

# MASTER OF SCIENCE IN FINANCE

# MASTERS FINAL WORK PROJECT

EQUITY RESEARCH: NIKE, INC

DAVID TENREIRA DIAS MARQUES SILVA

**OCTOBER 2019** 



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**SUPERVISOR:** 

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## **Abstract**

This project contains the detailed valuation and the respective estimation of Nike, Inc intrinsic shares value for the fiscal 2020YE, according to ISEG's Master in Finance final work project.

The choice of Nike, Inc comes from my personal interest in footwear and sports apparel, and mainly from Nike products, which I've been using and wearing since my childhood days. The price target was obtained through an absolute valuation model, more specifically, the Discounted Cash Flow (DCF) model. In addition, we used the Relative Valuation approach as a complement method to support the final recommendations, and the Dividend Discount Model (DDM), with the purpose of obtaining the price target based on the discount of future dividends, since the company has an attractive dividend policy for investors, but with the limitation of a conservative payout ratio, resulted in a sell recommendation and unrealistic price target.

A sensibility analysis was performed in order to complement and support the investing recommendation. With a price target of \$88.66 at fiscal 2020 YE, an upside potential of 15.23% relative to the price on May 31<sup>st</sup> 2019, our final recommendation for Nike, Inc shares is to BUY, taking into consideration the risks that may occur and affect the company's performance.

#### Resumo

Este projeto contém uma avaliação detalhada e respetiva estimativa do valor das açõoes da Nike, Inc para o final do ano fiscal de 2020, tendo em conta o projeto final do Mestrado em Finanças do ISEG.

A escolha da empresa Nike, Inc deriva do meu gosto pessoal por ténis e roupa de desporto, especialmente da marca Nike, que eu tenho vindo a usar desde os meus tempos de criança. O preço-alvo foi obtido através de um modelo absoluto de avaliação, mais concretamente, o método do Flow to Equity (FTE). Adicionalmente, usámos o método de avaliação relativa, de maneira a complementar a decisão do método anterior e usámos ainda o método de Desconto de Dividendos, com o intuito de obter um preço-alvo baseado no desconto de dividendos futuros, uma vez que a empresa tem uma politica de dividendos atraente para os investidores, mas com a limitação de uma conservadora taxa de pagamento de dividendos, resultou numa recomendação de venda e um preço-alvo irrealista.

Foi realizada uma análise de sensibilidades de maneira a complementar e dar apoio à decisão de investimento. Com um preço alvo de \$88.66 no FA fiscal de 2020, um potential de valorização de 15.23% em relação ao preço em 31 de Maio de 2019, a nossa recomendação final é de compra das ações da Nike, tendo em consideração os riscos que poderão ocorrer e afetar o desempenho da empresa.

# **Acknowledgements**

The realