Company Overview

Nike, Inc., considered the world's largest athletic apparel company, is best known for selling footwear, apparel, and equipment. The American multinational is also engaged in the design, development, manufacturing and marketing of sportswear products. Nike's brand portfolio includes Nike's own brand and products under the Jordan and Converse trademark.

Throughout the years, Nike has made several acquisitions of footwear and apparel companies. Some acquisitions include Bauer Hockey, surf apparel company Hurley, and Converse. By opting to focus on its own business lines, Nike has divested its participation in all its subsidiaries apart from Converse. Recent acquisitions are now focused on the company's "NIKE Direct" distribution channel, more specifically the digital selling point, by acquiring digital sales and machine learning technology-related corporations.

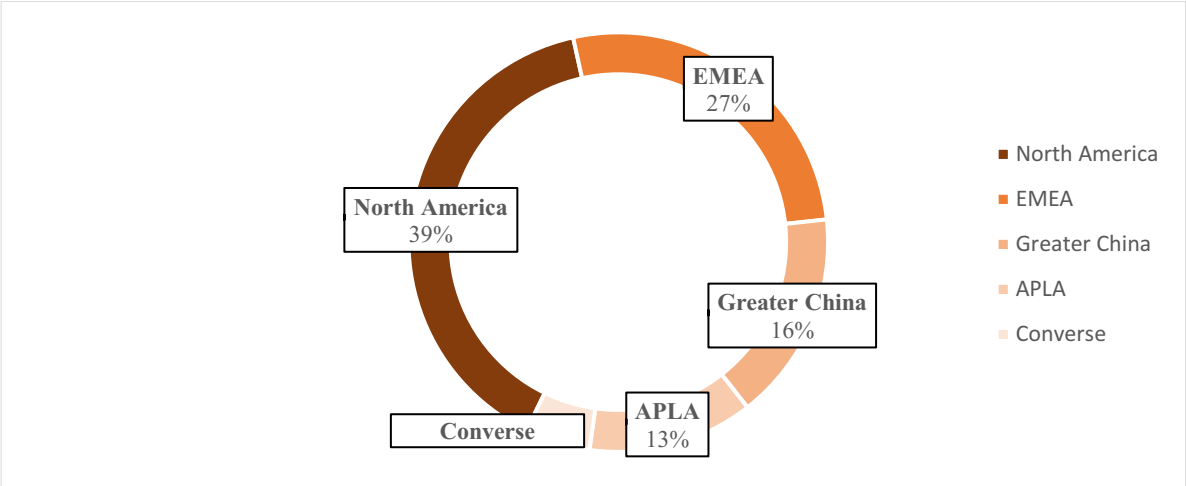
5.1. Business Overview

Nike breaks down its operations results by brands, reporting separate figures for the Nike Brand (that includes Nike's own products and Jordan), and Converse. In FY2022, Nike Brand accounted for 94.9% of Nike's total revenue, with $44,334 million, whereas Converse accounted for 5% of the company's consolidated revenue, corresponding to $2,346 million.

Moreover, in FY2022 the Global Brand Divisions were responsible for $102 million in sales, which included revenue from Nike Brand licensing and other sources that are not related to a particular regional operating division, whereas a negative amount of $72 million was under the label of corporate revenue, that consists of "foreign currency hedge gains and losses related to revenues generated by Nike" (Annual Report, 2022).

Within the Nike Brand, Nike reports the breakdown of this operating segment by regions: North America, Europe, Middle East & Africa (EMEA), Greater China and Asia Pacific & Latin America (APLA).

Figure 8: Nike Revenue Share in FY2022 by Operational Segment (Nike)



In FY2022, North America was the largest contributor for Nike's revenue, encompassing 39.3% of the total sales, quite distant from EMEA, the second largest region, that totaled 26.7% of total revenue. For the past 6 fiscal years, EMEA saw its revenue share increase from 23.3% despite Adidas' and Puma's relevant position in the European market. On the other hand, North America, the most mature market, declined from a 44.4% share, which is natural given its market-leading position in the continent and slower growth versus other operating regions.

Taking advantage of China's growing environment, mainly due to the increasing popularity of sports events such as basketball and football competitions in this country (ISPO, 2022), along with a rising demand for sportswear, this region in FY2022 encompasses 16.2% of the total sales, rising from 12.4% in FY2017.

Table 1: Evolution of Nike Revenue Share by Operational Segment (Nike)

	2017	2018	2019	2020	2021	2022
North America	44.4%	40.8%	40.6%	38.7%	38.6%	39.3%
EMEA	23.3%	25.4%	25.1%	25.0%	25.7%	26.7%
Greater China	12.4%	14.1%	15.9%	17.9%	18.6%	16.2%
APLA	13.8%	14.2%	13.4%	13.4%	12.0%	12.7%
Total Nike Brand	93.8%	94.6%	95.0%	95.0%	94.9%	94.9%
Converse	6.0%	5.2%	4.9%	4.9%	5.0%	5.0%
Global Brand Divisions	0.2%	0.2%	0.1%	0.1%	0.1%	0.2%
Corporate	0.2%	0.1%	0.0%	0.0%	0.1%	-0.2%
Total Revenue	100%	100%	100%	100%	100%	100%

Historical revenues show that North America is Nike's most mature market, with sales in FY2022 of $18,353 million and a CAGR of 3.8% between FY2017 and FY2022, distant from EMEA, the second largest region, that totaled $12,479 million in FY2022. EMEA is also the second fastest growing region, with a CAGR of 9.4% since 2017, only surpassed by Greater China (12.2%) during the same period. Despite declining almost 9% in the last year due to supply-chain shortages and pandemic lockdowns, Greater China still covered $7,547 million in sales. APLA was the region that grew the most in the last fiscal year, reporting a 11.5% growth, despite the less impressive CAGR over the last 6 fiscal periods of 4.7%.

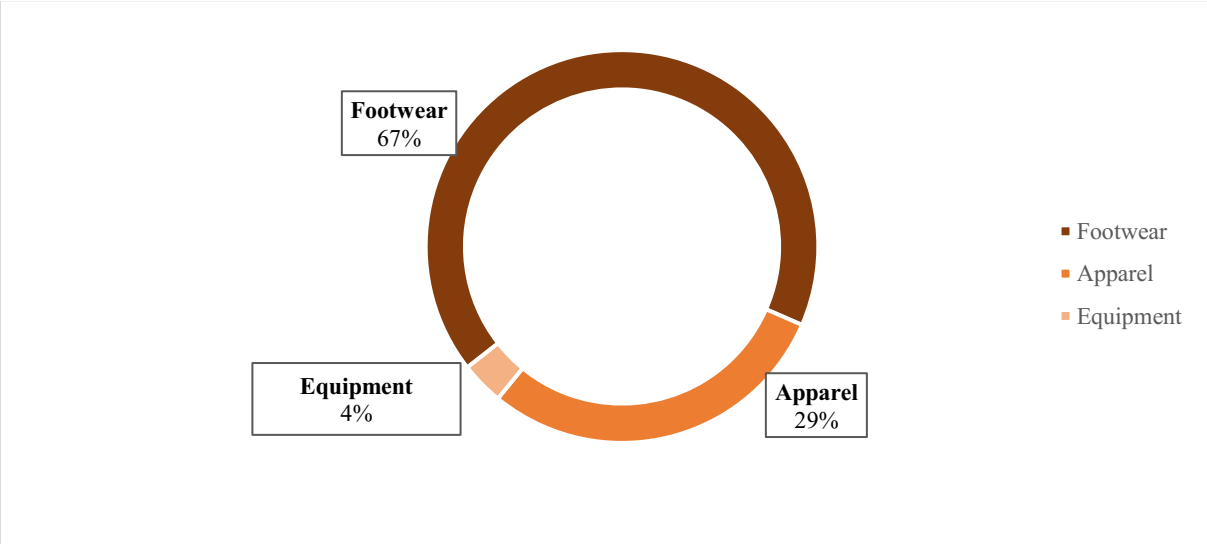
Since FY2017, the Converse brand has remained almost stable relative to the Nike Brand segment (2.8% CAGR). Even though its revenue grew 27.1% since the end of FY2020, the brand only accounts for 5.0% of Nike's total revenue.

Table 2: Nike's Revenue (Nike)

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	(2017-22) CAGR
North America	**15,216**	**14,855**	**15,902**	**14,484**	**17,179**	**18,353**	**3.82%**
YoY Growth (%)		(2.37%)	7.05%	(8.92%)	18.61%	6.83%	
EMEA	**7,970**	**9,242**	**9,812**	**9,347**	**11,456**	**12,479**	**9.38%**
YoY Growth (%)		15.96%	6.17%	(4.74%)	22.56%	8.93%	
Greater China	**4,237**	**5,134**	**6,208**	**6,679**	**8,290**	**7,547**	**12.24%**
YoY Growth (%)		21.17%	20.92%	7.59%	24.12%	(8.96%)	
APLA	**4,737**	**5,166**	**5,254**	**5,028**	**5,343**	**5,955**	**4.68%**
YoY Growth (%)		9.06%	1.70%	(4.30%)	6.26%	11.45%	
Total Nike Brand	**32,160**	**34,397**	**37,176**	**35,538**	**42,268**	**44,334**	**6.63%**
YoY Growth (%)		6.96%	8.08%	(4.41%)	18.94%	4.89%	
Converse	**2,042**	**1,886**	**1,906**	**1,846**	**2,205**	**2,346**	**2.81%**
YoY Growth (%)		(7.64%)	1.06%	(3.15%)	19.45%	6.39%	
Global Brand Divisions	**73**	**88**	**42**	**30**	**25**	**102**	**6.92%**
YoY Growth (%)		20.55%	(52.27%)	(28.57%)	(16.67%)	308.00%	
Total Nike Inc Revenue	**34,350**	**36,397**	**39,117**	**37,403**	**44,538**	**46,710**	**6.34%**
YoY Growth (%)		5.96%	7.47%	(4.38%)	19.08%	4.88%	

Regarding product type, Nike separates its revenues by footwear, apparel, equipment and other. Footwear is the main driver of Nike's turnover, encompassing $31,237 million in FY2022. The main source of revenue growth increased 4.1% since last year from $30,007 million. Apparel is the second biggest driver of revenue, accounting for 29% of total sales in FY2022 ($13,670 million), increasing 5.4% from last fiscal year. Finally, equipment and others accounted for 4% of the total volume of sales, after equipment sales jumped 17% from FY2021.

Figure 9: Revenue by Product Type in FY2022 (Nike)



In terms of relative importance, Footwear, Nike's flagship segment, has historically been the main driver of the company's revenues, consistently encompassing over 65% of total sales, while Apparel accounts for around 30% of revenues since FY2017 and the Equipment segment has been decreasing in importance.

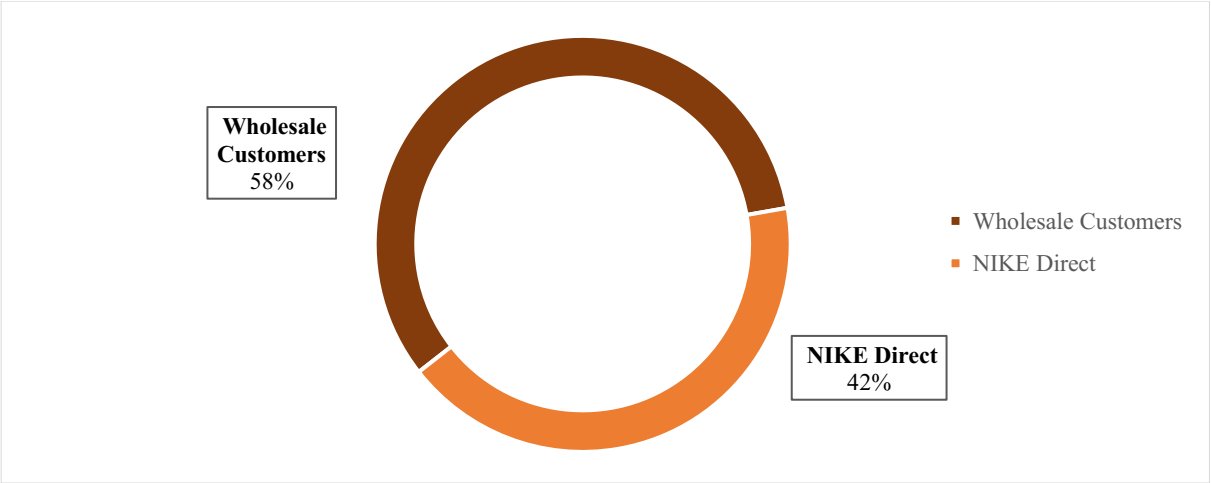
Table 3: Change in Revenue Share per Product Type (Nike)

	2017	2018	2019	2020	2021	2022
Footwear	65%	66%	66%	66%	67%	67%
Apparel	30%	30%	30%	30%	29%	29%
Equipment	5%	4%	4%	4%	4%	4%

Regarding sales by distribution channel, Wholesale Customers comprised most of Nike's sales with $26,900 million sold through this channel. Nike remains following its strategy of strengthening its position with wholesale partners that share its marketplace vision, such as JD Sports and Foot Locker while aiming to accelerate its direct-to-consumer strategy. NIKE Direct

includes own retail stores and digital platforms. This distribution channel grew 14% in FY2022 to encompass $19,657 million in revenue (42%), with the driver being an 18% increase in NIKE Brand Digital, accelerated by significant investments in digital technologies and information systems (Annual Report, 2022). Nike has the target to reach 60% of D2C-related sales by 2025.

Figure 10: Revenue by Distribution Channel in FY2022 (Nike)



The figure below shows Nike's evolution from a traditional marketing-focused retailer into a D2C giant by cutting ties with long-time retailers including DSW, Urban Outfitters and Olympia Sports and focus most of its efforts on D2C, while creating a digital marketplace that offered a high level of brand experience.

Table 4: Change in Revenue Share per Distribution Channel (Nike)

	2017	2018	2019	2020	2021	2022
Wholesale	72%	70%	68%	65%	61%	58%
NIKE Direct	28%	30%	32%	35%	39%	42%

5.2. Product Manufacturing

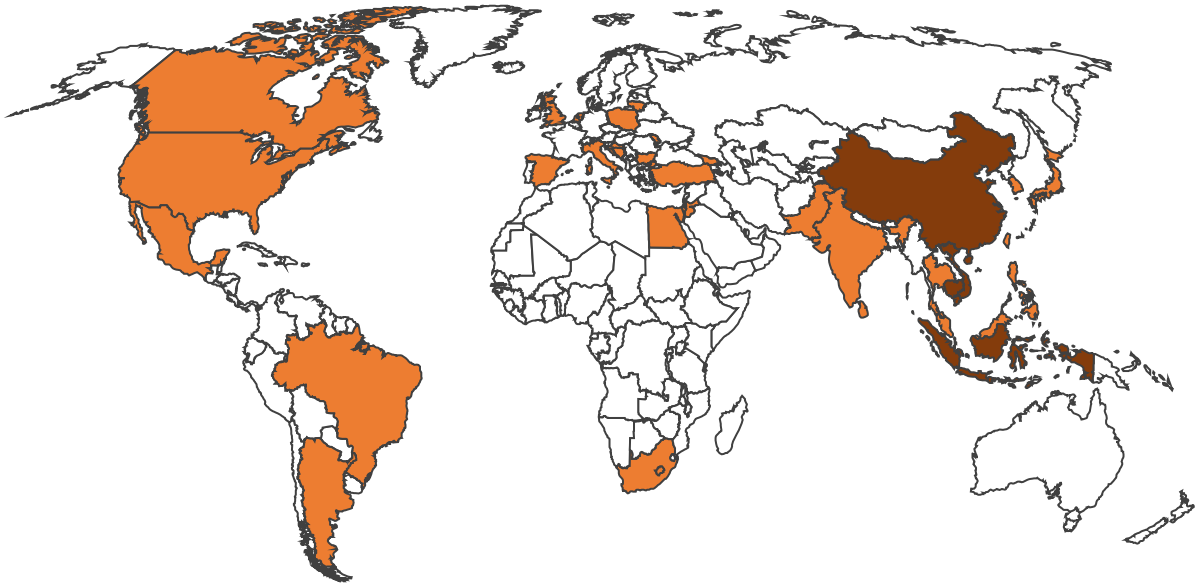
With the focus on minimizing costs, virtually all footwear and apparel products are manufactured outside the United States by self-governing producers. As of FY2022, Nike received its finished goods from 120 contract shoe factories spread throughout 11 nations.

Approximately 44%, 30%, and 20% of all footwear sold under the NIKE Brand were produced in contract factories in Vietnam, Indonesia, and China, respectively (Annual Report, 2022).

As of FY2022, 279 finished goods apparel contract factories spread over 33 nations supply clothing products. Contract factories in Vietnam, China, and Cambodia produced over 26%, 20%, and 16%, respectively, of the total NIKE Brand apparel (Annual Report, 2022).

However, there remains a large dependence on a strict number of contract factories for both footwear and apparel products, with four producers accounting for 58% of the total production of footwear and five apparel producers encompassing 54% of total clothing manufacturing when combined (Annual Report, 2022).

Figure 11: Nike's Manufacturing Map (Nike)



5.3. Shareholder Structure

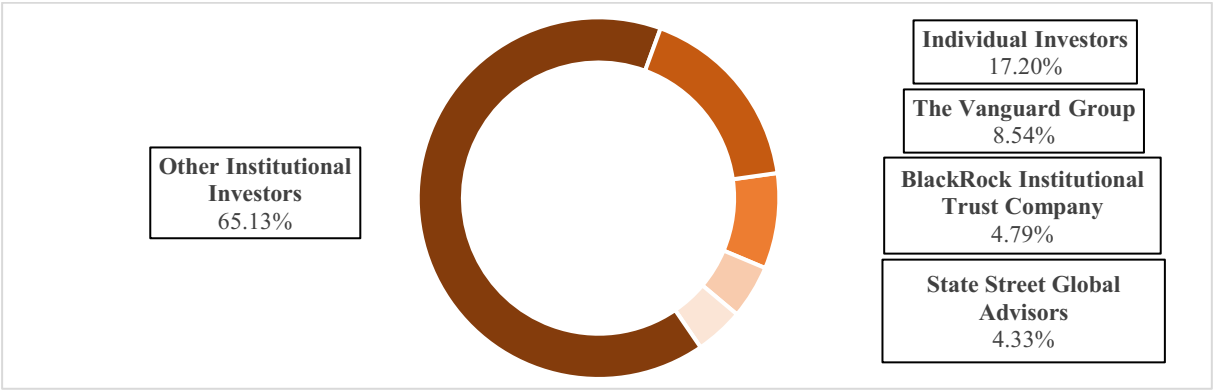
As of FY2022, Nike had a weighted average of 1,578.8 million basic shares outstanding (1,610.8 diluted). For the 1Q FY2023, the number decreased to 1,565m (1,587m diluted).

There are two different classes of Nike stock: Class A, which consists of 305 million shares, not publicly traded and convertible into Class B shares on a 1:1 basis, and Class B, which includes 1,273 million of standard Nike shares available to all investors.

Phil Knight, the co-founder of Nike, and his son Travis Knight, along with Swoosh LLC (77%) and other holding companies they possess, own more than 97% of outstanding Class A shares.

Nike's Class B stock is 82.80% owned by institutional investors, according to Refinitiv. The largest stakeholder is The Vanguard Group (8.54%), followed by Blackrock (4.79%).

Figure 12: Nike's Shareholder Structure (Refinitiv)

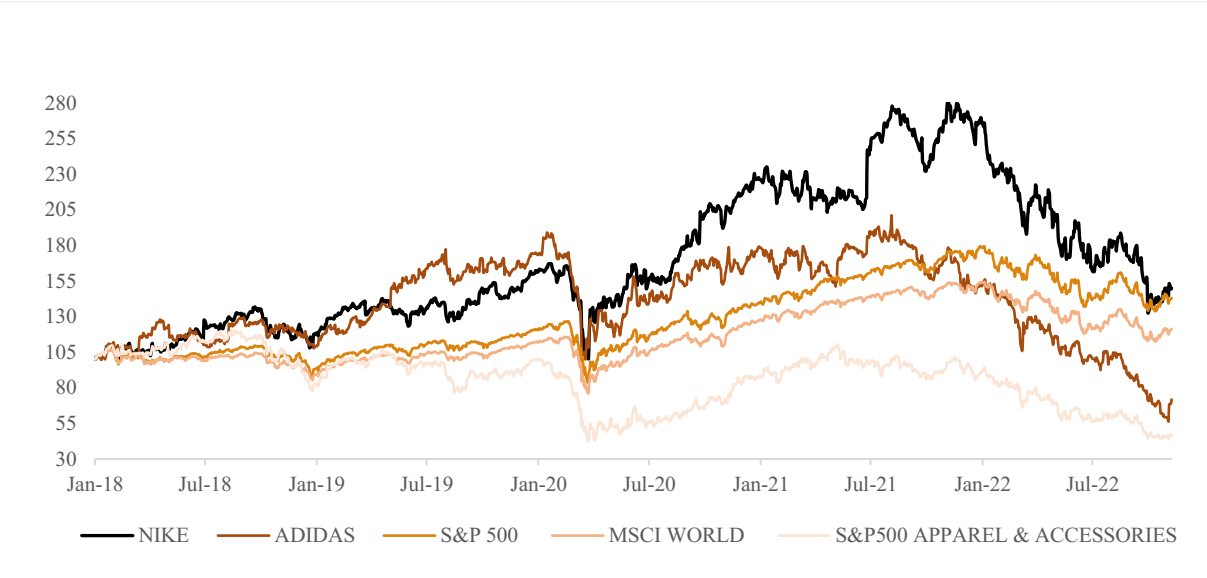


5.4. Share Performance

The following graph demonstrates a five-year comparison of Nike's share performance against its main competitor (Adidas), Standard & Poor's 500 Stock Index, MSCI World Index and the S&P500 Apparel and Accessories Index. Since 01/01/2018, Nike saw its share price increase from the lowest point of $62.49 (08/02/2018) to its all-time high closing price of $177.51 (05/11/2021). Even though the stock price of most of Nike's direct competitors and stock Indexes have plummeted during the peak of Covid-19 pandemic, Nike's stock was the most resilient of this comparison, with its lowest at $62.80 (23/03/2020), 100.4% of the starting point of the analysis.

Throughout the analyzed timespan, Nike managed to outperform its main competitor and comparable indexes for most of the period.

Figure 13: Market Performance Comparison (Own Analysis, Refinitiv)



6. Financial Performance

Table 5: Nike's Income Statement for FY2018-FY2022. Nike's FY is on the 31/05 of each year (Nike)

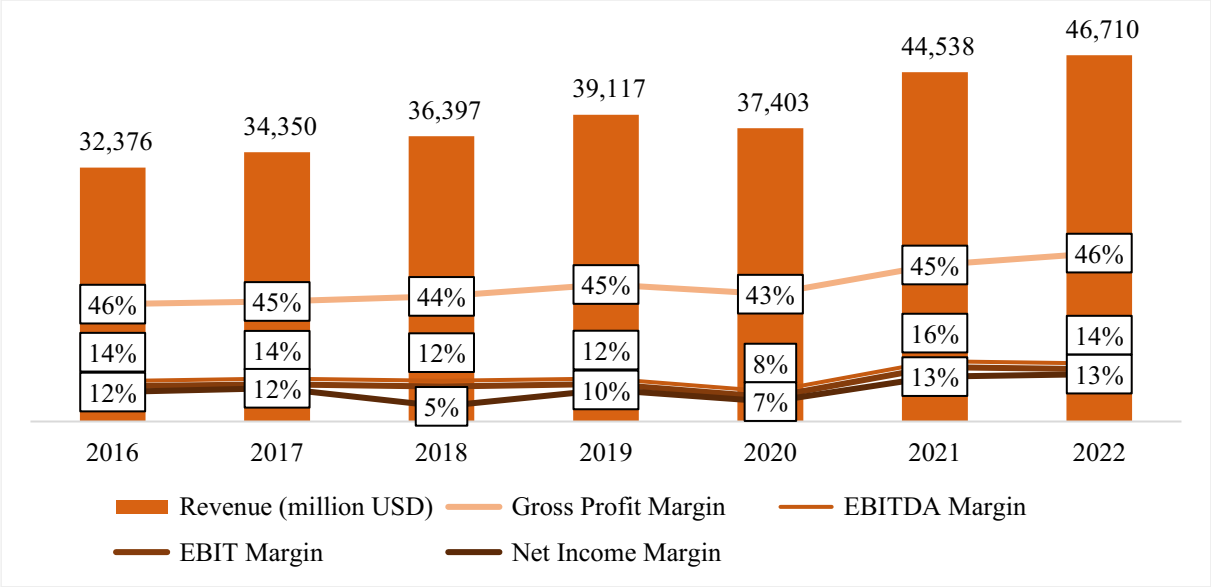
	2018	2019	2020	2021	2022
Revenue	**36,397**	**39,117**	**37,403**	**44,538**	**46,710**
YoY Growth (%)	5.80%	7.5%	(4.4%)	19.1%	4.9%
Cost of Sales	20,441	21,643	21,162	24,576	25,231
Gross Profit	**15,956**	**17,474**	**16,241**	**19,962**	**21,479**
Gross Profit Margin	43.8%	44.7%	43.4%	44.8%	46.0%
Demand creation expense	3,577	3,753	3,592	3,114	3,850
Operating overhead expense	7,934	8,948	9,534	9,911	10,954
Total S&A expenses	11,511	12,701	13,126	13,025	14,804
EBITDA	5,193	5,480	3,836	7,689	7,400
EBIT	4,445	4,773	3,115	6,937	6,675
Interest net	54	49	89	262	205
Other (income) expense	66	(78)	139	14	(181)
Earnings Before Tax	**4,325**	**4,802**	**2,887**	**6,661**	**6,651**
Taxes	2,392	772	348	934	605
Net Income	**1,933**	**4,030**	**2,539**	**5,727**	**6,046**

In FY2022, Nike's currency adjusted revenues reached $46,710 million, a 4.9% growth over FY2021, driven by higher revenues in EMEA, North America and APLA, and moderately counterbalanced by declines in Greater China (Annual Report, 2022).

EBITDA and EBIT slightly decreased due to greater selling and administrative costs offsetting stronger gross margin expansion (120 bps) and revenue growth. Margin improvement was due to the growth in NIKE Direct segment, favorable changes in foreign exchange rates and a bigger proportion of full-price sales (Annual Report, 2022).

Over the past seven fiscal years gross margins have been comparatively consistent (mid-40s), principally as a result of robust revenue growth that offset increased product prices on a wholesale equivalent basis, which were primarily brought on by high freight and logistics expenses. Nevertheless, EBIT, EBITDA and Net Income margins recovered to 2016/2017 levels, with Net Income reaching an all-time high of $6,046 million (Annual Report, 2022).

Figure 14: Income Statement Margins for FY2016-FY2022 (Nike)



6.1. Operational

Closings of retail marketplaces brought on by COVID-19 and ongoing investments in digital marketing to meet rising digital demand led to a 24% increase in demand creation costs for FY2022. (Annual Report, 2022). However, this figure is relatively smaller in revenue terms compared to past years (8.2% vs. 9.6%) and is expected to increase soon as Nike carries forward its Nike Direct approach.

The rise in operating overhead expense in FY2022 was largely driven by higher strategic technology investments, as well as NIKE Direct variable costs and wage-related costs as Nike

continues its organizational reconfiguration, focusing on the era of digital empowerment of its Consumer Direct strategy (Annual Report, 2022).

Nike includes D&A expenses within these lines of the Income Statement, depending on the asset's operational function.

Table 6: Nike's Cost Structure for FY2018-FY2022 (Nike)

	FY2018	FY2019	FY2020	FY2021	FY2022
Cost of Goods Sold	20,441	21,643	21,162	24,576	25,231
% of Revenue	56.2%	55.3%	56.6%	55.2%	54.0%
Demand Creation Expense	3,577	3,753	3,592	3,114	3,850
% of Revenue	9.8%	9.6%	9.6%	7.0%	8.2%
Operating overhead expense	7,934	8,948	9,534	9,911	10,954
% of Revenue	21.8%	22.9%	25.5%	22.3%	23.5%

Nike's net accounts receivable and inventory increased in FY2022, with the latter mostly resulting from supply chain issues that led to greater levels of in-transit inventory and, consequently, a reduced supply of readily available inventory to meet consumer demand (Annual Report, 2022). In FY2022, inventory levels increased 23%, while in the Q1 FY2023, inventory rose 44% ($9.7 billion) YoY, with North America facing the worst position. Nike's CFO claims the company will mark down more products (mainly apparel), expecting to normalize inventory levels in the H2 FY2023.

Nevertheless, DSO and DIO ratios remain in line with the industry, whereas Nike's DPO are relatively low, particularly when compared to its European and Asian peers.

Table 7: Nike's Operational Ratios for FY2018-FY2022 (Own Analysis & Refinitiv)

	FY2018	FY2019	FY2020	FY2021	FY2022	Peer Average (2022)
DSO: A/R (Days)	35	36	34	30	36	36.3
DPO: A/P (Days)	41	41	42	38	45	64.8
DIO: Inventory (Days)	94	92	112	106	110	118
Inventory Turnover	3.9	4.0	3.3	3.5	3.3	3.4

6.2. Liquidity

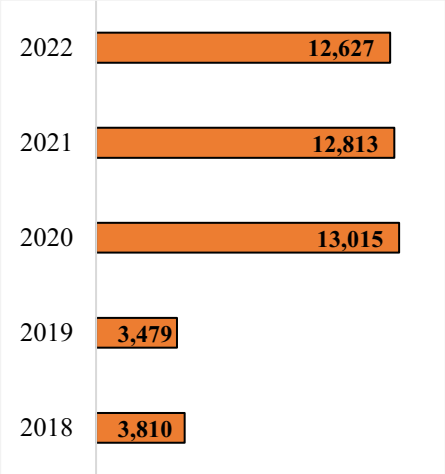
Comparing to the industry peers, Nike's main liquidity indicators surpass the average, which reflects the company's current assets' ability to pay off short-term obligations without raising external capital.

Table 8: Nike's Liquidity Ratios for FY2018-FY2022 (Own Analysis & Refinitiv)

	FY2018	FY2019	FY2020	FY2021	FY2022	Peer Average (2022)
Quick Ratio	164%	139%	159%	201%	184%	162%
Current Ratio	251%	210%	248%	272%	263%	227%
Cash Ratio	87%	59%	106%	139%	121%	100%

6.3. Solvency

Figure 15: Nike's Total Debt BV (Nike)



In FY2020, to offset inventory spiking, profit decrease and store closures due to the Covid-19 pandemic, Nike raced into the debt market and issued $6,000 million worth of US denominated bonds, which caused total debt and LT debt ratios proportion of capital to increase. As of FY2022, Nike holds $12,627 million of total debt, which in proportion to equity and total capital, slightly surpasses its peer's average. However, Nike's net debt of negative $370 million and strong ICR indicate a healthy balance sheet.

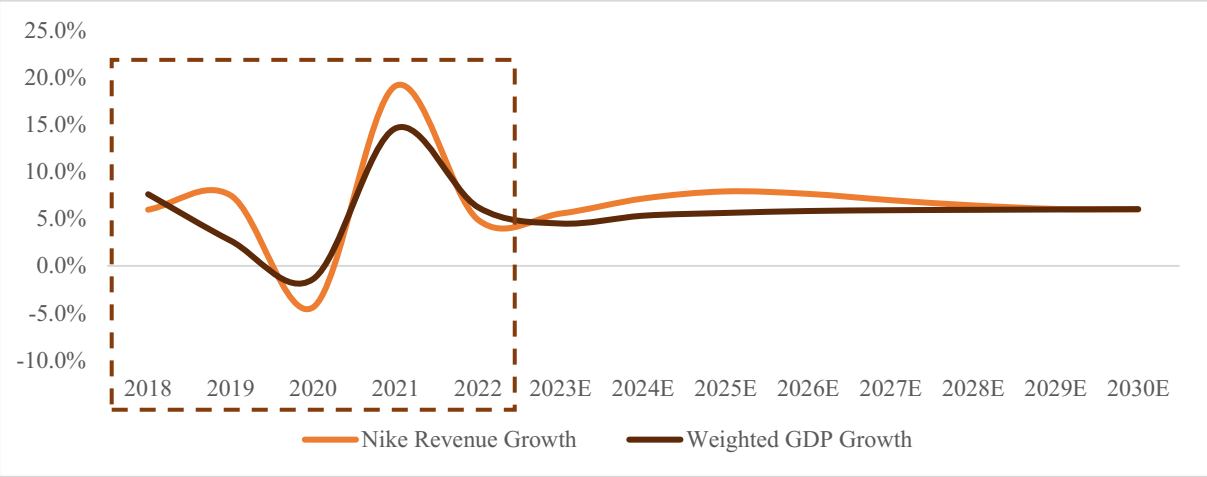
Table 9: Nike's Solvency Ratios for FY2018-FY2022 (Nike)

	FY2018	FY2019	FY2020	FY2021	FY2022	Peer Average (2022)
Total Debt to Equity	39%	38%	162%	100%	83%	55%
LT Debt to Capital	15%	15%	30%	25%	23%	22%
Total Debt to Capital	17%	15%	42%	34%	31%	29%
Interest Coverage Ratio	44.4	44.2	26.6	26.6	25.3	27.8
Net Debt to Capital	(6%)	(5%)	13%	(2%)	(1%)	(10%)

7. Financial Statements Forecast

7.1. Revenue

Figure 16: Revenue and Weighted GDP Forecast (OECD & Own Analysis)



In the last five years, Nike's revenue almost mirrored the Nominal GDP growth (weighted by Nike's geographical areas). As the figure above shows, there was an extreme degree of positive correlation between the two variables (92.2%), with the highest correlated being North America (85.5%) and EMEA (96.0%). Given the degree of this relationship, and the propensity for apparel and footwear purchases with an increase in consumer spending, the nominal GDP was considered as an adequate indicator to forecast Nike's revenue (Appendix V).

Table 10: Revenue Growth Forecast per Operational Segment (Own Analysis)

	FY2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
North America	18,353	19,350	20,385	21,376	22,350	23,322	24,304	25,272	26,240
YoY Growth %	6.83%	5.43%	5.35%	4.86%	4.56%	4.35%	4.21%	3.98%	3.83%
EMEA	12,479	13,650	14,817	15,986	17,137	18,299	19,415	20,537	21,681
YoY Growth %	8.93%	9.38%	8.55%	7.89%	7.20%	6.78%	6.09%	5.78%	5.57%
Greater China	7,547	7,547	8,471	10,018	11,718	13,255	14,654	15,975	17,384
YoY Growth %	(8.96%)	0.00%	12.24%	18.27%	16.97%	13.11%	10.56%	9.01%	8.82%
APLA	5,955	6,234	6,532	6,892	7,304	7,767	8,327	8,966	9,689
YoY Growth %	11.45%	4.68%	4.79%	5.50%	5.98%	6.35%	7.20%	7.68%	8.06%
Converse	2,346	2,414	2,502	2,598	2,702	2,832	2,975	3,132	3,307
YoY Growth %	6.39%	2.91%	3.64%	3.83%	4.02%	4.81%	5.03%	5.28%	5.60%
Global Brand	102	109	117	125	133	141	150	159	168
YoY Growth %	308.00%	6.92%	6.92%	6.92%	6.62%	6.20%	6.12%	5.88%	5.60%
Total Revenue	**46,710**	**49,303**	**52,823**	**56,994**	**61,345**	**65,618**	**69,825**	**74,040**	**78,468**
YoY Growth %	4.88%	5.55%	7.14%	7.90%	7.63%	6.96%	6.41%	6.04%	5.98%

Since Nike's revenue slightly outpaced the evolution of nominal GDP, it was considered that the company would continue to grow at its own pace of the last 6 fiscal years, as Nike will aim to capture a higher market share in the Greater China Market and EMEA, experiencing naturally a higher growth in these regions, while sustaining its position in North America and recover in the underperforming APLA region.

For the four geographical regions and the 2 global segments, it was assumed that the revenue growth for FY2023 would be the CAGR of 2017-2022, except for a company's forecast of stagnation in Greater China due to a 13% QoQ decrease in revenue for Q1 FY2023, with the government only planning to lift its zero-Covid policy in the H2 FY2023.

In this forecast, revenue growth is expected to reach its peak in FY2025, majorly impacted by the Chinese market recovery, the biggest growth opportunity for the company, accelerated by Nike's digitally integrated customer-experience and technological edge over competition, growth in e-commerce and athleisure trend.

Further reasoning behind each operational segment's revenue forecasts can be consulted in Appendix VII.

Until FY2030, while Nike is undergoing its shift to the consumer direct approach, the assumption is that Nike's growth will gradually converge with the evolution of nominal GDP for each area, with Converse and Global Brand converging to the global GDP forecast given the segments' international coverage. Thus, this dissertation is forecasting revenue evolution to converge with the overall economy growth, given Nike's global coverage, maturity and immense market-share, while younger/high-growth firms will naturally experience an advanced growth pace.

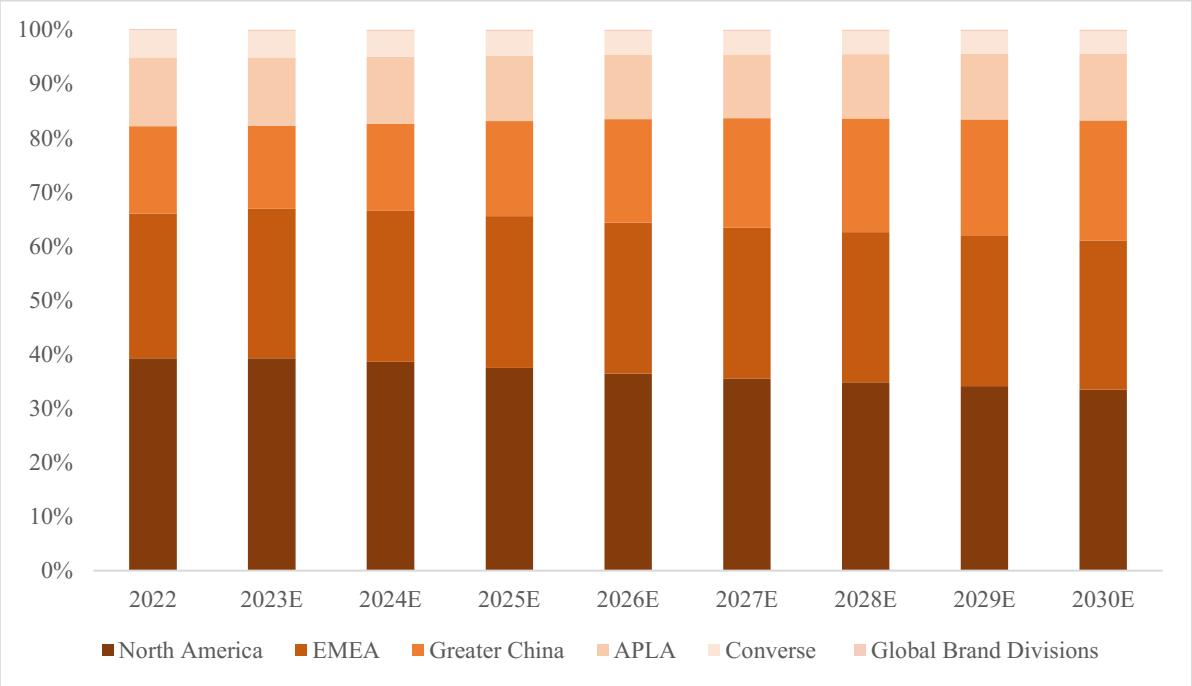
Appendix V shows a detailed revenue forecast as a factor of nominal GDP for each operational area.

Table 11: Revenue Forecast Conversion to Nominal GDP (Own Analysis)

	North America	EMEA	Greater China	APLA	Converse	Global Brand
CAGR 2017-2022	5.43% (2018-2022)	9.38%	18.27% (2017-2021)	4.68%	2.81%	6.92%
GDP Growth 2030	3.83%	5.57%	8.82%	8.06%	5.60% (World)	5.60% (World)

At the end of this forecast, it is expected that Greater China will capture the biggest growth in market share (16.2% to 22.2%), while North America will decline the most (39.3% to 33.4%), given the growth forecasts disparity between the two regions.

Figure 17: Revenue Share per Operational Segment Forecast (Own Analysis)



7.2. Operational Costs

Table 12: Cost Structure Forecast (Nike & Own Analysis)

	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
COGS (% Revenue)	54.0%	**56.0%**	**54.0%**	**54.0%**	**53.0%**	**53.0%**	**52.0%**	**51.0%**	**51.0%**
Demand Creation Expense (% Revenue)	8.2%	**9.0%**	**9.0%**	**8.0%**	**7.5%**	**7.5%**	**7.0%**	**7.0%**	**7.0%**
Operating Overhead Expense (% Revenue)	23.5%	**22.5%**	**22.5%**	**22.0%**	**22.0%**	**22.0%**	**22.0%**	**21.0%**	**21.0%**

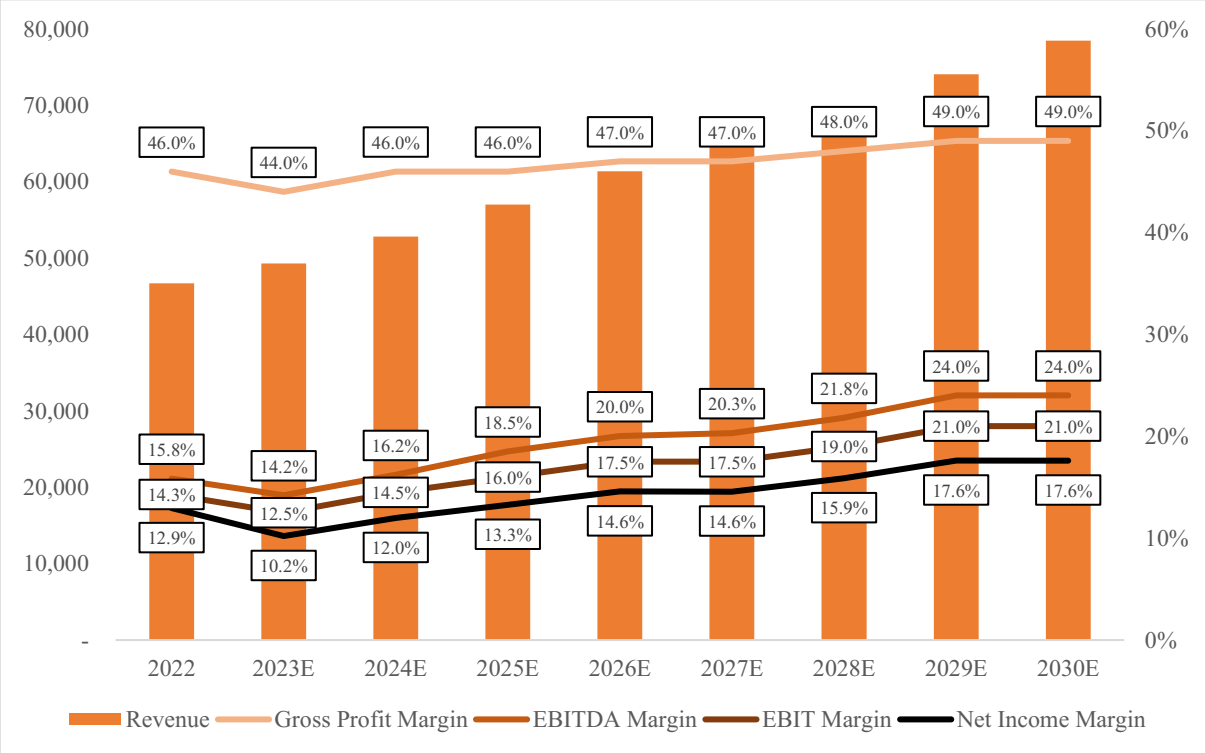
For the first years of the forecast, Nike is expected to incur in higher COGS, increased by higher product costs (including select supply chain investments) and a management cited 100bps headwind from higher expense in ocean freight causing a total 200bps increase in COGS in

FY2023. Management also cited that Nike is targeting a high 40s GPM for the upcoming years, which would be a direct consequence of the focus on D2C, as this strategy allows a reduction in third-party royalties and warehousing costs, and a superior inventory management as it relies less on retail partners coordination. Furthermore, a D2C-enhanced strategy also allows Nike to closer interface with consumers about buying trends, regional preferences, and product positioning, which naturally benefits inventory costs and, consequently, reduces the cost of sales.

Demand Creation was forecasted to remain high while Nike aims to counter a possible fall in demand due to macroeconomic conditions, with increased sports marketing campaigns and continued digital marketing investments to support heightened digital demand and to gradually decrease over time as the new strategy solidifies.

Operating overhead expenses are expected to remain equal to previous years (as a percentage of revenue) in the initial phase due to transition/Nike Direct variable costs and higher than usual R&D costs as the company refocuses its distribution strategy. For the future, it was forecasted a slight decrease to pre-pandemic levels, with wages and administrative expenses being the main costs, after a slowdown in non-recurring expenses.

Figure 18: Income Statement Margins Forecast (Own Analysis)



7.3. NWC

NWC was forecasted based on estimated revenue and cost of sales, by using the DSO, DIO and DPO methods and deferred tax as a percentage of revenue. DIO was forecasted to remain high in the beginning of the forecast, as Nike's inventory pile increased in the last year and in Q1 FY2023, and to start reversing to pre-pandemic levels throughout the explicit period.

DPO is expected to remain unchanged, while DSO was forecasted to slightly decrease due to Nike's focus on D2C, causing less dependency on retail third parties.

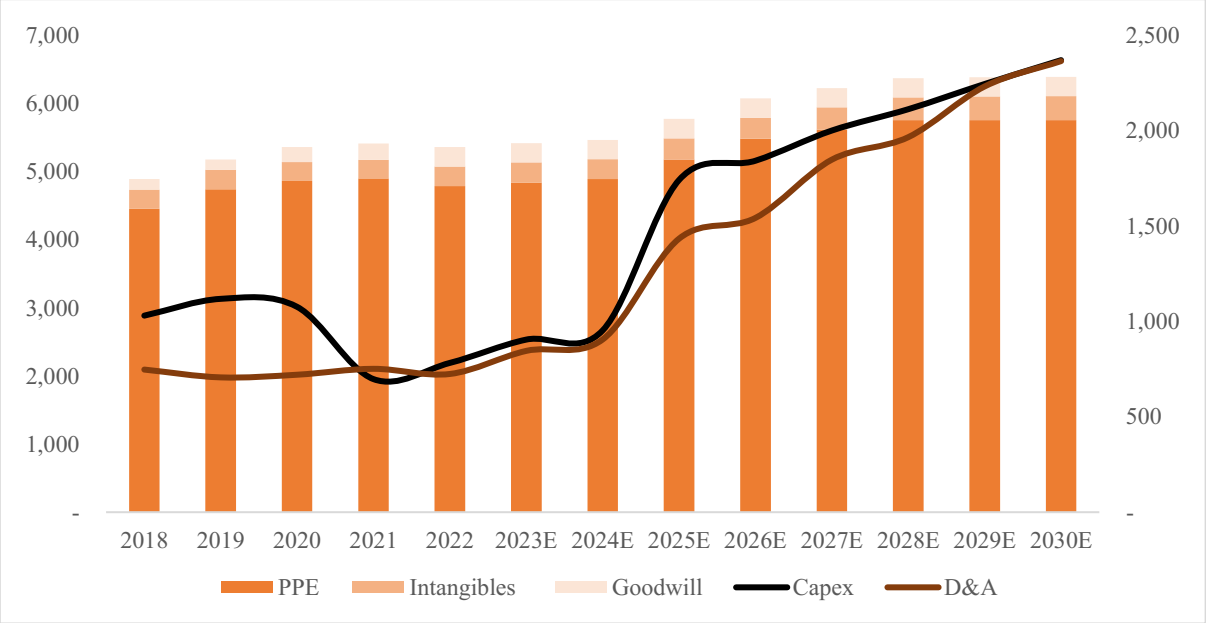
Income tax payable, Deferred Tax Liabilities and Deferred Tax Assets were assumed to be previous years' constant percentage of revenue/EBT (Appendix IV).

Table 13: NWC Forecast (Own Analysis)

	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
DSO	36	36	36	36	35	35	34	34	34
DIO	110	115	115	110	108	104	102	100	96
DPO	45	45	45	45	45	45	45	45	45
Def. Tax Assets (% Revenue)	5.5%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Income Tax Payable (% EBT)	3.3%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Def. Tax Liabilities (% Revenue)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Accounts Receivable	4,667	5,059	5,361	5,881	5,884	6,701	6,308	7,486	7,133
Inventory	8,420	8,978	8,996	9,554	9,687	10,132	10,162	10,529	10,522
Deferred Tax assets	2,587	2,465	2,641	2,850	3,067	3,281	3,491	3,702	3,923
Accounts Payable	(3,358)	(3,450)	(3,584)	(4,005)	(4,012)	(4,564)	(4,389)	(4,921)	(4,946)
Income Tax payable	(222)	(234)	(294)	(352)	(416)	(445)	(516)	(607)	(643)
Deferred Tax Liabilities	(922)	(986)	(1,056)	(1,140)	(1,227)	(1,312)	(1,396)	(1,481)	(1,569)
Net Working Capital (NWC)	**11,172**	**11,832**	**12,065**	**12,788**	**12,983**	**13,793**	**13,659**	**14,708**	**14,419**
Change in NWC	**-**	**660**	**233**	**723**	**195**	**810**	**(134)**	**1,049**	**(289)**

7.4. CAPEX and D&A

Figure 19: CAPEX and D&A Projections (Nike & Own Analysis)



Nike continued to invest in infrastructure to sustain future growth during FY2022, with a particular emphasis on digital features and an end-to-end technological foundation (Annual Report, 2022). On an operational level, corporate facilities and improvements across the supply chain to overcome increasing freight costs and to accelerate the D2C strategy are the main investment priorities. Moreover, in future periods, Nike's management expects spending around 3% of annual revenues in capital expenditures each year.

After the start of the Covid-19 pandemic, the PPE CAPEX decreased due to a cautious approach by Nike regarding their investment strategy given the surrounding uncertainty panorama. However, given the current inflation and the possibility of a recession, this projection shows that CAPEX will remain near previous years' and that the investment in the Consumer Direct Offense will be in maximum force in FY2025, with Nike investing heavily in technology for its digital and innovation platforms. These expenditures should have a significant impact on NIKE's performance, and management's 3% target is ought to be accomplished.

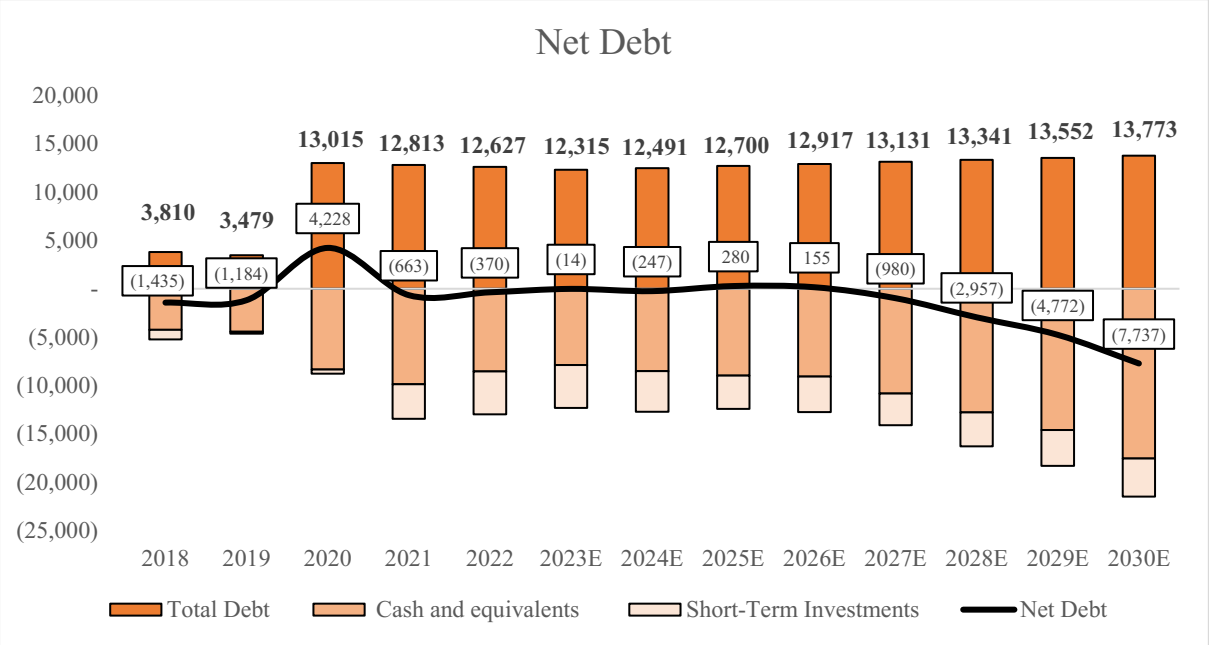
D&A was also forecasted as a function of sales and is projected to converge to CAPEX.

Total PPE and Intangibles are expected to grow 20% and 23% during the explicit period, respectively. Their schedule is represented in Appendix XVI.

All information and assumptions used regarding CAPEX, D&A and Goodwill can be consulted in Appendix XVI.

7.5. Debt and Interest Expense

Figure 20: Net Debt Projections (Own Analysis)



With the arrival of the Covid-19 pandemic, Nike issued $6,000 million worth of bonds, reaching a total $13,015 million of total debt in FY2020, distorting its historical debt to capital ratio. However, as of the end of FY2022, Nike's long-term debt was rated AA-/A1 by S&P and Moody's, signaling the company's healthy credit situation and lack of difficulty accessing the credit market.

With no further information from the management team and considering the firm's healthy credit market situation, it was assumed that Nike's long-term debt would remain constant through a continuous replacement of maturing bonds with new bonds with the same YTM. Moreover, the lease liabilities were projected as a function of Nike's revenue performance and should grow according to the company's needs. Thus, these were projected in function of revenue.

Information regarding the debt schedule can be found in Appendix XVII. Net debt projected keeps Nike's tendency to be close to zero or negative due to the company's high cash and equivalents and short-term investments (Appendix XVII).

Bond's interest expense was projected in function of the disclosed coupon rates of Nike's LT Debt for future periods and flexed with the effect of renewed bonds, with the respective coupon

rate assumed to be equal OECD's forecast for US corporations long-term interest rate for 2023 and 2024. Interest rates were forecasted to be constant at 2024 levels throughout the explicit period (Appendix XVII).

For the remaining debt instruments, since interest rates are not disclosed, they were forecasted as the average of OECD's short-term and long-term projections for US corporations for 2023 and 2024. As prior, for simplicity reasons, future interest rates were assumed to remain at 2024 levels.

Table 14: Interest Expense Forecast (Own Analysis, OECD)

	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
LT Debt (% Average Total Debt)	95.3%	95.3%	78.1%	72.9%	74.0%	75.5%	75.9%	74.8%	73.5%	72.3%	71.2%	70.1%	68.9%
Remaining Debt (% Average Total Debt)	4.7%	4.7%	21.9%	27.1%	26.0%	24.5%	24.1%	25.2%	26.5%	27.7%	28.8%	29.9%	31.1%
Interest Expense	**117**	**124**	**144**	**289**	**292**	**443**	**431**	**462**	**471**	**521**	**530**	**540**	**575**
Interest Rate (% Average Total Debt)	3.21%	3.40%	1.75%	2.24%	2.30%	3.55%	3.47%	3.66%	3.68%	4.00%	4.01%	4.01%	4.21%
Interest Rate of LT Debt	3.11%	3.11%	3.01%	3.01%	3.01%	3.16%	3.13%	3.36%	3.36%	3.79%	3.79%	3.79%	4.06%
Interest Rate of Remaining Debt	5.21%	9.00%	-	0.49%	0.33%	4.94%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%
Interest Expense of LT Debt	112	118	112	211	216	294	297	319	319	359	359	359	385
Interest Expense of Remaining Debt	5	6	32	78	76	149	133	142	152	161	171	180	190
Net Interest	**54**	**49**	**89**	**262**	**205**	311	302	324	331	366	372	379	404
Net interest (% of expense)	46.2%	39.5%	61.8%	90.7%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%	70.2%

7.6. Shareholder's Equity

Nike's management approved a new four-year, $18 billion share repurchase program for the company's Class B common stock in June 2022, which will replace the previous $15 billion share repurchase program. Thus, share repurchases in terms of revenue are forecasted to remain analogous to previous years, except for FY2021, which saw the company cut back on repurchases due to a lower net income post-pandemic. After the buyback program finishes, share repurchases are expected to slow down.

Dividend payout ratio is projected to revert to 2018 levels, after suffering a decline post-pandemic for the same reasons.

Equity Capital was forecasted to increase by the average of the last five periods absolute change, since its variation relies on stock-based compensation and stock exercised, both assumed to remain constant for simplicity reasons.

Furthermore, the evolution of the number of shares outstanding was calculated as the average variation of the previous periods (except FY2021), given that during the latest fiscal years Nike undergone a similar share buyback program as the one that started in 06/2022. Information about the effects of these actions is reflected on the retained earnings schedule (Appendix XVII).

Table 15: Shareholder's Equity Items Forecast (Own Analysis)

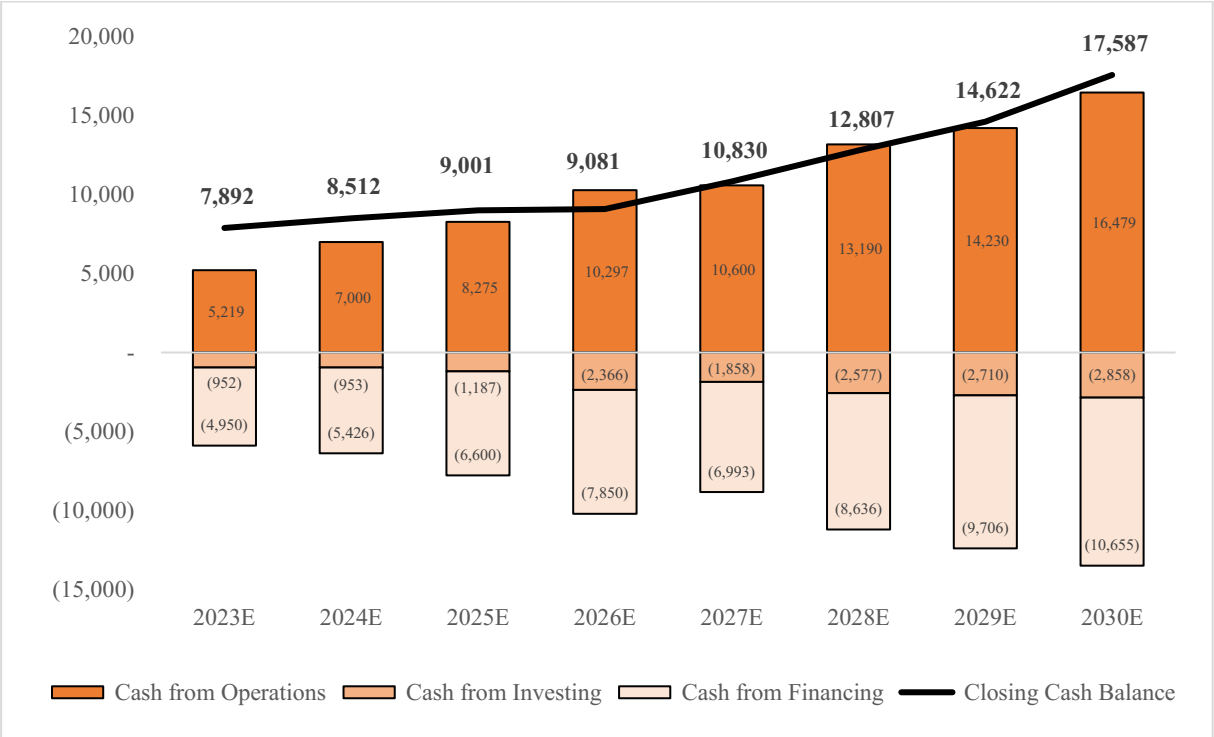
	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Share Repurchases	**4,254**	**4,286**	**3,067**	**608**	**4,014**	3,944	4,226	4,559	4,748	2,625	2,793	2,591	2,354
% Revenue	11.7%	11.0%	8.2%	1.4%	8.6%	8.0%	8.0%	8.0%	7.7%	4.0%	4.0%	3.5%	3.0%
Dividends	**1,243**	**1,332**	**1,452**	**1,638**	**1,837**	1,530	2,531	3,404	4,474	5,737	7,208	8,480	9,677
Payout Ratio	64.3%	33.1%	57.2%	28.6%	30.4%	30.40%	40.00%	45.00%	50.00%	60.00%	65.00%	65.00%	70.00%
Equity Capital	**6,387**	**7,166**	**8,302**	**9,968**	**11,487**	12,641	13,796	14,950	16,105	17,259	18,413	19,568	20,722
YoY Growth (Stock Exercised plus Stock Based Compensation)	672	779	1136	1666	1519	1154	1154	1154	1154	1154	1154	1154	1154
Shares Outstanding	**1,659**	**1,618**	**1,592**	**1,609**	**1,611**	1,587	1,563	1,540	1,517	1,506	1,496	1,487	1,479
% Change	(1.94%)	(2.45%)	(1.66%)	1.12%	0.09%	(1.49%)	(1.49%)	(1.49%)	(1.49%)	(0.70%)	(0.70%)	(0.60%)	(0.50%)

7.7. Cash-Flow Forecast

The closing cash balance for each period was obtained through the indirect method, starting with the latest cash balance, in addition to the fiscal year's net income and listing the effect of operational, investing and financing cash-flows.

The effect of the share buyback program causes closing cash balances to remain near FY2022's ($8,574 million) for the following 4 periods. After 2026E, closing cash balances start rising above the FY2018-FY2022 period, with the main driver being a higher cash-flow descendant from operations (caused by a sustained increase in net income) and a reduction in share repurchases (Appendix XVII).

Figure 21: Cash-Flow Sources Forecast (Own Analysis)



8. Valuation

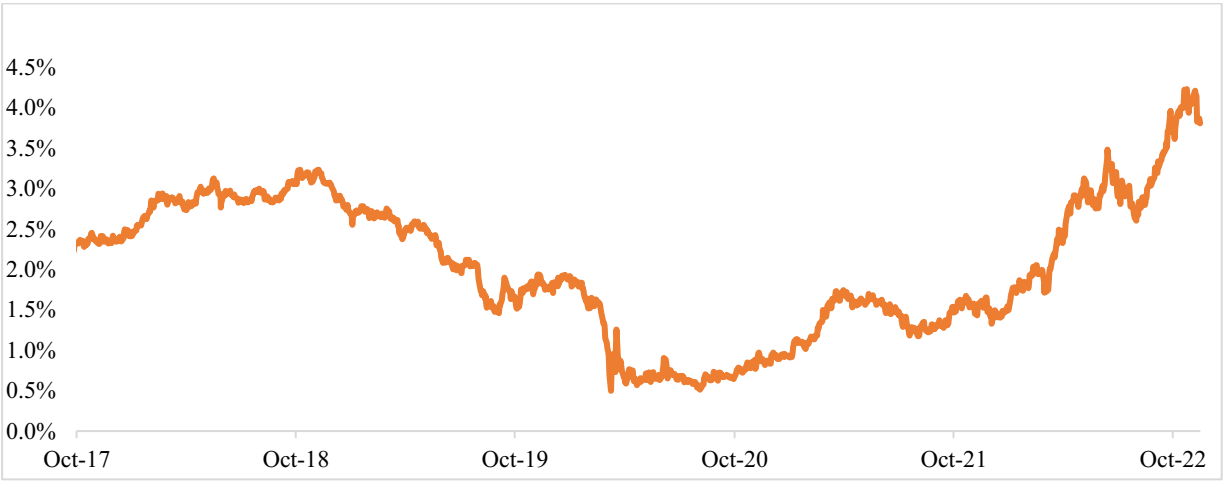
8.1. Cost of Capital

A WACC that appropriately incorporates the risk associated with Nike's cash flows and operations must be computed prior to assessing the company's worth.

8.1.1. Risk-free Rate

For the risk-free rate, it was selected a zero-coupon bond with virtually zero credit default risk. The chosen was a 10-year U.S. Government Bond as of 25/11/22 with a rate of 3.68%. This input will further be used for the computation of the cost of debt and equity.

Figure 22: US Treasury Yield 10Y (Refinitiv)



8.1.2. Cost of Debt

The market value of debt was computed in two steps. The MV of bonds is simply their outstanding amount. The remaining debt was converted from book value to market value according to Formula (9) provided by Damodaran. The total market value of debt is the sum between the two inputs.

Table 16: Estimation of Market Value of Debt (Own Analysis)

	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
MV Bonds	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420
BV Remaining Debt	3,207	2,895	3,071	3,280	3,497	3,711	3,921	4,132	4,353
Interest Expense of Remaining Debt	76	149	133	142	152	161	171	180	190
Interest Rate (%)	0.33%	4.94%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%
Average Maturity	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
MV of Remaining Debt	3,444	2,914	3,061	3,268	3,485	3,700	3,910	4,121	4,342
MV of Total Debt	**12,864**	**12,334**	**12,481**	**12,688**	**12,905**	**13,120**	**13,330**	**13,541**	**13,762**

The cost of debt for non-public debt was estimated through a synthetic rating based on its Interest Coverage Ratio (Damodaran, 2003) that has an inherent spread equivalent for each ICR.

For FY2023, the rating used was the one attributed by S&P and Moody's in Nike's FY2022 Annual Report. For the remaining years, the synthetic rating was equivalent to a respective spread retrieved from Appendix XVIII.

Table 17: Synthetic Spread Estimation (Own Analysis & Damodaran Webpage)

	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
EBITDA	7,400	7,009	8,565	10,554	12,279	13,332	15,234	17,782	18,844
Interest Expense	292	443	431	462	471	521	530	540	575
Interest Coverage Ratio	25.3	15.8	19.9	22.9	26.1	25.6	28.7	33.0	32.8
S&P / Moody's Rating	AA-/A1	AA-/A1	AAA	AAA	AAA	AAA	AAA	AAA	AAA
Spread	**1.03%**	**1.03%**	**0.67%**	**0.67%**	**0.67%**	**0.67%**	**0.67%**	**0.67%**	**0.67%**

The pre-tax cost of debt for public debt was calculated as the proportion of Bonds of the Total Debt multiplied by their current weighted YTM, kept constant throughout the forecasting period for simplicity reasons. The pre-tax cost of non-public debt was computed as the product of the proportion of private debt with the sum of the risk-free rate with the synthetic spread. The sum of two parts provides the pre-tax cost of debt. The after-tax cost of debt is obtained through the product of pre-tax k_D and (1-Tax $Rate_{Effective}$).

The effective tax rate, also used in the Income Statement, was forecasted based on the assumption that the future effective tax rate would remain stable based on the average of previous periods (Appendix IV).

Table 18: Estimation of Cost of Debt (Own Analysis)

	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Bonds (% of MV Total Debt)	73%	76%	75%	74%	73%	72%	71%	70%	68%
Weighted YTM	5.18%	5.18%	5.18%	5.18%	5.18%	5.18%	5.18%	5.18%	5.18%
Remaining Debt (% of MV Total Debt)	27%	24%	25%	26%	27%	28%	29%	30%	32%
Spread	1.03%	1.03%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%
Risk-free rate	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%
Pre-tax k_D	**5.05%**	**5.07%**	**4.98%**	**4.97%**	**4.96%**	**4.95%**	**4.94%**	**4.93%**	**4.92%**
Effective Tax Rate (%)	9%	14%	14%	14%	14%	14%	14%	14%	14%
After-tax k_D	**4.60%**	**4.36%**	**4.28%**	**4.27%**	**4.26%**	**4.25%**	**4.25%**	**4.24%**	**4.23%**

8.1.3. Cost of Equity

After Rf, Beta is the second input for the cost of equity following the CAPM method. The method used is known as the Peer Group Beta approach, and it makes use of average betas across many firms, which typically have inferior standard errors versus individual firm betas (Damodaran, 2003).

The selected peer group is the one displayed below, comprising entities within the same industry subsegment of Nike. The peers' 5-year monthly returns (11/2017-11/2022), retrieved from Eikon, were regressed on the S&P500 returns. The monthly returns were chosen to control for nontrading biases and the 5-year period to comprise a sufficient timespan to account for a larger series of events that affected all stocks studied. The S&P500 was chosen since it is considered as the closest to a broad market portfolio, reflecting diversification as requested in CAPM.

Thus, the peers' levered betas were unlevered (Formula 12) to find Nike's unlevered beta and then again re-levered accounting for the company's input characteristics. The Blume adjustment originated a beta of 1.00. Appendix XVIII shows Nike's returns' regression on the S&P500 for comparison.

Table 19: Estimation of Nike's Beta using Bottom-Up Approach (Refinitiv & Own Analysis)

	Levered Beta	Market Debt/Equity	Marginal Tax Rate	Unlevered Beta	% Revenue
ADIDAS	0.95	0.22	15.825%	0.80	27%
PUMA	1.09	0.20	15.825%	0.94	10%
VF CORP	1.47	0.42	21%	1.11	14%
ASICS	0.82	0.28	23.2%	0.67	4%
LULULEMON	1.33	0.00	15%	1.33	8%
SKECHERS	1.49	0.06	25%	1.43	8%
LI NING	0.41	0.01	21%	0.41	4%
DECKERS	1.17	0.00	21%	1.17	4%
ANTA	0.55	0.10	25%	0.51	9%
COLUMBIA	0.91	0.00	21%	0.91	4%
UNDER ARMOUR	1.48	0.17	21%	1.31	7%
NIKE	1.01	**0.08**	**21%**	0.96	
Adjusted Beta	**1.00**				

The cost of equity was computed for each year, considering the weighted MRP and CRP (Damodaran's webpage) based on Nike's forecasted market shares evolution for each region, per year.

Table 20: Estimation of Cost of Debt (Damodaran Webpage & Own Analysis)

	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
R_f	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%
Levered Beta	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MRP	4.97%	4.99%	5.00%	5.02%	5.03%	5.04%	5.05%	5.06%	5.07%
CRP	0.72%	0.75%	0.76%	0.77%	0.79%	0.80%	0.81%	0.82%	0.83%
Cost of Equity	**9.37%**	**9.40%**	**9.43%**	**9.46%**	**9.50%**	**9.52%**	**9.54%**	**9.56%**	**9.57%**

Finally, the WACC was determined multiplying the cost of equity and after-tax cost of debt by the respective proportion in terms of market value in the capital structure. The market value of equity ($168.26 billion) is equal to the price of Nike's stock (25-11-2022) of $105.96 multiplied by the number of diluted shares outstanding, 1,587 million.

With no further information regarding changes in the capital structure and the relatively stable forecasted market values of debt, it was assumed that the proportion of the MV Equity and MV Debt would remain constant throughout the explicit period.

Table 21: Estimation of WACC (Own Analysis)

	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
k_E	9.37%	9.40%	9.43%	9.46%	9.50%	9.52%	9.54%	9.56%	9.57%
k_D*(1-t)	4.60%	4.36%	4.28%	4.27%	4.26%	4.25%	4.25%	4.24%	4.23%
MV Equity	92.90%	92.90%	92.90%	92.90%	92.90%	92.90%	92.90%	92.90%	92.90%
MV Debt	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
WACC	**9.03%**	**9.05%**	**9.06%**	**9.09%**	**9.12%**	**9.15%**	**9.16%**	**9.18%**	**9.19%**

8.2. Long-Term Growth Rate

According to Damodaran (2003), the forecasted stable growth rate used for the computation of the terminal value cannot exceed the growth of the economy the company is inserted in. Since Nike is a mature firm with a leading market-share in the sportswear industry, it is reasonable to assume that it will experience a smaller growth than younger and high/growth firms. Therefore, assuming Nike would see its FCFFs grow forever at the nominal GDP growth rate would be too optimistic.

Thus, attending to the maturity stage of Nike and by adopting a more conservative approach, it was projected that Nike would enter a stable growth period, where its FCFF would grow in perpetuity at the long-term inflation rate weighted by Nike's geographical area coverage at the end of the explicit period (FY2030). The resulting long-term growth rate was 2.91%, as showed in Appendix XIX.

8.3. FCFF Calculation

Table 22: FCFF Estimation (Own Analysis)

Date	05/2023	05/2024	05/2025	05/2026	05/2027	05/2028	05/2029	05/2030	TV
Time Remaining (Years)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	
EBIT	6,163	7,659	9,119	10,735	11,483	13,267	15,548	16,478	
Effective Tax Rate	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	
EBIT*(1-t)	5,300	6,587	7,842	9,232	9,875	11,409	13,372	14,171	
Changes in NWC	660	233	723	195	810	(134)	1,049	(289)	
CAPEX	905	954	1,743	1,844	2,002	2,114	2,246	2,371	
D&A	846	906	1,435	1,544	1,849	1,967	2,233	2,366	
FCFF	**4,581**	**6,306**	**6,811**	**8,738**	**8,913**	**11,396**	**12,310**	**14,455**	**14,876**
WACC	**-**	**9.06%**	**9.09%**	**9.12%**	**9.15%**	**9.16%**	**9.18%**	**9.19%**	
Discount Factor	-	0.92	0.84	0.77	0.70	0.65	0.59	0.54	
Discounted FCFF		**5,782**	**5,723**	**6,724**	**6,280**	**7,351**	**7,268**	**7,810**	**128,000**

For the calculation of the present value of the explicit period, the FCFFs were discounted at the weighted-average cost of capital for each year. The terminal value, which resulted from a growth perpetuity of 2.91%, was discounted at the WACC to the last date of the explicit period.

The total enterprise value, comprised of the sum of the present values of the two forecasting phases, was equal to $174,939 million, with the PV of terminal value comprising 73%. To find the value that is available for shareholders (Equity value), cash and equivalents and short-term investments were added, while the market value of debt and the intrinsic value of stock options were deducted. The target share price for 31/05/2023 corresponded to $108.68, after dividing the Equity value by the current shares outstanding (diluted).

Table 23: Estimation of Target Share Price (Own Analysis & Nike)

Valuation Date	**31/05/2023**
Sum of Present Values (FY2024-FY2030)	46,939
Perpetuity Growth	2.91%
Present Value of TV	128,000
Enterprise Value	174,939
(+) Cash and Equivalents	7,892
(+) Short-Term Investments	4,437
(-) Market Value of Debt	12,334
(-) Intrinsic Value of Stock Options	2,456
Equity Value	172,478
Shares Outstanding (million diluted)	1,587
Share Price	**108.68**

8.4. Scenario Analysis

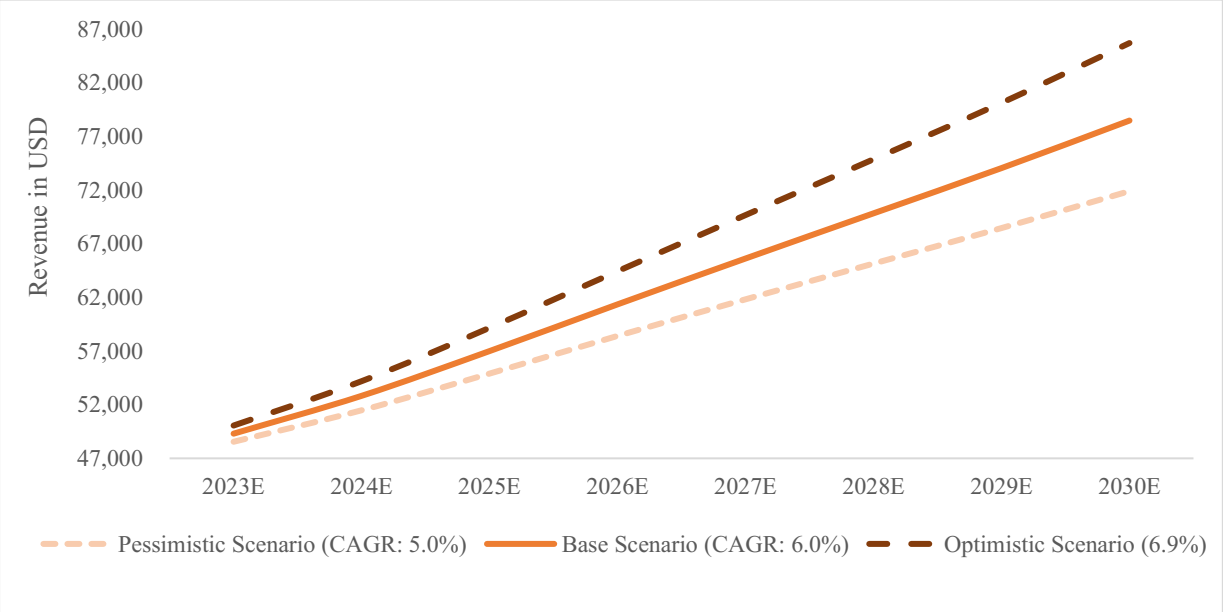
The short-term recovery of the Chinese market after the FY2022 and Q1 FY2023 negative results, along with the worldwide response to the rise of inflation will have a significant impact on Nike's share price in the future.

For a pessimistic scenario it was assumed that the revenue in Greater China would continue the last 12 months' tendency by further declining 5% in FY2023. Furthermore, the remaining operational areas are projected to underperform by 15% the base case until FY2030, propelled

by failure to meet nominal GDP projections, which, by consequence, would impact consumer spending and decrease demand.

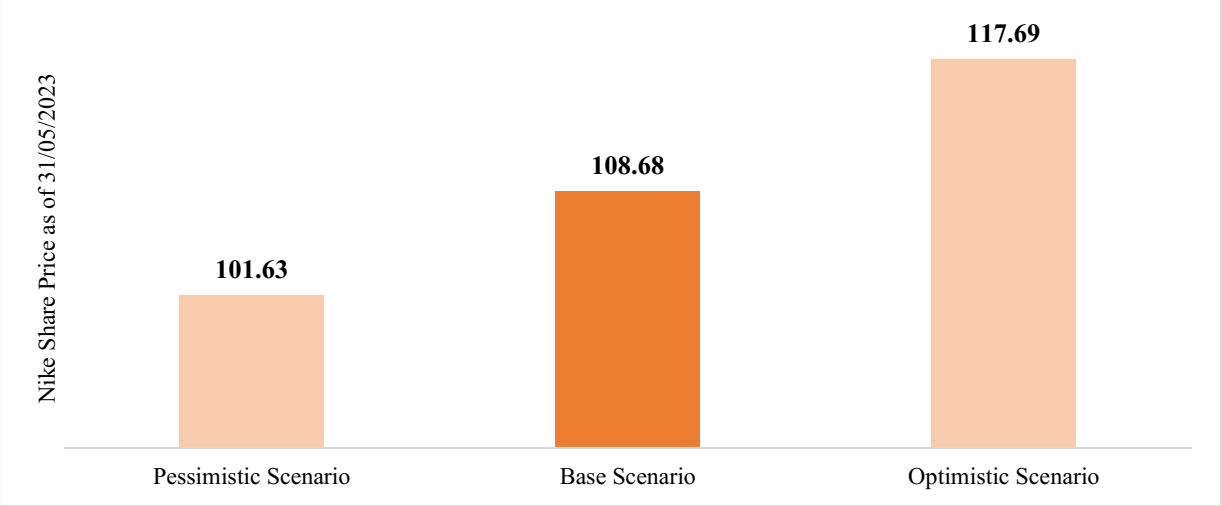
For the optimistic scenario, Greater China manages to exceed revenue expectations by increasing 5% in FY2023, driven by the positive consumer response to the lifting of lockdown restrictions by the Chinese government, expected for the H2 FY2023. This scenario also includes a revenue overperformance of 15% on the remaining segments versus the base scenario until FY2030.

Figure 23: Revenue Projection Scenarios (Own Analysis)



The 31/05/2023 target share price for each scenario can be seen below:

Figure 24: Target Share Price per Scenario (Own Analysis)



8.5. Sensitivity Analysis

The discounted Terminal Value in the DCF encompassed 73% of the total enterprise value. Having such an importance in the total valuation, it is of upmost importance to analyze how much a small change in the discount rate and long-term growth assumptions for the terminal value impact the target share price.

As the table below suggests, a 40-bps variation in the discounted terminal value input variables originated a share price range of $101.52-$116.88.

Figure 25: Target Share Price Sensitivity Analysis (Own Analysis)

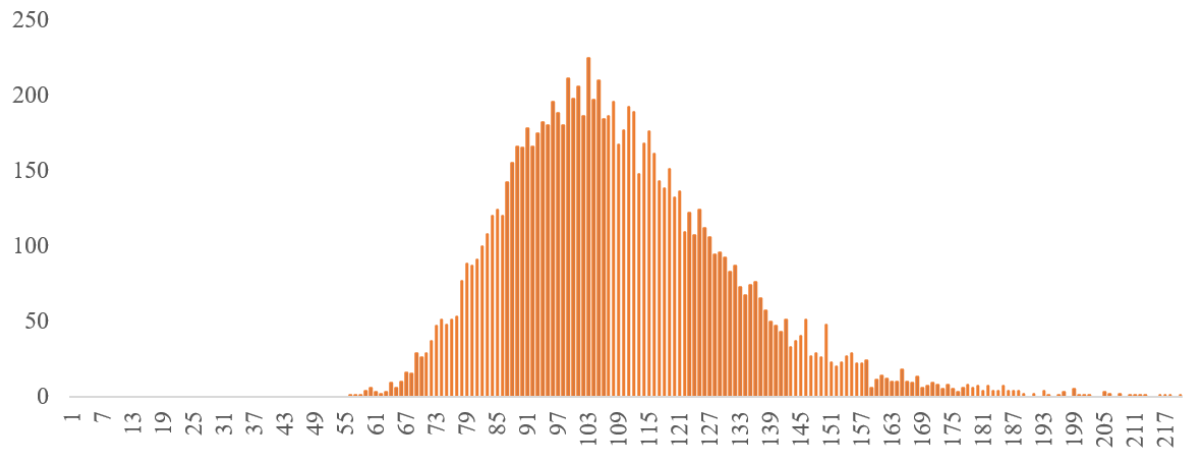
Long-Term Growth \ WACC (Terminal Value)	8.89%	8.99%	9.09%	9.19%	9.29%	9.39%	9.49%	9.59%	9.69%
2.51%	105.65	105.12	104.59	104.07	103.56	103.04	102.53	102.03	101.52
2.61%	106.90	106.37	105.83	105.30	104.78	104.26	103.74	103.22	102.71
2.71%	108.20	107.65	107.11	106.57	106.04	105.51	104.98	104.46	103.94
2.81%	109.53	108.98	108.43	107.88	107.34	106.80	106.27	105.74	105.21
2.91%	110.91	110.34	109.79	109.23	**108.68**	108.13	107.59	107.05	106.52
3.01%	112.33	111.76	111.19	110.62	110.07	109.51	108.96	108.41	107.87
3.11%	113.80	113.21	112.64	112.06	111.50	110.93	110.37	109.81	109.26
3.21%	115.31	114.72	114.13	113.55	112.97	112.40	111.83	111.26	110.70
3.31%	116.88	116.28	115.68	115.09	114.50	113.92	113.34	112.76	112.19

Finally, it was performed a Monte Carlo simulation to evaluate the share price retrieved from the FCFF valuation. This simulation encompassed a total of ten thousand iterations that tested the flexibility of the forecasted revenue, cost of goods sold, the market D/E, the levered beta and lastly, the long-term growth rate, according to a normal distribution. The simulation yielded an average share price of $108.71 and an upside probability of 50.4% based on the current share price of $105.96 (25/11/2022).

Table 24: Results of Monte Carlo Simulation (Own Analysis)

Iterations	10,000
Average Share Price	108.71
5th Percentile	78.06
95th Percentile	148.78
Upside Probability (>$105.96)	50.4%

Figure 26: Share Price Frequency from Monte Carlo Simulation (Own Analysis)



8.6. Relative Valuation

The intrinsic valuation, by involving a high degree of assumptions when projecting future cash-flows for a business, can be often challenging given the ever-changing business and economic scenarios. Furthermore, company stocks, like most assets, are usually priced to similar assets in the marketplace (Damodaran, 2003). Therefore, to verify and present an alternative to the DCF analysis, a relative valuation was performed.

Since Nike is by far the leader in the sportswear industry in terms of market capitalization and turnover, the list of peers had to be narrowed to encompass Nike competitors that present a more suitable size, similar long-term growth ambitions, a resembling capital structure and operational ratios, and a worldwide presence.

Accordingly, the metrics used to form a final list of peers for the relative valuation can be seen in Appendix XX. Adidas and Puma were selected due to their top-of-mind brand status, in addition to their global presence and high turnover.

Even though Anta faces slightly higher growth prospects for the future, as direct competitor of Nike in China and Asia-Pacific, regions where Nike aims to experience the highest growth, was selected for its revenue, similar capital structure, regional exposure and for being one the largest companies in market capitalization after Nike and Adidas.

Table 25: Relative Valuation (Own Analysis)

	Refinitiv Eikon Multiples			
	EV/EBITDA (FY1)	EV/Revenue (FY1)	P/E (FY1)	Weight (Revenue)
Adidas	14.21	1.29	39.59	58.8%
Puma	9.04	1.10	21.71	21.2%
Anta Sports Products	14.80	3.65	25.85	20.0%
Weighted-Average	13.23	1.72	33.06	
Average	12.68	2.01	29.05	
Median	14.21	1.29	25.85	
Nike EV (Weighted Average)	92,737	84,864	168,824	
Nike EV (Average)	88,882	99,269	148,667	
Nike EV (Median)	99,580	63,532	132,571	
Nike Share Price (Min.)	54.5	38.5	82.0	
Nike Share Price (Average)	**56.9**	**51.9**	**92.1**	
Nike Share Price (Max.)	61.2	61.0	104.8	

The share price was computed based on the 1Y forward multiples of EV/Revenue and EV/EBITDA, two denominators that represent important metrics when evaluating the performance of manufacturing, consumer discretionary companies. Additionally, these metrics are unlevered, meaning the valuation is independent of capital structure. Furthermore, since historical multiples are often distorted by non-recurring expenses and events such as the global pandemic, forward multiples are better suited to perform a relative valuation, since they reflect future performance, alike most valuation methods.

Nike's EV is the product of forecasted revenue and EBITDA for FY2023 with the calculated multiples. Finally, the share price is computed after net debt and option adjustments are deducted from EV.

These two multiples yielded share prices well below the results of the DCF valuation, indicating an undervaluation when compared to the results produced by the DCF valuation and of Nike's current share price.

However, the forward P/E multiple produced different results, driven by Adidas' higher multiple, returning a Nike share price between $82.0-$104.8.

The simplicity that a relative valuation offers encounters disadvantages that can distort the fair price of a company. Different stock exchanges and the dependency on correctly valued peers are some of the factors that may misvalue a firm.

For reference, the three multiples, in addition to a simple average, the median and weighted average (by revenue) approached were utilized to smooth the valuation results.

9. Investment Banking Research Comparison

Finally, it is necessary to contextualize the obtained results with equity research reports published by prominent investment banks to correlate the findings with those of other analysts. Two equity reports were compared to the findings, utilizing two distinct approaches.

The first, published on the 19th of October 2022 by Mathew R. Boss (CPA) from JP Morgan, set a price target of $120 for Dec-2023, therefore, the bank issued a Buy recommendation.

Even though JP Morgan's methodology was the forthright P/E multiple approach, the issued report provided a great amount of comparable information regarding how much the dissertation differs in terms of projections and financial statements. As the table below indicates, JP Morgan was slightly more optimistic when forecasting revenue, especially for the North American market, for which the bank forecasted a double-digit growth for FY2023. The revenue for the remaining operating regions, along with the projected cost margins, are almost identical in both valuations.

JP Morgan's Dec-2023 price target is based on 26.5x (5-year pre-pandemic average) the EPS of Calendar Year 2024. By employing the same strategy while using the dissertation's projections, the price target is $119.5, for the same date.

However, according to the dissertation's DCF model, this time discounted for Dec-2023, the yielded price target was $114.7, slightly more conservative than JPM's recommendation.

Table 26: Comparison with JP Morgan's Equity Research (JP Morgan & Own Analysis)

	JP Morgan		Dissertation	
Multiples Approach	FY2023	FY2024	FY2023	FY2024
Revenue	49,826	54,135	49,303	52,823
Gross Margin (%)	43.7%	46.1%	44.0%	46.0%
SG&A (%)	32.0%	31.9%	31.5%	31.5%
D&A	997	1,083	846	906
CAPEX	1,495	1,624	905	954
Changes in NWC	99	142	660	233
Tax rate	16.4%	16.5%	14%	14%
Net Income	5,053	6,340	5,067	6,351
Shares Outstanding	1,577	1,548	1,587	1,563
EPS	3.2	4.1	3.2	4.0
31/12/2024 EPS	4.53		4.51	
JP Morgan P/E Multiple (FY1)	26.5			
Price Target 12/2023 (JPM Approach)	120.0		119.5	
Dissertation Price Target 12/2023 (DCF)	-		114.7	

The second equity report, published by Valuentum Research, a Chicago-based independent investment research publisher, issued a price target recommendation of $92.0 for FY2023. Valuentum's report was performed through a WACC-based DCF. However, opposite to the dissertation, it comprised three different forecasting phases, which included an additional transitional period (FY2028-FY2042) between the explicit period and the perpetuity growth.

The biggest differences arise from divergent assumptions for the calculation of WACC, namely a smaller cost of equity, driven by a substantially lower beta and the non-inclusion of country risk premium.

Even though the forecasted terminal growth rate is virtually matching, Valuentum's explicit period projections are rather conservative, by forecasting smaller Revenue and FCFF CAGRs, negatively impacting the ending Enterprise Value. Furthermore, Valuentum's report understates the total amount of debt stated in Nike's Annual Report for the calculation of Net Debt.

Even though Nike's share price currently trades well above Valuentum's recommendation, their report was issued on the 30th of September of 2022, at the time issuing a Hold recommendation.

Table 27: Comparison with Valuentum's Equity Research (Valuentum & Own Analysis)

DCF Approach	Valuentum	Dissertation
WACC	7.9%	9.0% to 9.2%
Cost of Equity	8.2%	9.4% to 9.6%
Risk-free	4.30%	3.68%
Beta	0.6	1.0
ERP (+ CRP)	6.5%	5.7 to 5.9%
After-tax Cost of Debt	4.7%	4.2% to 4.6%
Terminal Growth Rate	3%	2.91%
Explicit Period Revenue CAGR	6.30%	6.80%
Explicit Period FCFF CAGR	13.60%	16.50%
Explicit Period PV	26,336	46,939
Phase II PV (6Y-20Y)	58,628	-
Terminal PV	59,016	128,000
Enterprise Value	143,980	174,939
Net Debt + Adjustments (Options)	(3,567)	2,461
Equity Value	147,547	172,478
Price Target 05/2023	92.0	108.7

Even though both investment research entities reached different recommendations, JP Morgan is closer to the dissertation's results and the analysts' consensual price target of Nike of $1 10, according to Refinitiv (Appendix XXI).

Despite JPM employing a more straightforward valuation technique that may be considered oversimplistic, most renowned investment banks apply the same methodology given Nike's results and industry stability. Furthermore, JPM's investment thesis comprises in-depth information about each operational segment and detailed cost information by directly cooperating with Nike's management team, being a more reliable source of comparison for this dissertation.

10. Investment Recommendation

The end goal of this dissertation is to provide an investment recommendation regarding Nike's shares based on their fair value at the end of fiscal year 2023 (31/05/2023).

However, valuing a company is not an exact science, depending to a large extent on defined assumptions. As the world is experiencing a scenario of economic and market instability after the recovery of a global pandemic and the surge of inflationary concerns, uncertainty is therefore increased. Despite every constraint, this dissertation seeks to combine theoretical knowledge and connect it with the global market outlook, along with the foreseeable future of Nike and information provided by its management team and the sportswear industry.

Considering everything that was mentioned and all the projections regarding Nike's future performance, the final price target is rooted in the DCF valuation results. The author's preference for this method follows the line of thought of Damodaran: "If good investors buy businesses, rather than stocks, DCF valuation is the right way to think about what you are getting when you buy an asset". This methodology allows any analyst to include all major assumptions about a business and build plausible scenarios to evaluate how much a slight change in inputs changes the overall result.

Even though the relative valuation was considered as a mean of comparison, it delivered a mixed outcome. It was challenging to find suitable peers to Nike, since the company towers the competition in terms of most financial metrics. Being one of the most marketable and renowned brands in the world may also have contributed to an unrighteous comparison that resulted in an undervaluation of Nike when using its competitors multiples.

Finally, the results of the FCFF valuation yielded a final share price target of $108.68 for 31/05/2023, which would mean an upside of 2.6% from the share price of $105.96 (25/11/2022).

In light with the uncertainty surrounding the evolution of the world's inflation and economic development, along with a bordering analysts' consensus of $110 as the 12-month price target, it is wise to issue a HOLD recommendation for Nike and standby to evaluate how the company prospers throughout the near future.

Figure 27: Football Field Valuation (Own Analysis)

References

Andrade, G. and Kaplan, S. (1997). How Costly is Financial (not Economic) Distress? Evidence from Highly Leveraged Transactions that Became Distressed. University of Chicago.

BStrategyHub. (2022). Nike SWOT 2022: SWOT analysis of Nike, Business Strategy Hub. Available at: https://bstrategyhub.com/swot-analysis-of-nike-nike-swot-analysis/.

Blume, M.E. (1975). Betas and their regression tendencies. The Journal of Finance, v.30, 785-795.

Bruner, R., Eades, K., Harris, R., Higgins, R. (1998). Best Practices in Estimating the Cost of Capital: Survey and Synthesis. Financial Practice and Education – Spring/Summer 1998.

Damodaran, A. (2003). Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, Third Edition. Hoboken, N.J.: Wiley.

Damodaran, A. (2006). Valuation Approaches and Metrics: A Survey of the Theory and Evidence. Stern School of Business.

Damodaran, A. (2008). What is the riskfree rate? A Search for the Basic Building Block. Stern School of Business.

Damodaran, A. (2010). Equity Risk Premiums (ERP): Determinants, Estimation and Implication. Stern School of Business.

Eurostat. (2022). Statistics explained, Statistics Explained. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=National_accounts_and_GDP.

Fabric Inc. (2022). Nike e-commerce: How Nike's D2C Strategy Hits 50% Digital penetration, fabric. Available at: https://fabric.inc/blog/nike-ecommerce-strategy/.

Fama, E. and French, K. (1992). The Cross-Section of Expected Stock Returns. The Journal of Finance, v.47, no.2, 427-465.

Fernández, P. (2007). Company valuation methods. The most common errors in valuations. IESE Business School – University of Navarra, 1-27.

Fortune Business Insights. (2021). Sportswear market size, share & covid-19 impact analysis, Regional Forecast, 2021-2028, Sportswear Market Size & Share. Available at: https://www.fortunebusinessinsights.com/sportswear-market-102571.

GlobeNewsWire. (2022). Global sportswear market will be worth ~$365 billion by 2027, GlobeNewswire Newsroom. Mobility Foresights. Available at: https://www.globenewswire.com/en/news-release/2022/08/01/2489525/0/en/Global-Sportswear-Market-will-be-worth-365-Billion-by-2027.html.

Goedhart, M. and Harden, P. (2003). Emerging Markets aren't as risky as you think. The McKinsey Quarterly 2003 Special Edition: Global Directions.

Gordon, M. and Shapiro, E. (1956). Capital Equipment Analysis: The Required Rate of Profit. School of Industrial Management, MIT, v.3, no. 2, 102-110.

Iacurci, G. (2022). Here's the inflation breakdown for September 2022 - in one chart, CNBC. CNBC. Available at: https://www.cnbc.com/2022/10/13/heres-the-inflation-breakdown-for-september-2022-in-one-chart.html.

IBISWorld. (2021). Industry market research, reports, and Statistics, IBISWorld. Available at: https://www.ibisworld.com/global/industry-trends/biggest-industries-by-employment/.

International Monetary Fund. (2022). World Economic Outlook - Countering the Cost-of-Living Crisis. rep. Washington, U.S.A.: IMF.

James, M., and Koller, T. (2000). Valuation in Emerging Markets. The McKinsey Quarterly, no.4, 78-85.

Kaplan, S. N. and Ruback, R. (1995). The Valuation of Cash Flow Forecasts: An Empirical Analysis. The Journal of Finance, v.50, no.4.

Klingelhöfer, C. (2022). How the Chinese Play Sports, ISPO.com. Available at: https://www.ispo.com/en/markets/these-are-most-popular-sports-china.

Koller, T., Goedhart, M., & Wessels, D. (2005). The right role for multiples in valuation. McKinsey on Finance, vol.15, 7-11.

Koller, T., Goedhart, M. and Wessels, D. (2005). Valuation: Measuring and Managing the Value of Companies, Fourth Edition. New Jersey: John Wiley & Sons.

Liu, J. (2002). Equity Valuation Using Multiples. Journal of Accounting Research, v.40, no.1.

Luehrman, T. A. (1997a). What's it worth? A General Manager's Guide to Valuation. Harvard Business Review.

Luehrman, T. A. (1997b). Using APV: A Better Tool for Valuing Operations. Harvard Business Review.

McKinsey. (September, 2022). How the Apparel Industry Can Adapt to Inflation.

Mitra, S. K. (2010). Note on Cash Flow Valuation Methods: Comparison of WACC, FTE, CCF and APV Approaches. Ivey Publishing.

MKToolbox. (2022). SWOT analysis of Nike: A performance overview in 2022, mktoolboxsuite.com. Available at: https://mktoolboxsuite.com/swot-analysis-of-nike/.

Modigliani, F. and Miller, M. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. The American Economic Review, v.48, no.3.

Modigliani, F. and Miller, M. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. The American Economic Review, v.53, no.3.

Myers, S. (1974). Interactions of Corporate Financing and Investment Decisions-Implications for Capital Budgeting. The Journal of Finance, v.29, no.1, 1-25.

Nike. (2022). 2022 Annual Report.

Nike. (2021). 2021 Impact Report.

OECD Database. (2022). OECD Database.

OECD. (September, 2022). Economic Outlook, Interim Report - Paying the Price of War.

Park, I. (2022). Changes in consumption patterns during the COVID-19 pandemic: Analyzing the revenge spending motivations of different emotional groups. Journal of Retailing and Consumer Services.

Pinto, J., Robinson, T. and Stowe, J. (2019). Equity Valuation: A survey of professional practice. Review of Financial Economics, v.37, no.2, 219-233.

PWC. (2022). Corporate income tax (CIT) rates. Available at: https://taxsummaries.pwc.com/quick-charts/corporate-income-tax-cit-rates.

Refinitiv Eikon. (2022). Refinitiv Eikon Platform.

Rosenberg, B. and Guy, J. (1976). Prediction of Beta from Investment Fundamentals: Part One, Prediction Criteria. Financial Analysts Journal, v.32, no.3, 60–72.

Saphir, A. (2022). Fed set to deliver another big rate hike, debate December downshift, Reuters. Thomson Reuters. Available at: https://www.reuters.com/markets/us/fed-set-deliver-another-big-rate-hike-debate-december-downshift-2022-10-31/.

Schill, M. J. (2013). Business Valuation: Standard Approaches and Applications. Darden School of Business.

Schreiner, A. and Spremann, K. (2007). Multiples and Their Valuation Accuracy in European Equity Markets. University of St. Gallen – School of Finance.

Schulz, M. (2022) Nike sales rise 4% as excess inventory piles up, Vogue Business. Vogue Business. Available at: https://www.voguebusiness.com/companies/nike-sales-rise-4-as-excess-inventory-piles-up.

Sharpe, W.F. (1964). Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk. The Journal of Finance, v.19, no.3.

Westwater, T. (2022). Chinese yuan slides against US dollar as Covid lockdowns weigh on sentiment. DailyFX. Available at: https://www.dailyfx.com/news/chinese-yuan-slides-against-us-dollar-as-covid-lockdowns-weigh-on-sentiment-20221031.html.

WorldBank. (2022). GDP growth (annual %), Data. Available at: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG.

Yap, K.L.M. and Tran, J. (2022). VND/USD: Vietnam Dong Drops for a 10th Straight Day, Bloomberg.com. Bloomberg. Available at: https://www.bloomberg.com/news/articles/2022-10-19/vietnam-s-dong-poised-for-longest-losing-streak-since-2008?leadSource=uverify+wall.

Young, M., Sullivan, P., Nokhasteh, A. and Holt, W. (1999). All Roads Lead to Rome: An Integrated Approach to Valuation Models. Goldman Sachs Investment Research, September 1999.

Zenner, M., Hill, S., Clark, J., & Mago, N. (2008). The Most Important Number in Finance: The Quest for the Market Risk Premium. JPMorgan – Capital Structure Advisory & Solutions.

Appendixes

Appendix I: Income Statement Forecast

Appendix Table 1: Income Statement Forecast (Own Analysis)

Income Statement	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Revenue	**36,397**	**39,117**	**37,403**	**44,538**	**46,710**	**49,303**	**52,823**	**56,994**	**61,345**	**65,618**	**69,825**	**74,040**	**78,468**
Cost of Sales	20,441	21,643	21,162	24,576	25,231	27,610	28,524	30,777	32,513	34,777	36,309	37,760	40,019
Gross Profit	**15,956**	**17,474**	**16,241**	**19,962**	**21,479**	**21,693**	**24,299**	**26,217**	**28,832**	**30,840**	**33,516**	**36,280**	**38,449**
Demand creation expense	3,577	3,753	3,592	3,114	3,850	4,437	4,754	4,559	4,601	4,921	4,888	5,183	5,493
Operating overhead expense	7,934	8,948	9,534	9,911	10,954	11,093	11,885	12,539	13,496	14,436	15,361	15,548	16,478
Total selling and administrative expenses	11,511	12,701	13,126	13,025	14,804	15,530	16,639	17,098	18,097	19,357	20,249	20,731	21,971
EBIT	4,445	4,773	3,115	6,937	6,675	6,163	7,659	9,119	10,735	11,483	13,267	15,548	16,478
Interest net	54	49	89	262	205	311	302	324	331	366	372	379	404
Other (income) expense	66	(78)	139	14	(181)	-	-	-	-	-	-	-	-
Earnings Before Tax	**4,325**	**4,802**	**2,887**	**6,661**	**6,651**	**5,852**	**7,357**	**8,795**	**10,405**	**11,117**	**12,894**	**15,170**	**16,074**
Taxes	2,392	772	348	934	605	819	1,030	1,231	1,457	1,556	1,805	2,124	2,250
Net Income	**1,933**	**4,030**	**2,539**	**5,727**	**6,046**	**5,033**	**6,327**	**7,564**	**8,948**	**9,561**	**11,089**	**13,046**	**13,824**

Appendix II: Balance Sheet Forecast

Appendix Table 2: Forecasted Balance Sheet (Own Analysis)

Balance Sheet	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Assets													
Cash and equivalents	4,249	4,466	8,348	9,889	8,574	7,892	8,512	9,001	9,081	10,830	12,807	14,622	17,587
Short-term investments	996	197	439	3,587	4,423	4,437	4,226	3,420	3,681	3,281	3,491	3,702	3,923
Accounts Receivable	3,498	4,272	2,749	4,463	4,667	5,059	5,361	5,881	5,884	6,701	6,308	7,486	7,133
Inventory	5,261	5,622	7,367	6,854	8,420	8,978	8,996	9,554	9,687	10,132	10,162	10,529	10,522
Other current assets	1,130	1,968	1,653	1,498	2,129	2,129	2,129	2,129	2,129	2,129	2,129	2,129	2,129
Total Current Assets	15,134	16,525	20,556	26,291	28,213	28,495	29,225	29,984	30,461	33,072	34,897	38,468	41,294
PPE	4,454	4,744	4,866	4,904	4,791	4,840	4,893	5,178	5,485	5,616	5,756	5,756	5,756
Operating lease assets	-	-	3,097	3,113	2,926	2,958	3,169	3,420	3,681	3,937	4,189	4,442	4,708
Intangible assets	285	283	274	269	286	296	291	313	307	328	335	348	353
Goodwill	154	154	223	242	284	284	284	284	284	284	284	284	284
Deferred tax assets	763	840	1,584	2,015	2,587	2,465	2,641	2,850	3,067	3,281	3,491	3,702	3,923
Other non-current assets	1,746	1,171	742	906	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234
Total Assets	**22,536**	**23,717**	**31,342**	**37,740**	**40,321**	**40,572**	**41,737**	**43,263**	**44,519**	**47,752**	**50,186**	**54,234**	**57,552**
Liabilities													
Accounts Payable	2,279	2,612	2,248	2,836	3,358	3,450	3,584	4,005	4,012	4,564	4,389	4,921	4,946
Current lease liabilities	-	-	445	467	420	420	420	420	420	420	420	420	420
Notes payable	336	9	248	2	10	10	10	10	10	10	10	10	10
Income taxes payable	150	229	156	306	222	234	294	352	416	445	516	607	643
Other current liabilities	3,269	5,010	5,184	6,063	6,220	6,220	6,220	6,220	6,220	6,220	6,220	6,220	6,220
Total Current Liabilities	6,034	7,860	8,281	9,674	10,230	10,334	10,528	11,007	11,078	11,658	11,555	12,178	12,239
LT Debt	3,474	3,470	9,409	9,413	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420
Lease liabilities	-	-	2,913	2,931	2,777	2,465	2,641	2,850	3,067	3,281	3,491	3,702	3,923
Deferred tax liabilities	425	464	852	882	922	986	1,056	1,140	1,227	1,312	1,396	1,481	1,569
Other non-current liabilities	2,791	2,883	1,832	2,073	1,691	1,691	1,691	1,691	1,691	1,691	1,691	1,691	1,691
Total Liabilities	**12,724**	**14,677**	**23,287**	**24,973**	**25,040**	**24,896**	**25,336**	**26,108**	**26,483**	**27,362**	**27,554**	**28,472**	**28,843**
Shareholder's Equity													
Equity Capital	6,387	7,166	8,302	9,968	11,487	12,641	13,796	14,950	16,105	17,259	18,413	19,568	20,722
Other accumulated income	(92)	231	(56)	(380)	318	-	-	-	-	-	-	-	-
Retained Earnings	3,517	1,643	(191)	3,179	3,476	3,035	2,605	2,205	1,931	3,131	4,219	6,194	7,987
Shareholder's Equity	**9,812**	**9,040**	**8,055**	**12,767**	**15,281**	**15,676**	**16,401**	**17,156**	**18,036**	**20,390**	**22,633**	**25,762**	**28,709**
Total Liabilities & Shareholder's Equity	**22,536**	**23,717**	**31,342**	**37,740**	**40,321**	**40,572**	**41,737**	**43,263**	**44,519**	**47,752**	**50,186**	**54,234**	**57,552**

Appendix III: Cash-Flow Statement Forecast

Appendix Table 3: Forecasted Cash-Flow Statement (Own Analysis)

Cash Flow Statement	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Operating Cash Flow								
Net Earnings	5,033	6,327	7,564	8,948	9,561	11,089	13,046	13,824
Plus: Depreciation	838	898	1,425	1,534	1,837	1,955	2,221	2,354
Plus: Amortization	8	8	10	10	12	12	12	12
Less: Changes in Working Capital	660	233	723	195	810	(134)	1,049	(289)
Cash from Operations	**5,219**	**7,000**	**8,275**	**10,297**	**10,600**	**13,190**	**14,230**	**16,479**
Investing Cash Flow								
Investments in Property & Equipment	(887)	(951)	(1,710)	(1,840)	(1,969)	(2,095)	(2,221)	(2,354)
Investments in Intangibles	(18)	(3)	(33)	(3)	(33)	(19)	(25)	(17)
(Increase) Decrease in Short-Term Investments	(14)	211	806	(261)	400	(210)	(211)	(221)
(Increase) Decrease in Operating Lease Assets	(32)	(211)	(250)	(261)	(256)	(252)	(253)	(266)
(Increase) Decrease in other non-current assets	-	-	-	-	-	-	-	-
Cash from Investing	**(952)**	**(953)**	**(1,187)**	**(2,366)**	**(1,858)**	**(2,577)**	**(2,710)**	**(2,858)**
Financing Cash Flow								
Issuance (repayment) of LT debt	-	-	-	-	-	-	-	-
Increase (repayment) of operating lease liabilities	(312)	176	209	218	214	210	211	221
Increase of other non-current liabilities	-	-	-	-	-	-	-	-
Equity Capital (Exercise of options)	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154
Other financing activities	(318)	-	-	-	-	-	-	-
Dividends paid	(1,530)	(2,531)	(3,404)	(4,474)	(5,737)	(7,208)	(8,480)	(9,677)
Share Repurchases	(3,944)	(4,226)	(4,559)	(4,748)	(2,625)	(2,793)	(2,591)	(2,354)
Cash from Financing	**(4,950)**	**(5,426)**	**(6,600)**	**(7,850)**	**(6,993)**	**(8,636)**	**(9,706)**	**(10,655)**
Net Increase (decrease) in Cash	(682)	620	488	81	1,749	1,977	1,814	2,965
Opening Cash Balance	8,574	7,892	8,512	9,001	9,081	10,830	12,807	14,622
Closing Cash Balance	**7,892**	**8,512**	**9,001**	**9,081**	**10,830**	**12,807**	**14,622**	**17,587**

Appendix IV: Assumptions

Appendix Table 4: Assumptions Table (Own Analysis, Nike, JP Morgan)

Assumptions	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Income statement													
Revenue Growth (% Change)	6.0%	7.5%	(4.4%)	19.1%	4.9%	5.6%	7.1%	7.9%	7.6%	7.0%	6.4%	6.0%	6.0%
Cost of Goods Sold (% of Revenue)	56.2%	55.3%	56.6%	55.2%	54.0%	56.0%	54.0%	54.0%	53.0%	53.0%	52.0%	51.0%	51.0%
Demand Creation Expense (% of Revenue)	9.8%	9.6%	9.6%	7.0%	8.2%	9.0%	9.0%	8.0%	7.5%	7.5%	7.0%	7.0%	7.0%
Operating Overhead Expense (% of Revenue)	21.8%	22.9%	25.5%	22.3%	23.5%	22.5%	22.5%	22.0%	22.0%	22.0%	22.0%	21.0%	21.0%
Tax Rate (% of Earnings Before Tax)	55.3%	16.1%	12.1%	14.0%	9.1%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%
Balance Sheet													
Accounts Receivable (Days)	35	36	34	30	36	36	36	36	35	35	34	34	34
Inventory (Days)	94	92	112	106	110	115	115	110	108	104	102	100	96
Accounts Payable (Days)	41	41	42	38	45	45	45	45	45	45	45	45	45
Short-term investments (% of Revenue)	2.7%	0.5%	1.2%	8.1%	9.5%	9.0%	8.0%	6.0%	6.0%	5.0%	5.0%	5.0%	5.0%
Other current assets (% of Revenue)	3.1%	5.0%	4.4%	3.4%	4.6%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Lease assets (% of Revenue)	0.0%	0.0%	8.3%	7.0%	6.3%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Intangible assets (% of Revenue)	0.8%	0.7%	0.7%	0.6%	0.6%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Goodwill (% of Revenue)	0.4%	0.4%	0.6%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Deferred tax assets (% of Revenue)	2.1%	2.1%	4.2%	4.5%	5.5%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Other non-current assets (% of Revenue)	4.8%	3.0%	2.0%	2.0%	2.6%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Income tax payables (% of Revenue)	3.5%	4.8%	5.4%	4.6%	3.3%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Other current liabilities (% of Revenue)	9.0%	12.8%	13.9%	13.6%	13.3%	12.6%	11.8%	10.9%	10.1%	9.5%	8.9%	8.4%	7.9%
Lease liabilities (% of Revenue)	0.0%	0.0%	7.8%	6.6%	5.9%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Deferred tax liabilities (% of Revenue)	1.2%	1.2%	2.3%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Other non-current liabilities (% of Revenue)	7.7%	7.4%	4.9%	4.7%	3.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%

Effective Tax Rate: Forecasted as the average effective tax rate of previous years, without considering atypical years such as FY2018 and FY2022. While the U.S.'s marginal tax rate is 21%, Nike has consistently achieved a lower effective tax rate, majorly impacted by tax benefits such as "Foreign-derived intangible income benefit", "Excess tax benefits from share-based compensation" and others stated in their Annual Reports. With no further indications of changes in this matter, it was assumed a continuation of previous years effective tax rate tendency.

DIO: Projected to be especially high in the beginning of the forecast, as Nike reached all-time high levels of inventory in Q4 FY2022 and Q1 FY2023. However, as supply-chain interruptions were forecasted to ease and as Nike keeps focusing on its D2C strategy, inventory levels are expected to gradually come down closer to pre-pandemic levels, as the new distribution refocus will allow Nike to minimize coordination inefficiencies with third-party retailers and will obtain a wealth of first-hand and valuable consumer insights that are better reached with a D2C strategy.

DSO and DPO: Since these two indicators have remained historically stable, it was reasonable to assume the tendency would continue throughout the forecasting period. Only DSO suffered a small decrease, still within Nike's historical levels, expected with the refocus on D2C customers and reduction of retail partners importance in the distribution mix.

Deferred Tax Assets, Deferred Tax Liabilities and Income Tax Payables: Since effective tax rate was forecasted as the average of previous years, it was adequate to forecast these balance sheet elements with the same approach. Therefore, these items were projected to remain stable to previous periods' percentage of revenue/percentage of EBT.

Short-Term Investments: For simplicity reasons, forecasted to remain close to FY2022 figures, therefore, losing importance in terms of revenue percentage throughout the projecting period.

Other Balance Sheet Items: Forecasted to remain constant or as the same percentage of revenue, without further information or any contradictory signs from Nike's management team.

Appendix V: Revenue Correlation with Nominal GDP

Appendix Table 5: Revenue Correlation with Nominal GDP (Own Analysis, OECD)

	Revenue Correlation with local GDP growth (2018-2022)	Average Revenue to Weighted GDP (Multiplier 2018-2022)
North America	0.85	1.57
EMEA	0.96	1.70
Greater China	0.64	1.60
APLA	0.60	1.25
Converse (World)	0.71	0.70
Total Nike	0.92	1.42

Even though Nike's latest 5 fiscal years global revenue evolution had a higher degree of correlation with the nominal GDP growth weighted by Nike's operational areas, when considering each individual area's correlation with the corresponding area's GDP evolution there was still a moderate-high/high degree of positive correlation for every case (above 60%). This robustness test allowed the assumption of the usage of nominal GDP as an adequate indicator for a sum-of-parts revenue projection throughout the explicit period (FY2023-FY2030).

Appendix Table 6: Forecasted Revenue as GDP Multiple (Own Analysis, OECD)

	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
North America	(2.37%)	7.05%	(8.92%)	18.61%	6.83%	5.43%	5.35%	4.86%	4.56%	4.35%	4.21%	3.98%	3.83%
GDP %	5.38%	4.12%	(2.24%)	10.06%	8.87%	4.59%	3.33%	3.65%	3.99%	3.83%	3.83%	3.83%	3.83%
Multiplier	-0.44	1.71	3.98	1.85	0.77	1.18	1.61	1.33	1.14	1.14	1.10	1.04	1.00
EMEA	15.96%	6.17%	(4.74%)	22.56%	8.93%	9.38%	8.55%	7.89%	7.20%	6.78%	6.09%	5.78%	5.57%
GDP %	8.55%	(0.21%)	(3.18%)	16.86%	4.28%	3.29%	5.91%	5.74%	5.62%	5.57%	5.57%	5.57%	5.57%
Multiplier	1.87	0.00	1.49	1.34	2.09	2.85	1.45	1.37	1.28	1.22	1.09	1.04	1.00
Greater China	21.17%	20.92%	7.59%	24.12%	(8.96%)	0.00%	12.24%	18.27%	16.97%	13.11%	10.56%	9.01%	8.82%
GDP %	12.85%	3.60%	3.64%	19.39%	3.25%	5.04%	7.56%	8.24%	8.44%	8.82%	8.82%	8.82%	8.82%
Multiplier	1.65	5.81	2.08	1.24	-2.76	0.00	1.62	2.22	2.01	1.49	1.20	1.02	1.00
APLA	9.06%	1.70%	(4.30%)	6.26%	11.45%	4.68%	4.79%	5.50%	5.98%	6.35%	7.20%	7.68%	8.06%
GDP %	7.54%	2.96%	(1.85%)	17.27%	6.40%	6.12%	7.25%	7.64%	7.74%	8.06%	8.06%	8.06%	8.06%
Multiplier	1.20	0.58	2.32	0.36	1.79	0.77	0.66	0.72	0.77	0.79	0.89	0.95	1.00
Converse	(7.64%)	1.06%	(3.15%)	19.45%	6.39%	2.91%	3.64%	3.83%	4.02%	4.81%	5.03%	5.28%	5.60%
GDP %	6.38%	1.68%	(2.53%)	13.62%	4.62%	4.55%	5.37%	5.51%	5.60%	5.60%	5.60%	5.60%	5.60%
Multiplier	-1.20	0.63	1.25	1.43	1.38	0.64	0.68	0.70	0.72	0.86	0.90	0.94	1.00
Global Brand	20.55%	(52.27%)	(28.57%)	(16.67%)	308.00%	6.92%	6.92%	6.92%	6.62%	6.20%	6.12%	5.88%	5.60%
GDP %	6.38%	1.68%	(2.53%)	13.62%	4.62%	4.55%	5.37%	5.51%	5.60%	5.60%	5.60%	5.60%	5.60%
Multiplier	3.22	0.00	11.31	-1.22	66.67	1.52	1.29	1.26	1.18	1.11	1.09	1.05	1.00

Appendix VI: Revenue Forecast Scenarios

Base Scenario	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
North America	15,216	14,855	15,902	14,484	17,179	18,353	19,350	20,385	21,376	22,350	23,322	24,304	25,272	26,240
YoY Growth %		(2.37%)	7.05%	(8.92%)	18.61%	6.83%	5.43%	5.35%	4.86%	4.56%	4.35%	4.21%	3.98%	3.83%
EMEA	7,970	9,242	9,812	9,347	11,456	12,479	13,650	14,817	15,986	17,137	18,299	19,415	20,537	21,681
YoY Growth %		15.96%	6.17%	(4.74%)	22.56%	8.93%	9.38%	8.55%	7.89%	7.20%	6.78%	6.09%	5.78%	5.57%
Greater China	4,237	5,134	6,208	6,679	8,290	7,547	7,547	8,471	10,018	11,718	13,255	14,654	15,975	17,384
YoY Growth %		21.17%	20.92%	7.59%	24.12%	(8.96%)	0.00%	12.24%	18.27%	16.97%	13.11%	10.56%	9.01%	8.82%
APLA	4,737	5,166	5,254	5,028	5,343	5,955	6,234	6,532	6,892	7,304	7,767	8,327	8,966	9,689
YoY Growth %		9.06%	1.70%	(4.30%)	6.26%	11.45%	4.68%	4.79%	5.50%	5.98%	6.35%	7.20%	7.68%	8.06%
Converse	2,042	1,886	1,906	1,846	2,205	2,346	2,414	2,502	2,598	2,702	2,832	2,975	3,132	3,307
YoY Growth %		(7.64%)	1.06%	(3.15%)	19.45%	6.39%	2.91%	3.64%	3.83%	4.02%	4.81%	5.03%	5.28%	5.60%
Global Brand	73	88	42	30	25	102	109	117	125	133	141	150	159	168
YoY Growth %		20.55%	(52.27%)	(28.57%)	(16.67%)	308.00%	6.92%	6.92%	6.92%	6.62%	6.20%	6.12%	5.88%	5.60%
Total Nike Inc Revenues	**34,350**	**36,397**	**39,117**	**37,403**	**44,538**	**46,710**	**49,303**	**52,823**	**56,994**	**61,345**	**65,618**	**69,825**	**74,040**	**78,468**
YoY Growth %		5.96%	7.47%	(4.38%)	19.08%	4.88%	5.55%	7.14%	7.90%	7.63%	6.96%	6.41%	6.04%	5.98%

Appendix Table 7: Base Scenario of Revenue Forecast (Own Analysis)

Pessimistic Scenario	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
North America	15,216	14,855	15,902	14,484	17,179	18,353	19,200	20,073	20,902	21,713	22,515	23,321	24,110	24,895
YoY Growth %		(2.37%)	7.05%	(8.92%)	18.61%	6.83%	4.62%	4.55%	4.13%	3.88%	3.70%	3.58%	3.38%	3.26%
EMEA	7,970	9,242	9,812	9,347	11,456	12,479	13,474	14,453	15,422	16,367	17,310	18,207	19,101	20,006
YoY Growth %		15.96%	6.17%	(4.74%)	22.56%	8.93%	7.97%	7.27%	6.71%	6.12%	5.76%	5.18%	4.91%	4.73%
Greater China	4,237	5,134	6,208	6,679	8,290	7,547	7,170	7,916	9,145	10,464	11,630	12,674	13,645	14,667
YoY Growth %		21.17%	20.92%	7.59%	24.12%	(8.96%)	(5.00%)	10.40%	15.53%	14.42%	11.14%	8.98%	7.66%	7.50%
APLA	4,737	5,166	5,254	5,028	5,343	5,955	6,192	6,444	6,745	7,088	7,471	7,928	8,445	9,024
YoY Growth %		9.06%	1.70%	(4.30%)	6.26%	11.45%	3.98%	4.07%	4.68%	5.08%	5.40%	6.12%	6.53%	6.85%
Converse	2,042	1,886	1,906	1,846	2,205	2,346	2,404	2,478	2,559	2,647	2,755	2,873	3,001	3,144
YoY Growth %		(7.64%)	1.06%	(3.15%)	19.45%	6.39%	2.47%	3.09%	3.26%	3.42%	4.09%	4.28%	4.49%	4.76%
Global Brand	73	88	42	30	25	102	108	114	121	128	135	142	149	156
YoY Growth %		20.55%	(52.27%)	(28.57%)	(16.67%)	308.00%	5.88%	5.88%	5.88%	5.63%	5.27%	5.20%	5.00%	4.76%
Total Nike Inc Revenues	**34,350**	**36,397**	**39,117**	**37,403**	**44,538**	**46,710**	**48,548**	**51,479**	**54,895**	**58,406**	**61,816**	**65,144**	**68,452**	**71,892**
YoY Growth %		5.96%	7.47%	(4.38%)	19.08%	4.88%	3.93%	6.04%	6.64%	6.40%	5.84%	5.38%	5.08%	5.03%

Appendix Table 8: Pessimistic and Optimistic Scenario of Revenue Forecast (Own Analysis)

Optimistic Scenario	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
North America	15,216	14,855	15,902	14,484	17,179	18,353	19,499	20,699	21,856	23,002	24,152	25,322	26,481	27,647
YoY Growth %		(2.37%)	7.05%	(8.92%)	18.61%	6.83%	6.24%	6.15%	5.59%	5.24%	5.00%	4.84%	4.58%	4.40%
EMEA	7,970	9,242	9,812	9,347	11,456	12,479	13,825	15,184	16,562	17,934	19,333	20,688	22,063	23,476
YoY Growth %		15.96%	6.17%	(4.74%)	22.56%	8.93%	10.79%	9.83%	9.07%	8.29%	7.80%	7.01%	6.65%	6.41%
Greater China	4,237	5,134	6,208	6,679	8,290	7,547	7,924	9,040	10,939	13,074	15,045	16,872	18,620	20,509
YoY Growth %		21.17%	20.92%	7.59%	24.12%	(8.96%)	5.00%	14.08%	21.01%	19.52%	15.08%	12.14%	10.36%	10.14%
APLA	4,737	5,166	5,254	5,028	5,343	5,955	6,275	6,621	7,040	7,524	8,074	8,742	9,514	10,396
YoY Growth %		9.06%	1.70%	(4.30%)	6.26%	11.45%	5.38%	5.51%	6.33%	6.88%	7.30%	8.28%	8.83%	9.27%
Converse	2,042	1,886	1,906	1,846	2,205	2,346	2,425	2,526	2,637	2,759	2,912	3,080	3,267	3,478
YoY Growth %		(7.64%)	1.06%	(3.15%)	19.45%	6.39%	3.35%	4.19%	4.40%	4.62%	5.53%	5.78%	6.07%	6.44%
Global Brand	73	88	42	30	25	102	110	119	128	138	148	158	169	180
YoY Growth %		20.55%	(52.27%)	(28.57%)	(16.67%)	308.00%	7.96%	7.96%	7.96%	7.61%	7.13%	7.04%	6.76%	6.44%
Total Nike Inc Revenues	**34,350**	**36,397**	**39,117**	**37,403**	**44,538**	**46,710**	**50,059**	**54,189**	**59,163**	**64,432**	**69,664**	**74,862**	**80,114**	**85,686**
YoY Growth %		5.96%	7.47%	(4.38%)	19.08%	4.88%	7.17%	8.25%	9.18%	8.91%	8.12%	7.46%	7.02%	6.95%

Appendix VII: Revenue Forecast Assumptions

North America: The most significant and the region where NIKE most strongly displays its dominance is the domestic market of North America. Despite the poor results in FY2020 due to the global pandemic, Nike's NA growth has recently surpassed the growth of the sportswear industry, driven by a quick recovery of 18.6% in FY2021

Due to supply chain issues, North American inventory transit times have increased since the pandemic, which minimized the capacity to meet demand (especially for wholesale) in FY2022, and possibly will in FY2023. With this scenario is expected that Nike, in order to fulfill a reasonable growth for FY2023 and early FY2024, will need to incur in more discounted sales, meaning lower revenue per item sold, given the need to drain accumulated inventory.

Nevertheless, the company's recent historical performance momentum, allied to its home market advantage that provides stronger brand recognition and closer contact with customers via the high percentage of social media users in the region are all factors that the author predicts will counterbalance Nike's inventory concerns and allow the firm to keep its normal growth of previous years.

In addition, the escalating demand for sportswear products driven by athleisure trends and upcoming global sports events (NBA Championships, rise in popularity in Major League Soccer, CONCACAF 2023 in the USA and the FIFA World Cup in 2026 hosted in North America) may also contribute to additional demand and prevent a possible stagnation in growth scenario given Nike's already gigantic revenue stream in North America and their undisputed market leading position.

EMEA: Even though this region is fiercely contested by Nike's German direct competitors (Adidas and Puma), Nike has managed to deliver a strong performance, with a revenue CAGR of 9.4% between FY2017-FY2022, almost doubling in size since FY2017.

It becomes evident that NIKE's superior performance in the area has largely been attributed to its increased capacity to penetrate the European market versus its competitors, alongside a higher investment in consumer demand creation. Nike's performance can also be explained by a last-decade management's focus towards acquiring a higher market share in other regions other than the domestic market. In addition, Nike has been working to increase the effectiveness and speed of its fulfillment capabilities as part of the Consumer Direct Offense strategy. For instance, Nike tripled its digital fulfillment capacity throughout the European, Middle Eastern,

and African markets in response to the global pandemic and an increase in consumer demand expenses ever since (Fabric Blog, 2022).

Even though consumer purchasing power is lower in the Middle East and Africa, which favors companies with lower pricing points, the increase in population that has access to internet and, consequently, online stores and social media advertising campaigns, can benefit and manage to keep Nike's growth tendency in these sub-regions of EMEA.

The author's rationale is that for the first years of the forecasting period, Nike has the conditions to sustain EMEA's growth, allying a strong investment in digital consumer experience with the creation of a premium and seamless brand experience through retail concepts such as Nike House of Innovation, Nike Rise, Nike Unite, and Nike Live, taking the lead with digital, online-to-offline services and physical experiences in this region (Fabric Blog, 2022).

Nonetheless, it was forecasted that with the passage of time, Nike would see its EMEA growth converge to the evolution of nominal GDP, since growing and consistently acquiring additional market share in such a highly competitive region would be a rather unrealistic projection, taking into consideration Nike's size and maturity.

Greater China: The Chinese market is by far the fastest growing region in the sportswear industry. The sports practice movement in China is being fueled by the government, by promoting more physical activity among their citizens and funding sports facilities for both amateur and professional athletes. On the other hand, football and especially basketball, have the most potential for equipment-related sales, given that the NBA is the most watched sports league in the nation, even more so than any domestic leagues. NIKE's affiliation with the NBA has benefited both the company's brand recognition and revenue in China.

Even though Nike saw a decrease in revenue in China for FY2022, mostly associated with the heavy lockdown restrictions imposed by the government, it is projected that the Chinese administration will start lifting Covid-19 restrictions by the second half of Nike's FY2023.

A cautious forecast of a revenue stagnation in FY2023 was the author's projection, since Nike's projections, as well as of leading investment banks such as JP Morgan and Deutsche Bank also predict a similar outcome. Nonetheless, this dissertation predicts a recovery of Greater China to pre-FY2022 levels around the second half of FY 2024, with FY2025 being the first full fiscal year with zero constraints. As the explicit period leads into FY2030, the same assumption as

EMEA was made for Greater China, given the difficulty to sustain a constant high 10's% – low 20's% growth for a large time span.

APLA: Asia and Pacific, as well as Latin America have been the most underwhelming regions when it comes to Nike's revenue growth. Despite FY2022 growth of 11.5%, Nike's performance in this region has remained below the nominal GDP growth. Some reasons that could have affected this underperformance may have been connected to Latin America's slower industry development, driven by inflationary pressures, whereas in Asia Pacific, the threat of counterfeit items and local competitors may have disturbed Nike's growth.

However, Nike's digital acceleration, driven by the launch of Nike App in Mexico, along with Singapore, Thailand, the Philippines, Malaysia, India, Taiwan, and Vietnam in FY2022, may have been the driving factor for APLA's biggest increase in revenue since Nike discloses sales by the current set of regions.

The forecast made was that Nike would capitalize from their recent investments in APLA, and revenues would gradually converge upwards from FY2017-FY2022's CAGR to the region's nominal GDP growth throughout the forecasting window.

Converse and Global Division: Given the fact that Nike does not disclose these two segments by region, the forecast made was similar to prior. Both segments would endure their growth in FY2023 by the CAGR of the six previous fiscal years, since Nike has not revealed any indicating factors that these segments would experience an abnormal growth/downturn. Lastly, due to these segments' worldwide coverage, and by following the correlation of Nike's past revenues with nominal GDP growth, the assumption made was a convergence with the world's nominal GDP development as the forecasting window expanded.

Appendix VIII: Adjusted Present Value (APV)

Adjusted Present Value (APV)

The Adjusted Present Value (APV) method consists of, firstly, evaluating the company assuming that it is financed 100% by equity (EV_U) and, later, adjusting for all financing side effects. The latter includes adding the present value of the interest tax shield (ITS) and finally, subtracting the expected costs of bankruptcy (Myers, 1974).

$$EV = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1+k_U)^t} + \frac{TV}{(1+k_U)^t} + PV\ (ITS) - \text{PV(E(Cost of financial distress))} \quad (4)$$

The evaluation of the operational component of the company is processed in a similar way to the evaluation through discounted cash flows, however, the unlevered cost of equity is used as the discount rate, instead of using the WACC.

Compared to the FCFF, the tax advantage of debt financing is not recognized in the discount factor, nor in the cash flow calculation. Instead, the APV highlights itself for being "exceptionally transparent: you get to see all the components of value in the analysis; none are buried in adjustments to the discount rate" (Luehrman, 1997).

Regarding the calculation of tax benefits, Modigliani & Miller (1958) were among the first academics to try to isolate the effect of tax benefits on the impact on a firm's value. They proposed a world with taxes and no bankruptcy costs and used the risk-free rate to compute the present value of tax shields. Conversely, Myers (1974) argued that the risk of having debt is equal to the risk of the tax savings, hence, suggesting that the present value of the interest tax shield should be discounted at the cost of debt.

However, other professionals contend that "future interest payments, together with the tax shields, will fluctuate for the same reasons as operating cash flows change and, therefore, deserve the same discount rate" (Luerhman, 1997). The discount rate for ITS is controversial, thus for adopted of the commonly accepted method, the cost of debt is assumed for the formula:

$$PV\ (ITS) = \sum_{t=1}^{t=n} \frac{ITS_t}{(1+k_D)^t} + \frac{TV}{(1+k_D)^t} \quad (5)$$

The final step is to evaluate the expected bankruptcy costs, which entails the estimation of the probability of default and the direct and indirect cost of bankruptcy (Damodaran, 2003):

$$E(Cost\ of\ financial\ distress) = EV_U * PD * Bankruptcy\ Cost \quad (6)$$

This stage of the APV appraoch poses the greatest estimating difficulty because neither the likelihood of bankruptcy nor the cost of bankruptcy can be determined with accuracy. Altman (2009) summarized the probability of default over 10 years by bond rating class after analyzing firms during the 1999 to 2008 time-period. Another option is to employ a statistical approach

to calculate the likelihood of default at each debt level based on the firm's observable characteristics.

Nonetheless, studies that have examined the scope of this cost in actual bankruptcies can be used to predict the bankruptcy cost, but with significant error. The research consensus regarding direct bankruptcy costs was their insignificance in comparison to the firm value. These direct costs comprise “lawyers', accountants' fees and the value of the managerial time spent in administering the bankruptcy”, while the indirect costs include “lost sales, lost profits, and possibly the inability of the firm to obtain credit or to issue securities” (Warner, 1997).

Shapiro (1989) and Titman (1984) speculated that indirect costs could be as high as 25 to 30%. On the other hand, Andrade & Kaplan (1998) estimated the total costs of distress to be around 10%-20%. Given the mixed literature remarks and the different impacts that distress costs can have on a firm value depending on its industry and tangibility, it is difficult to assume a concrete value.

Appendix IX: Equity Valuation Models

Dividend Discounted Model (DDM)

According to Damodaran (2003), the Dividend Discount Model suggests that a dividend is the only cash flow an investor earns by purchasing shares in a publicly traded company. Therefore, one of the simplest models for valuing equities is this model, which argues that the value of a company is equal to the present value of its projected dividends.

This model is based on the idea that when investors buy a stock, they frequently expect to receive two different types of cash flows: dividends during the holding period and an anticipated price at the end of the same period. Since this predicted price is determined by future payouts, discounted at the cost of equity, the value of a stock is therefore the present value of the expected dividends through infinity (Damodaran, 2003).

$$Value\ per\ share = \sum_{t=1}^{t=n} \frac{E(DPS_t)}{(1+k_E)^t} \quad (15)$$

The Gordon Growth Model, developed by Gordon and Shapiro in 1956, asserts that for companies with steady growth and no dividend retention policy, the equity value can be characterized as an expanding perpetuity based on the anticipated dividend in the future.

However, one of the major problems of this model arises from the impossibility to forecast dividends or assume a specific dividend growth rate, since companies can either reduce their dividends or not pay at all if their underlying conditions demand it. In addition, non-dividend payment stocks and low dividend paying stocks are automatically excluded from this model, given that if a firm's payout ratio is not adjusted to reflect changes on the dividend's growth rate, its stock will appear undervalued (Damodaran, 2003).

Furthermore, intangible property such as brands and licenses will not be incorporated in this model and even other methods of returning cash to shareholders (stock buybacks) will not be considered without the adoption of an augmented version of the DDM (Damodaran, 2003).

Free Cash Flow to Equity (FCFE)

The foundation of the dividend discount model is the idea that owners only ever receive dividend payments. However, the term "cash flows to equity" is used more broadly to refer to the residual cash flows that remain after all financial commitments and investment needs (Damodaran, 2003).

In order to calculate how much cash a company can afford to return to its investors, this method starts with net income, the stockholders' earnings' accounting measure, for the term and converts it to a cash flow by removing the firm's reinvestment obligations. Subsequently, as they reflect cash withdrawals, capital expenditures are deducted from net income. On the other hand, depreciation and amortization are re-added because they are accounting expenses rather than cash outlays.

The gap between capital expenditures and depreciation is often what determines the firm's growth characteristics (net capital expenditures) since high-growth companies typically have higher net capital expenditures than low-growth companies, which can sometimes even have negative net capital expenditures.

Finally, equity holders must consider how changes in debt levels may affect their cash flows. The repayment of existing debt's principal constitutes a financial outflow, but it may be partially or entirely supported by the issuance of new debt, which is a cash inflow. Once more, measuring

the effects of changes in debt on cash flow requires balancing the payback of existing debt against the issuance of new debt (Damodaran, 2003).

$$FCFE = NI + Depreciations - CAPEX - \Delta NWC + (New\ Debt\ Issued - Debt\ Repayments) \quad (16)$$

Similar to DDM, FCFE is discounted at the cost of equity, which reflects the return requirements of investors. By discounting cash flows to equity at the cost of equity rather than at the weighted average cost of capital, the equity cash flow model values equity directly (Damodaran, 2003).

Appendix X: SWOT Analysis

Strengths

Store Network: The business's diverse shop network broadens customer reach and strengthens its competitive position. The company operated in 702 locations outside of the US and 344 retail stores inside of it as of May 2022. It distributes Nike and Converse brand products through company-owned Nike Direct operations, digital platforms, and a variety of independent distributors such as footwear stores, sales representatives, and licensees internationally (MarketLine, 2022).

Operational Agility: Strong operational networks improve the company's supply chain operations and its long-term expansion and growth goals. This aids the business in managing supply risks, price fluctuations, and complexity while ensuring a consistent supply of inputs. Most of Nike's products are manufactured in Vietnam, China and Indonesia, allowing the company to achieve lower manufacturing costs (MarketLine, 2022).

R&D: Nike historically released products before the competition and gave customers cutting-edge goods and services. These innovation-based tactics help keeping the business on top of developments in the market and provide it the "first mover" advantage. Nike's R&D concentrates on creating novel goods and enhancing current product lines. Its state-of-the-art technological advancements, designing, and manufacturing capabilities enhance the product's performance and longevity, cut down on waste, prevent injuries and provide comfort for consumers (MarketLine, 2022).

Brand Value: Because of its catchy, simple pronunciation, and distinctive name, Nike is one of the most well-known companies in the world. The swoosh, Nike's logo along with the slogan "Just do it" allowed the company to reach an extreme degree of brand awareness and customer base (BStrategyHub, 2022). Nike's brand value is considered the highest among any apparel brand, being valued at $33 billion (Statista, 2022).

Weaknesses

Poor labor conditions (Outsourcing): Nike outsources its manufacturing mostly to eastern Asian countries. This led to various controversies as the company has been accused of problems such child labor, forced labor, inhumane working conditions, low pay, excessive work hours. Furthermore, the outsourcing strategy poses difficulties to accurately verify the quality of products (MToolbox, 2022).

Lawsuits: Nike has engaged in several legal disputes, including numerous allegations of patent infringement involving knitted footwear technologies and apps.

Dependency on North American Market: About 39% of Nike's sales in FY2022 came from North America, with the remaining 61% came from the rest of the world. Despite its global coverage, Nike depends on North America for significant sales and expansion.

Opportunities

Emerging Markets: When it comes to spotting chances, Nike has already made a name for itself on a worldwide scale, but there is still enormous room for growth in Asia-Pacific and Latin America. It is forecasted that there will be a considerable demand for Nike's products due to emerging market's rising economic affluence and intense interest in sports (MToolbox, 2022).

Technology: Nike has already created an enormous range of products, but there is still much space for innovation. Combining creative designs and apparel/footwear features with wearable technology that tracks physical activity can be advantageous to dive into an aspect of the fashion industry that still hasn't been explored much (BStrategyHub, 2022).

Rise in Sportswear Industry: The rise of e-commerce, rising health and fitness awareness among the public, and an increase in the number of sports enthusiasts and players are some of the key drivers of the sports equipment market. The international market for sports equipment is anticipated to expand at a CAGR of 7% between 2021 and 2025, according to a McKinsey research analysis. Global demand for sports equipment is being driven by a rising consumer expenditure and the goal of a higher quality of life. Being a manufacturer and supplier of sportswear, the company may profit from favorable industry conditions (MarketLine, 2022).

Consumer Direct Strategy: The perceived value of a distinct and personalized shopping experience has increased, and the overall apparel and footwear industry are engaging in AI predictive analytics platforms to expand its online sales capabilities and predict customer's shopping behavior, it turns Nike's current refocus on its distribution strategy towards a D2C approach much more advantageous.

Threats

Counterfeit products: Nike's business can be negatively impacted by the massive influx of counterfeit goods. The abundance and increasing resemblance with real products, makes counterfeit goods a real threat to Nike's sales and profit margins. Furthermore, customers could inadvertently buy fake and low-quality products with fake labels, which undermines consumer confidence and damages the reputation of the real company (MarketLine, 2022).

Competition: The sportswear sector is replete with fierce competition. Despite being the market leader, Nike is nonetheless vulnerable to existing threats such as Adidas and Puma, but also new emerging brands. This requires a constant innovation in Nike's product mix, an enhanced marketing strategy, competitive pricing, and others.

Foreign Exchange Risks: Nike is impacted by fluctuating exchange rates since it is a multinational entity. To report its financial results, Nike uses US dollars. Due to the U.S. dollar's exposure to volatility when compared to other financial currencies, such as Canadian dollar, Japanese Yen, Chinese Yuan, Euro and British pound, this has an impact on its revenue (MarketLine, 2022).

Appendix XI: Risk Analysis

Below are listed market risks (MR) and individual risks (IR) that pose a threat for Nike's future operational and financial performance.

Global Economic Conditions (MR1): Lower sales, higher costs, reduced margins, and lower profitability could be the consequences of economic variables outside Nike's control such as changes in the global economic climate, including changes in inflation and currency exchange rates (Annual Report, 2022).

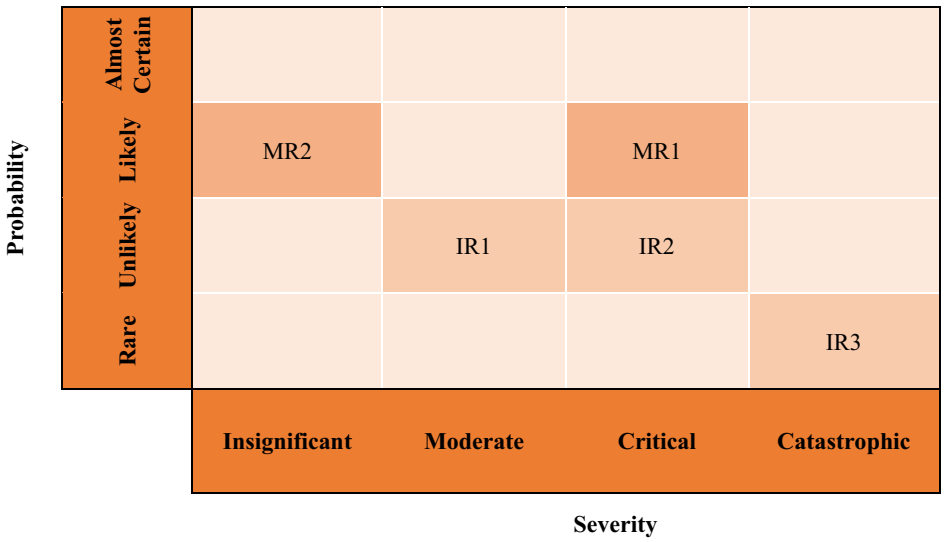
Intense Competition (MR2): There is fierce rivalry in several sectors, including product offerings, technology, marketing expenses, price, production costs, digital commerce platforms, digital services, and social media presence. These, along with the fact that the athletic footwear, apparel, and equipment industry is fiercely competitive both domestically and internationally, rapid technological advancements, and ongoing changes in consumer preferences on the clothing and footwear markets all constitute important risk factors. Nike's costs could rise, the need to lower wholesale or suggested retail prices might arise if it fails to foresee and respond to competition appropriately and promptly (Annual Report, 2022).

Demand Forecast (IR1): Inaccurate customer demand forecasting could result in excess or insufficient inventory, which would hurt Nike by lowering operating margins (Annual Report, 2022).

Overseas manufacturing and distribution (IR2): Nike's products are subject to risks related to overseas sourcing, manufacturing and distribution. Significant disruptions in the supply of raw materials or a sudden increase in demand may hamper Nike's contract manufacturers to locate alternatives and possibly fail to meet production demand. Delays in shipment/delivery caused by shortages in containers, labor and availability of transportation have previously negatively impacted the financial performance, since most manufacturers are located outside the main markets and products need to be transported between large distances (Annual Report, 2022).

Brand image maintenance (IR3): Nike's brand value, similar to most companies depends on the successful efforts of marketing and consumer campaigns, product quality, sustainability and innovation. Furthermore, Nike is a company with innumerous endorsers, as most of them are top athletes and world-known figures, and some the top sports institutions and competitions, with millions of fans and viewers. Therefore, maintaining a favorable perception of the company's ethics and brand culture is crucial to the company's brand value. Any negative claims or publicity about Nike's culture, products, customer experience, as well as any of its key endorsers or suppliers, might gravely harm Nike's reputation and brand image (Annual Report, 2022).

Appendix Table 9: Nike Risk Matrix (Own Analysis)



Appendix XII: ESG Analysis

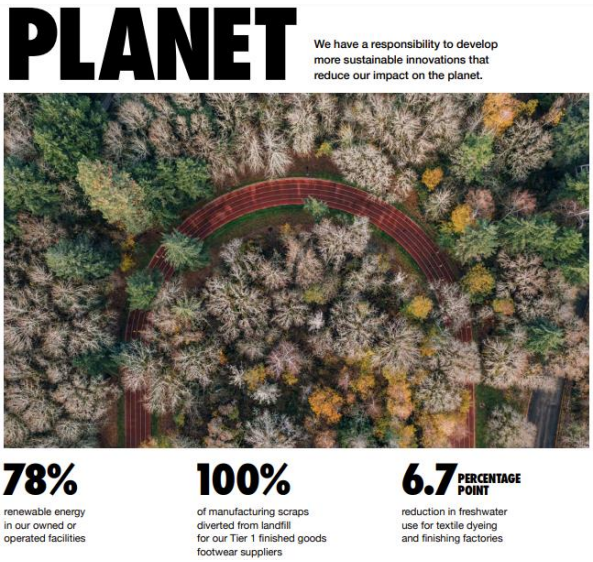
ESG has recently become a critical factor to some investors worldwide that adopted this methodology to find strategical investments. Moreover, Nike has been recently trying to develop its social and environmentally sustainability in response to changing industry trends and an increased global concern over a company's contribution to the planet and social ecosystem.

As of 2022, Nike received a grade of 69.41 out of 100 according to Refinitiv. This score is within the average for the industry. However, it is significantly lower than some of Nike's direct competitors such as Adidas and Puma, that received a score of 90.58 and 87.98, respectively.

Nike's Corporate Social Responsibility and sustainability initiative is in line with the company's motto "Breaking Barriers". Nike aims towards the capacity of sports to bring people together and established goals for 2025 in environmental sustainability, community investment, diversity and inclusion. The following information can be found in Nike's Annual Reports and Impact Reports.

Environmental

Nike, through the Supplier Climate Action Program, aims to make sure that its manufacturers and suppliers are committed to their objective of becoming carbon neutral by 2025. So far Nike has reached a level of 78% renewable energy in their owned/operated facilities, while aiming to have a 70% reduction in greenhouse gas in their own facilities and 0% growth in greenhouse gas emissions from key suppliers' manufacturing and transportation operations, despite a forecasted business growth.



Appendix Figure 1: Nike Environmental Accomplishments (Nike)

Nike is utilizing reusable and recyclable products as well as more sustainable materials in its product lines as an effort to further reduce waste. Nike targeted a 10% waste reduction per unit in manufacturing, distribution and headquarters and has already achieved a 97% level of waste diverted from landfill and incineration and 69% of its waste is recycled (100% and 80% targets, respectively).

Lastly, the 2025 target is a 25% reduction in freshwater usage in textile dyeing and finishing and a total of 13 billion liters restored that will aid in long-term resilience for communities and ecosystems under water stress.

Social

To fight against lawsuits that emerged surrounding Nike's work environment and inclusion culture, it has been of Nike's interest to elaborate corporate social programs that are centered on providing a healthy work environment for every employee.

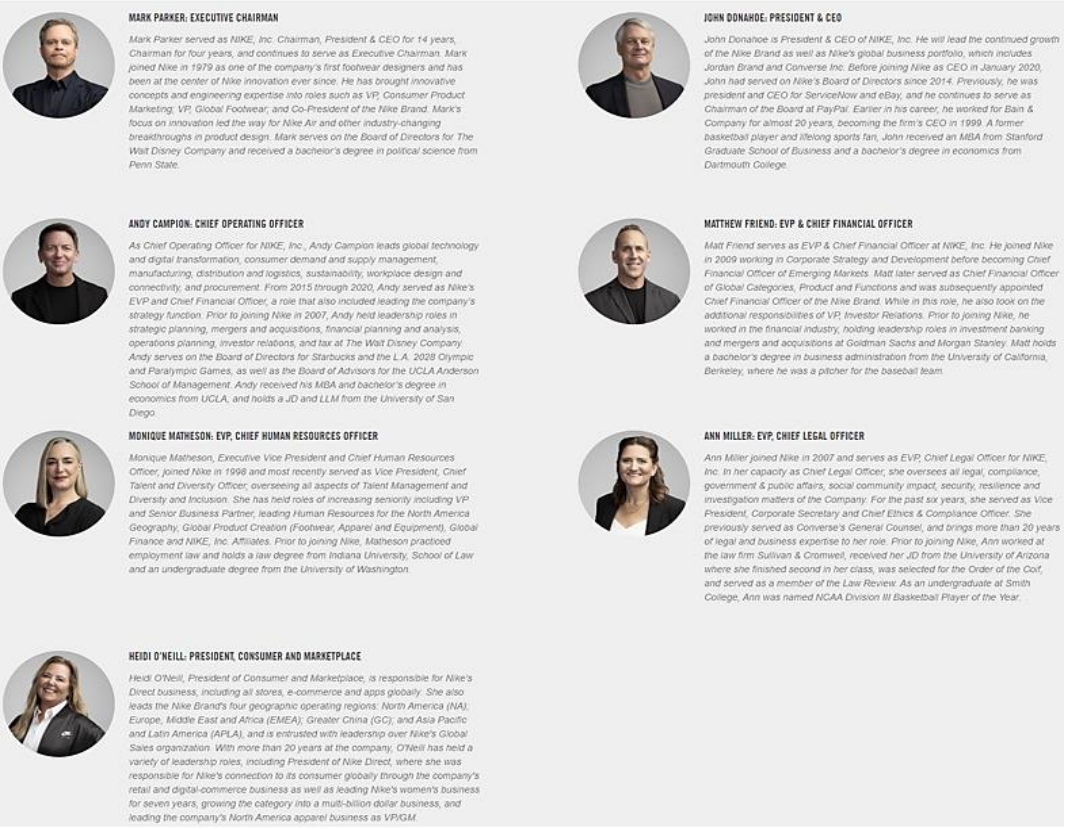
Nike's target for 2025 comprises a 50% representation for women (currently 50.4%) and a 35% (currently 34.3%) representation of ethnic and racial minorities among its total workforce. Aiming towards a higher percentage of women and ethnic minorities in leadership/director positions by boosting internship and direct hire opportunities, Nike proposed a $10 million investment in Historically Black Colleges and Universities (HBCU) and Hispanic-Serving Institutions (HSI) in the form of scholarships and academic partnerships.

Finally, Nike's mission is aimed towards leaving a positive footprint within the social community. The company has already invested more than $97 million, as the form of donations, infrastructure, equipment supplies and towards programs that target an increase in children's active sports participation.

Governance

The Board, which is chosen by the shareholders, is the company's highest decision-making body. The Board's objectives are to responsibly address the concerns of shareholders and other stakeholders, such as employees, customers, suppliers, governments, local communities, and the public, as well as to build long-term shareholder value for the Company, including by promoting its sustainability.

The senior management team, which includes the executive officers in charge of running the company's operations, is chosen by the Board, who serves as an advisor to and monitors the senior management team's performance. In FY2022, their total remuneration came down, mostly linked to a decrease in performance-related bonus and stock awards. Nonetheless, John Donahoe's base salary, as Nike's CEO, represents just 7.5% of the total remuneration as of FY2022.



MARK PARKER: EXECUTIVE CHAIRMAN

Mark Parker served as NIKE, Inc. Chairman, President & CEO for 14 years, Chairman for four years, and continues to serve as Executive Chairman. Mark joined Nike in 1979 as one of the company's first footwear designers and has been at the center of Nike innovation ever since. He has brought innovative concepts and engineering expertise into roles such as VP, Consumer Product Marketing; VP, Global Footwear; and Co-President of the Nike Brand. Mark's focus on innovation led the way for Nike Air and other industry-changing breakthroughs in product design. Mark serves on the Board of Directors for The Walt Disney Company and received a bachelor's degree in political science from Penn State.

JOHN DONAHOE: PRESIDENT & CEO

John Donahoe is President & CEO of NIKE, Inc. He will lead the continued growth of the Nike Brand as well as Nike's global business portfolio, which includes Jordan Brand and Converse Inc. Before joining Nike as CEO in January 2020, John had served on Nike's Board of Directors since 2014. Previously, he was president and CEO for ServiceNow and eBay, and he continues to serve as Chairman of the Board at PayPal. Earlier in his career, he worked for Bain & Company for almost 20 years, becoming the firm's CEO in 1999. A former basketball player and lifelong sports fan, John received an MBA from Stanford Graduate School of Business and a bachelor's degree in economics from Dartmouth College.

ANDY CAMPION: CHIEF OPERATING OFFICER

As Chief Operating Officer for NIKE, Inc., Andy Campion leads global technology and digital transformation, consumer demand and supply management, manufacturing, distribution and logistics, sustainability, workplace design and connectivity, and procurement. From 2015 through 2020, Andy served as Nike's EVP and Chief Financial Officer, a role that also included leading the company's strategy function. Prior to joining Nike in 2007, Andy held leadership roles in strategic planning, mergers and acquisitions, financial planning and analysis, operations planning, investor relations, and tax at The Walt Disney Company. Andy serves on the Board of Directors for Starbucks and the L.A. 2028 Olympic and Paralympic Games, as well as the Board of Advisors for the UCLA Anderson School of Management. Andy received his MBA and bachelor's degree in economics from UCLA, and holds a JD and LLM from the University of San Diego.

MATTHEW FRIEND: EVP & CHIEF FINANCIAL OFFICER

Matt Friend serves as EVP & Chief Financial Officer at NIKE, Inc. He joined Nike in 2009 working in Corporate Strategy and Development before becoming Chief Financial Officer of Emerging Markets. Matt later served as Chief Financial Officer of Global Categories, Product and Functions and was subsequently appointed Chief Financial Officer of the Nike Brand. While in this role, he also took on the additional responsibilities of VP, Investor Relations. Prior to joining Nike, he worked in the financial industry, holding leadership roles in investment banking and mergers and acquisitions at Goldman Sachs and Morgan Stanley. Matt holds a bachelor's degree in business administration from the University of California, Berkeley, where he was a pitcher for the baseball team.

MONIQUE MATHESON: EVP, CHIEF HUMAN RESOURCES OFFICER

Monique Matheson, Executive Vice President and Chief Human Resources Officer, joined Nike in 1998 and most recently served as Vice President, Chief Talent and Diversity Officer, overseeing all aspects of Talent Management and Diversity and Inclusion. She has held roles of increasing seniority including VP and Senior Business Partner, leading Human Resources for the North America Geography, Global Product Creation (Footwear, Apparel and Equipment), Global Finance and NIKE, Inc. Affiliates. Prior to joining Nike, Matheson practiced employment law and holds a law degree from Indiana University, School of Law and an undergraduate degree from the University of Washington.

ANN MILLER: EVP, CHIEF LEGAL OFFICER

Ann Miller joined Nike in 2007 and serves as EVP, Chief Legal Officer for NIKE, Inc. In her capacity as Chief Legal Officer, she oversees all legal, compliance, government & public affairs, social community impact, security, resilience and investigation matters of the Company. For the past six years, she served as Vice President, Corporate Secretary and Chief Ethics & Compliance Officer. She previously served as Converse's General Counsel, and brings more than 20 years of legal and business expertise to her role. Prior to joining Nike, Ann worked at the law firm Sullivan & Cromwell, received her JD from the University of Arizona where she finished second in her class, was selected for the Order of the Coif, and served as a member of the Law Review. As an undergraduate at Smith College, Ann was named NCAA Division III Basketball Player of the Year.

HEIDI O'NEILL: PRESIDENT, CONSUMER AND MARKETPLACE

Heidi O'Neill, President of Consumer and Marketplace, is responsible for Nike's Direct business, including all stores, e-commerce and apps globally. She also leads the Nike Brand's four geographic operating regions: North America (NA); Europe, Middle East and Africa (EMEA); Greater China (GC); and Asia Pacific and Latin America (APLA), and is entrusted with leadership over Nike's Global Sales organization. With more than 20 years at the company, O'Neill has held a variety of leadership roles, including President of Nike Direct, where she was responsible for Nike's connection to its consumer globally through the company's retail and digital-commerce business as well as leading Nike's women's business for seven years, growing the category into a multi-billion dollar business, and leading the company's North America apparel business as VP/GM.

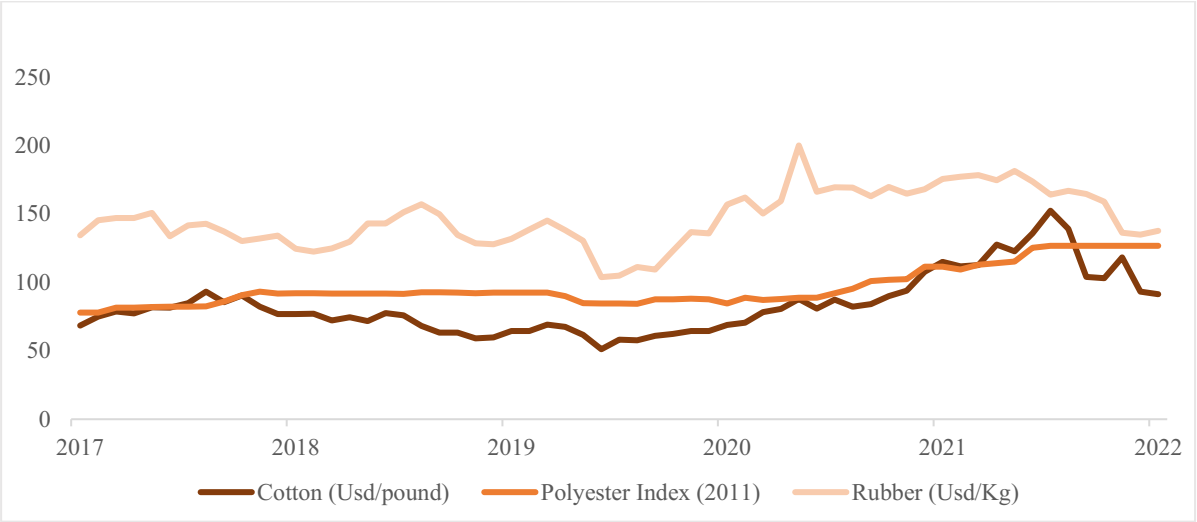
Appendix Figure 2: Nike's Executive Team (Nike)

Appendix XIII: Prices of Commodities

Nike uses mainly six raw materials for its footwear and apparel manufacturing: Cotton, Polyester, Rubber, EVA foam, Synthetic Leather, and Leather, with the price of these materials having a significant impact on Nike's COGS.

According to the Singapore Commodity Exchange, the price of Rubber reached a 2-year low of 120 USd/Kg, while Cotton futures plummeted to a 22-month low of 75.1 USd/lb in November 2022 (Intercontinental Exchange, 2022). According to the most recent figures from the US Department of Agriculture, both acreage and output grew, and worldwide cotton production is predicted to reach 118.1 million bales in 2022–23, a 2% rise over the previous year. These commodities' price evolution and supply will dictate Nike's performance in the near future, at a time when inflationary pressures loom over the global economy.

Appendix Figure 3: Evolution of the price of commodities relevant for Nike's business (Singapore CE, International CE)



Appendix XIV: Competition Framework

Adidas AG designs, manufactures and markets a broad range of athletic and sports lifestyle products for women, men and kids. The company's product line includes clothing, accessories, athletic gear, and footwear (MarketLine, 2022). It sells products under Adidas and Reebok brands and owns a share of the German football club Bayern Munich, and Runtastic, an Austrian fitness technology company. As of FY2021, the company reported revenues of $25.122bn, a 10.83% increase from 2020. It is the second largest player in the sportswear industry and was, until recently, the leader in the European market, owning the leading position now only in Eastern Europe.

PUMA SE designs, manufactures, markets, and sells sports footwear, apparel and accessories. The company's primary competitive advantage is its selection of high-performance and sport-inspired lifestyle goods in sports such as football, running and fitness, golf, and motorsports. It markets and distributes its products worldwide primarily through its own subsidiaries, licensed retail stores, and e-commerce platforms (MarketLine, 2022). Puma had $8.0 bn in revenue for FY2021, growing 35% after a decline during the global pandemic. Nonetheless, the company doubled this figure since FY2016 driven by a strong performance in the Americas and across key markets in Europe.

ANTA Sports is a Chinese sportswear company. The company's main business is creating, producing, and selling sports footwear, basketball products, sports apparel, kids' sportswear, casualwear and sports accessories. The products of the company are marketed under various labels including ANTA and FILA (MarketLine, 2022). Anta registered $7.6 billion in revenue in FY2021, their best year ever, growing 48% from the previous period and tripled since FY2017, driven by a strong Chinese market performance and by providing innumerous professional equipment deals, for instance, by being the official supplier of the International Olympic Committee.

Lululemon Athletica Inc is a Canadian designer, producer and retailer of athletic apparel and accessories. The company, which launched in 1998, first sold yoga-related accessories such as backpacks and mats in addition to sports pants, shorts, tops, and jackets designed for healthy lifestyle activities comprising yoga and running. Since then, the company expanded to now sell sports apparel, footwear, and personal care products. The company markets products through retail stores and e-commerce platforms (MarketLine, 2022). Lululemon had $6.3 billion in revenue in FY2022, growing 42% since the previous year.

VF Corporation is a U.S. manufacturer, distributor, and marketer footwear, apparel, and accessories. Its product portfolio includes mainly footwear, sportswear, casual and performance apparel jeans wear. The company has also a strong performance in accessories-related sales such as handbags and backpacks. VF's products are marketed under The North Face, Vans, Timberland, Eastpak, and many other labels. Similar to its peers, VF sells products through their department stores and specialty stores, through wholesale partners and also through many e-commerce platforms (MarketLine, 2022).

Appendix Table 10: Largest 12 Sportswear Players (Refinitiv, Annual Reports)

Company Name	Country of Headquarters	Revenue Share (%) (of 12 largest players) LTM	Gross Margin (%) FY0	Average Inventory Turnover (FY0)	Employees	Number of Stores
Nike Inc	U.S.	35.6%	46.0%	3.30	79,100	1,046
Under Armour Inc	U.S.	4.3%	50.3%	3.31	7,050	350
Lululemon Athletica Inc	Canada	5.3%	57.7%	3.28	27,000	574
VF Corp	U.S.	9.0%	54.5%	4.34	37,500	1,322
Adidas AG	Germany	17.8%	50.7%	2.49	61,843	2,184
Puma SE	Germany	6.2%	47.9%	2.70	15,250	832
Asics Corp	Japan	2.6%	49.5%	2.43	8,883	1,900
Li Ning Co Ltd	China	2.9%	53.0%	6.80	3,822	7,137
Skechers USA Inc	U.S.	5.2%	49.3%	2.56	6,050	2,946
Deckers Outdoor Corp	U.S.	2.5%	51.0%	3.93	3,700	149
ANTA Sports Products Ltd	China	6.0%	61.6%	2.88	46,500	12,479
Columbia Sportswear Co	U.S.	2.6%	51.6%	2.52	7,800	142

Apart from Nike and Adidas, the two giants in the sportswear industry that combined encompass more than half of the revenue share of the twelve largest players, this market is heavily contested and fragmented, with the remaining 10 largest peers accounting between 2% and 9% of the peer group's combined revenue.

Nike's sportwear dominance in the North American region has naturally pushed its competitors to focus on specific types of products. Some product types are performance apparel (Under Armour and Columbia), skate wear (VF) and sneakers (Skechers and Deckers).

Historically, the competition in the European market has been fierce, with the likes of Puma and Adidas disputing the top three spots in the Old Continent, with Nike only being able to surpass Adidas in 2020. In the Asian market several contestants have emerged, with strong performances in the home markets of China and Japan, driven by aggressive retailing strategies, as well as the digitalization of their D2C channels. Players such as Li Ning and Anta have managed to capture significant market shares, with their share percentage (of the biggest 12 players) doubling and even tripling since 2017.

One natural growth strategy of this industry encompasses sponsoring sports athletes and competitions. However, the latest years have proven that companies are aiming to build and strengthen their relationships with their customers, as many leading sporting goods brands have worked over the past years to expand their D2C capabilities. Nike and Adidas have revealed big goals for their D2C channels, planning to expand digitally without sacrificing the power of physical storefronts (McKinsey, 2022).

Nonetheless, the industry is naturally affected by the evolution of demographics and economic development, meaning that the industry will see Asian companies certainly experience a significant growth. On the other hand, the western world companies will benefit with the rise in consumer purchasing power in the Americas and EMEA, as well as their brand globalization strategies, already being fruitful for Nike, Adidas and Puma in the Eastern hemisphere.

Appendix Table 11: Revenue Share of 12 biggest players (Refinitiv, Annual Reports)

	2017	2018	2019	2020	2021	2022 (LTM)
Nike Inc	35.4%	35.7%	35.2%	36.7%	36.0%	35.6%
Under Armour Inc	5.1%	5.1%	4.7%	4.4%	4.6%	4.3%
Lululemon Athletica Inc	2.4%	2.6%	3.0%	3.9%	3.6%	5.3%
VF Corp	11.4%	8.2%	9.2%	10.3%	7.5%	9.0%
Adidas AG	24.6%	25.3%	23.8%	20.6%	20.3%	17.8%
Puma SE	4.8%	5.4%	5.5%	5.9%	6.5%	6.2%
Asics Corp	3.7%	3.4%	3.1%	3.0%	3.0%	2.6%
Li Ning Co Ltd	1.4%	1.6%	1.8%	1.1%	2.8%	2.9%
Skechers USA Inc	4.3%	4.5%	4.7%	4.5%	5.1%	5.2%
Deckers Outdoor Corp	1.8%	1.9%	1.8%	2.1%	2.1%	2.5%
ANTA Sports Products Ltd	2.5%	3.6%	4.4%	5.1%	6.2%	6.0%
Columbia Sportswear Co	2.5%	2.7%	2.7%	2.5%	2.5%	2.6%

Appendix XV: Weighted GDP Calculation

Appendix Table 12: World Nominal GDP weighted by Nike's operational segments' revenue share (Own Analysis, OECD)

	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
North America GDP	4.20%	5.38%	4.12%	(2.24%)	10.06%	8.87%	4.59%	3.33%	3.65%	3.99%	3.83%	3.83%	3.83%	3.83%
Ponderation of Sales	44.30%	40.81%	40.65%	38.72%	38.57%	39.29%	39.25%	38.59%	37.51%	36.43%	35.54%	34.81%	34.13%	33.44%
EMEA GDP	7.53%	8.55%	(0.21%)	(3.18%)	16.86%	4.28%	3.29%	5.91%	5.74%	5.62%	5.57%	5.57%	5.57%	5.57%
Ponderation of Sales	23.20%	25.39%	25.08%	24.99%	25.72%	26.72%	27.68%	28.05%	28.05%	27.94%	27.89%	27.80%	27.74%	27.63%
Greater China GDP	9.25%	12.85%	3.60%	3.64%	19.39%	3.25%	5.04%	7.56%	8.24%	8.44%	8.82%	8.82%	8.82%	8.82%
Ponderation of Sales	12.33%	14.11%	15.87%	17.86%	18.61%	16.16%	15.31%	16.04%	17.58%	19.10%	20.20%	20.99%	21.58%	22.15%
APLA GDP	10.28%	7.54%	2.96%	(1.85%)	17.27%	6.40%	6.12%	7.25%	7.64%	7.74%	8.06%	8.06%	8.06%	8.06%
Ponderation of Sales	13.79%	14.19%	13.43%	13.44%	12.00%	12.75%	12.64%	12.37%	12.09%	11.91%	11.84%	11.93%	12.11%	12.35%
Converse (World)	6.33%	6.38%	1.68%	(2.53%)	13.62%	4.62%	4.55%	5.37%	5.51%	5.60%	5.60%	5.60%	5.60%	5.60%
Ponderation of Sales	5.94%	5.18%	4.87%	4.94%	4.95%	5.02%	4.90%	4.74%	4.56%	4.41%	4.32%	4.26%	4.23%	4.21%
Global Brand (World)	6.33%	6.38%	1.68%	(2.53%)	13.62%	4.62%	4.55%	5.37%	5.51%	5.60%	5.60%	5.60%	5.60%	5.60%
Ponderation of Sales	0.21%	0.24%	0.11%	0.08%	0.06%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.21%	0.21%	0.21%
Weighted GDP Factor	**6.55%**	**7.60%**	**2.67%**	**(1.39%)**	**14.58%**	**6.21%**	**4.49%**	**5.32%**	**5.61%**	**5.82%**	**5.90%**	**5.94%**	**5.98%**	**6.02%**

Appendix XVI: PPE, Intangibles, D&A and Goodwill

Appendix Table 13: Intangibles Schedule (Own Analysis)

Intangibles Schedule	**2018**	**2019**	**2020**	**2021**	**2022**	**2023E**	**2024E**	**2025E**	**2026E**	**2027E**	**2028E**	**2029E**	**2030E**
Intangibles Opening	283	285	283	274	269	286	296	291	313	307	328	335	348
(+) Capex	3	-	(9)	3	25	18	3	33	3	33	19	25	17
(-) Amortization	1	2		8	8	8	8	10	10	12	12	12	12
Intangibles Closing	**285**	**283**	**274**	**269**	**286**	**296**	**291**	**313**	**307**	**328**	**335**	**348**	**353**

Appendix Table 14: PPE Schedule (Own Analysis)

PPE Schedule	2018	2019	2020	2021	2022	**2023E**	**2024E**	**2025E**	**2026E**	**2027E**	**2028E**	**2029E**	**2030E**
PPE Opening	3,989	4,454	4,744	4,866	4,904	4,791	4,840	4,893	5,178	5,485	5,616	5,756	5,756
(+) Capex	1,028	1,119	1,086	695	758	887	951	1,710	1,840	1,969	2,095	2,221	2,354
(-) Depreciation	747	705	721	744	717	838	898	1,425	1,534	1,837	1,955	2,221	2,354
Other Adjustments	184	(124)	(243)	87	(154)	-	-	-	-	-	-	-	-
PPE Closing	**4,454**	**4,744**	**4,866**	**4,904**	**4,791**	**4,840**	**4,893**	**5,178**	**5,485**	**5,616**	**5,756**	**5,756**	**5,756**

Appendix Table 15: Forecast of CAPEX and D&A (Own Analysis, Nike)

	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
PPE Capex	1,028	1,119	1,086	695	758	887	951	1,710	1,840	1,969	2,095	2,221	2,354
% of Revenue	2.8%	2.9%	2.9%	1.6%	1.6%	1.80%	1.80%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Depreciation	747	705	721	744	717	838	898	1,425	1,534	1,837	1,955	2,221	2,354
% of Revenue	2.1%	1.8%	1.9%	1.7%	1.5%	1.70%	1.70%	2.50%	2.50%	2.80%	2.80%	3.00%	3.00%
Intangibles Capex	3	-	(9)	3	25	18	3	33	3	33	19	25	17
% of Revenue	0.01%	0.00%	-0.02%	0.01%	0.05%	0.04%	0.01%	0.06%	0.01%	0.05%	0.03%	0.03%	0.02%
Amortization	1	2	-	8	8	8	8	10	10	12	12	12	12
% of Revenue	0.00%	0.01%	0.00%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Goodwill	154	154	223	242	284	284	284	284	284	284	284	284	284
% of Revenue	0.42%	0.39%	0.60%	0.54%	0.61%	0.58%	0.54%	0.50%	0.46%	0.43%	0.41%	0.38%	0.36%
Total Capex	**1,031**	**1,119**	**1,077**	**698**	**783**	**905**	**954**	**1,743**	**1,844**	**2,002**	**2,114**	**2,246**	**2,371**
Total D&A	**748**	**707**	**721**	**752**	**725**	**846**	**906**	**1,435**	**1,544**	**1,849**	**1,967**	**2,233**	**2,366**

Appendix XVII: Debt, Retained Earnings and Cash Balances

Appendix Table 16: Debt Schedule Forecast (Own Analysis)

Debt Schedule	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
LT Debt Opening	3,477	3,474	3,470	9,409	9,413	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420
Current lease Opening	-	-	-	445	467	420	420	420	420	420	420	420	420
Lease Opening	-	-	-	2,913	2,931	2,777	2,465	2,641	2,850	3,067	3,281	3,491	3,702
Notes payable Opening	6	336	9	248	2	10	10	10	10	10	10	10	10
Total Debt Opening	**3,483**	**3,810**	**3,479**	**13,015**	**12,813**	**12,627**	**12,315**	**12,491**	**12,700**	**12,917**	**13,131**	**13,341**	**13,552**
LT Debt Issuance	(3)	(4)	5,939	4	7	-	-	-	-	-	-	-	-
Current lease Issuance	-	-	445	22	(47)	-	-	-	-	-	-	-	-
Lease Issuance	-	-	2,913	18	(154)	(312)	176	209	218	214	210	211	221
Notes payable Issuance	330	(327)	239	(246)	8	-	-	-	-	-	-	-	-
LT Debt Closing	3,474	3,470	9,409	9,413	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420
Current lease Closing	-	-	445	467	420	420	420	420	420	420	420	420	420
Lease Closing	-	-	2,913	2,931	2,777	2,465	2,641	2,850	3,067	3,281	3,491	3,702	3,923
Notes Payable Closing	336	9	248	2	10	10	10	10	10	10	10	10	10
Total Debt Closing	**3,810**	**3,479**	**13,015**	**12,813**	**12,627**	**12,315**	**12,491**	**12,700**	**12,917**	**13,131**	**13,341**	**13,552**	**13,773**

Appendix Table 17: Bond Interest Rate Schedule (Own Analysis)

	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Issued Bonds as of FY2022	8,920	8,920	7,920	7,920	5,920	5,920	5,920	4,420
Renewed Bonds	500	500	1,500	1,500	3,500	3,500	3,500	5,000
Total Bonds	9,420	9,420	9,420	9,420	9,420	9,420	9,420	9,420
Interest Rate of "Old Bonds"	3.05%	3.05%	3.14%	3.14%	3.33%	3.33%	3.33%	3.49%
LT Interest Rate of Renewed Bonds (OECD Forecast)	5.06%	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%
Total Interest Rate of Bonds	3.16%	3.13%	3.36%	3.36%	3.79%	3.79%	3.79%	4.06%

Appendix Table 18: Short-Term and Long-Term Interest Rates Forecast (OECD, Own Analysis)

	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Short-Term Interest Rate (OECD Forecast)	4.82%	4.32%	4.32%	4.32%	4.32%	4.32%	4.32%	4.32%
Long-Term Interest Rate (OECD Forecast)	5.06%	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%

By analyzing the interest rates for LT Debt (Bonds) and the interest rates for remaining debt instruments, it can be observed that the second has higher interest rates, which is rather unusual. However, this is justified by a large portion of previously issued bonds with fixed coupons lower than the ones of the renewed bonds. The significant proportion of previously issued bonds that mature after the end of the forecasting period (FY2030) with lower interest rates causes the total interest rate of bonds to be lower than the one of the remaining debt.

Remaining debt is comprised by Notes Payables, Current portion of operating leases and leases in the balance sheet, as Nike considers these instruments part of Total Debt.

Appendix Table 19: Retained Earnings Schedule (Own Analysis)

Retained Earnings Schedule	**2023E**	**2024E**	**2025E**	**2026E**	**2027E**	**2028E**	**2029E**	**2030E**
Opening Retained Earnings	3,476	3,035	2,605	2,205	1,931	3,131	4,219	6,194
(+) Net income	5,033	6,327	7,564	8,948	9,561	11,089	13,046	13,824
(-) Share Repurchases	(3,944)	(4,226)	(4,559)	(4,748)	(2,625)	(2,793)	(2,591)	(2,354)
(-) Dividends	(1,530)	(2,531)	(3,404)	(4,474)	(5,737)	(7,208)	(8,480)	(9,677)
Closing Retained Earnings	**3,035**	**2,605**	**2,205**	**1,931**	**3,131**	**4,219**	**6,194**	**7,987**

Appendix Table 20: Cash Schedule (Own Analysis)

	2023E	**2024E**	**2025E**	**2026E**	**2027E**	**2028E**	**2029E**	**2030E**
Opening Cash Balance	8,574	7,892	8,512	9,001	9,081	10,830	12,807	14,622
Cash from Operations	5,219	7,000	8,275	10,297	10,600	13,190	14,230	16,479
Cash from Investing	(952)	(953)	(1,187)	(2,366)	(1,858)	(2,577)	(2,710)	(2,858)
Cash from Financing	(4,950)	(5,426)	(6,600)	(7,850)	(6,993)	(8,636)	(9,706)	(10,655)
Closing Cash Balance	**7,892**	**8,512**	**9,001**	**9,081**	**10,830**	**12,807**	**14,622**	**17,587**
Short-Term Investments	**4,437**	**4,226**	**3,420**	**3,681**	**3,281**	**3,491**	**3,702**	**3,923**

Appendix XVIII: Cost of Capital Calculation

Appendix Table 21: Nike's Bonds Outstanding FY2022 (Refinitiv)

Description	Amount Outstanding	% of Total	Interest Rate	YTM	Coupon Class	Country of Issue	Currency	Is Convertible	Collateral
NKE 2.250 01-May-2023 '23	500,000,000	5.26%	2.25%	4.995%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 2.400 27-Mar-2025 '25	1,000,000,000	10.53%	2.40%	4.847%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 2.375 01-Nov-2026 '26	1,000,000,000	10.53%	2.38%	4.858%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 2.750 27-Mar-2027 '27	1,000,000,000	10.53%	2.75%	4.895%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 2.850 27-Mar-2030 '29	1,500,000,000	15.79%	2.85%	5.174%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 3.250 27-Mar-2040 '39	1,000,000,000	10.53%	3.25%	5.403%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 3.625 01-May-2043 '42	500,000,000	5.26%	3.63%	5.538%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 3.875 01-Nov-2045 '45	1,000,000,000	10.53%	3.88%	5.495%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 3.375 01-Nov-2046 '46	500,000,000	5.26%	3.38%	5.429%	Fixed Coupon	United States	U.S. Dollar	N	N/A
NKE 3.375 27-Mar-2050 '49	1,500,000,000	15.79%	3.38%	5.320%	Fixed Coupon	United States	U.S. Dollar	N	N/A
Total	9,500,000,000	100%	3.01%	5.18%					

Appendix Table 22: Damodaran's Synthetic Spread table (Damodaran's Website)

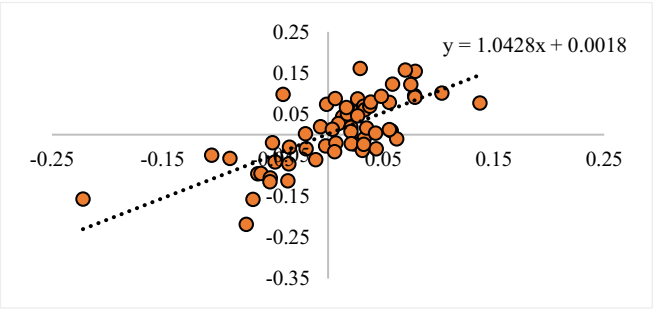
If interest coverage ratio is			
greater than	≤ to	Rating is	Spread is
-100000	0.499999	D2/D	14.34%
0.5	0.799999	C2/C	10.76%
0.8	1.249999	Ca2/CC	8.80%
1.25	1.499999	Caa/CCC	7.78%
1.5	1.999999	B3/B-	4.62%
2	2.499999	B2/B	3.78%
2.5	2.999999	B1/B+	3.15%
3	3.499999	Ba2/BB	2.15%
3.5	3.9999999	Ba1/BB+	1.93%
4	4.499999	Baa2/BBB	1.59%
4.5	5.999999	A3/A-	1.29%
6	7.499999	A2/A	1.14%
7.5	9.499999	A1/A+	1.03%
9.5	12.499999	Aa2/AA	0.82%
12.5	100000	Aaa/AAA	0.67%

Appendix Figure 4: Nike's 5Y monthly returns regressed on S&P500 (Refinitiv)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.732653
R Square	0.53678
Adjusted R Square	0.528929
Standard Error	0.055772
Observations	61

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.001774	0.007219	0.24568	0.806782461
X Variable 1	1.04282	0.126118	8.268571	1.92555E-11



The regression of Nike's latest 5 year monthly returns against the S&P500 yielded a levered beta of 1.04, a minor difference when compared to the levered beta yielded by the chosen peer group (1.01).

The author's preference for the peer group beta relies on the assumption that over time, the business risk of a firm will gradually equal that of its peer group, hence, the performance of similar companies is a better predictor of the company's future performance than the company's own previous performance. In addition, this approach eliminates any company-specific noise, by removing potential occurrences that could have distorted the company's historical beta.

Appendix Table 23: MRP and CRP per region (Own Analysis, Damodaran's Website, OECD)

EMEA	% of Region GDP	MRP	CRP
Africa	7.8%	9.49%	5.25%
Eastern Europe & Russia	14.3%	6.35%	2.11%
Middle East	9.3%	5.84%	1.60%
Western Europe	68.6%	5.07%	0.83%
		5.7%	1.4%
APLA	**% of Region GDP**	**MRP**	**CRP**
Asia	82.7%	5.28%	1.04%
Australia & New Zealand	4.4%	4.24%	0%
Caribbean	0.7%	11.07%	6.83%
Central and South America	12.1%	8.03%	3.79%
		5.6%	1.4%

Segment	MRP	CRP
North America	4.24%	0.0%
EMEA	5.7%	1.4%
APLA	5.6%	1.4%
China	4.94%	0.70%
Global Brand	5.26%	1.02%
Converse	5.26%	1.02%
World	5.26%	1.02%

Appendix Table 24: Calculation of MRP and CRP (Own Analysis)

	Revenue 2022	Revenue 2023E	Revenue 2024E	Revenue 2025E	Revenue 2026E	Revenue 2027E	Revenue 2028E	Revenue 2029E	Revenue 2030E
North America	39.29%	39.25%	38.59%	37.51%	36.43%	35.54%	34.81%	34.13%	33.44%
EMEA	26.72%	27.68%	28.05%	28.05%	27.94%	27.89%	27.80%	27.74%	27.63%
APLA	12.75%	15.31%	16.04%	17.58%	19.10%	20.20%	20.99%	21.58%	22.15%
China	16.16%	12.64%	12.37%	12.09%	11.91%	11.84%	11.93%	12.11%	12.35%
Global Brand	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.21%	0.21%	0.21%
Converse	5.02%	4.90%	4.74%	4.56%	4.41%	4.32%	4.26%	4.23%	4.21%
Weighted MRP	**4.97%**	**4.99%**	**5.00%**	**5.02%**	**5.03%**	**5.04%**	**5.05%**	**5.06%**	**5.07%**
Weighted CRP	**0.72%**	**0.75%**	**0.76%**	**0.77%**	**0.79%**	**0.80%**	**0.81%**	**0.82%**	**0.83%**

Appendix XIX: Long-Term Growth Rate (Weighted Inflation)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
North America	4.69	8.05	3.51	2.23	2.04	2.01	2.04	2.04	2.04	2.04
% Ponderation (of Sales)	38.6%	39.3%	39.2%	38.6%	37.5%	36.4%	35.5%	34.8%	34.1%	33.4%
EMEA	6.70	14.18	10.86	6.16	4.99	4.57	4.49	4.49	4.49	4.49
% Ponderation (of Sales)	25.7%	26.7%	27.7%	28.0%	28.0%	27.9%	27.9%	27.8%	27.7%	27.6%
Greater China	0.85	2.17	2.24	1.86	2.00	2.00	2.00	2.00	2.00	2.00
% Ponderation (of Sales)	18.6%	16.2%	15.3%	16.0%	17.6%	19.1%	20.2%	21.0%	21.6%	22.2%
APLA	3.69	3.50	5.89	5.06	3.73	3.45	3.32	3.24	3.24	3.24
% Ponderation (of Sales)	12.0%	12.7%	12.6%	12.4%	12.1%	11.9%	11.8%	11.9%	12.1%	12.3%
Converse & Global Brands (World)	4.70	8.75	6.52	4.13	3.56	3.38	3.33	3.33	3.33	3.33
% Ponderation (of Sales)	5.1%	5.1%	5.1%	5.0%	4.8%	4.6%	4.5%	4.5%	4.4%	4.4%
Weighted Inflation	**4.37%**	**8.19%**	**5.80%**	**3.72%**	**3.14%**	**2.96%**	**2.93%**	**2.91%**	**2.91%**	**2.91%**

Appendix Table 25: Weighted Inflation in (%) by Nike's Operational Segments (Own Analysis, OECD)

Appendix XX: Relative Valuation

Appendix Table 26: Choice of peers for Relative Valuation (Own Analysis, Refinitiv)

	Revenue (LTM)	Gross Margin	EBITDA Margin 5 YR Avg	Inventory Turnover (FY0)	LT Growth (Refinitiv)	Market Cap	Net debt (2022)	Total D/E (FY0)
Nike Inc.	**47,149**	**46.0%**	**14.2%**	**3.3**	**7%**	**168,259**	**(370)**	**61.7%**
Under Armour	5,683	46.5%	6.6%	2.7	4%	3,958	(337)	38.9%
Lululemon	7,061	57.7%	23.5%	3.3	19%	45,864	(1,260)	0.0%
VF Corp	11,791	54.5%	-3.2%	4.3	1%	12,955	4,145	153.5%
Adidas AG	**23,430**	**50.7%**	**13.1%**	**2.5**	**12%**	**24,819**	**1,828**	**70.9%**
Puma SE	**8,432**	**47.9%**	**6.3%**	**2.7**	**16%**	**7,932**	**777**	**63.5%**
Asics Corp	3,408	49.5%	5.9%	2.4	N/A	3,810	124	75.5%
Skechers	7,214	49.3%	10.4%	2.6	N/A	6,137	(271)	10.5%
Deckers	3,414	51.0%	13.0%	3.9	17%	9,133	(844)	0.0%
Li Ning	3,786	53.0%	17.4%	6.8	18%	19,296	(2,176)	6.3%
ANTA Sports	**7,965**	**61.6%**	**28.4%**	**2.9**	**15%**	**29,488**	**(674)**	**63.3%**
Columbia	3,424	51.6%	13.3%	2.5	N/A	5,069	(895)	0.0%

From the list of twelve possible peers suitable for relative valuation, only Adidas, Puma and Anta gathered all the requirements from size (revenue and market capitalization), profitability (gross margin and average EBITDA margin), long-term growth, capital structure (total D/E and net debt) and regional coverage.

Appendix XXI: Wall Street Target Price

Appendix Figure 5:Analysts 1-year target price for Nike (01/12/2022) (Refinitiv)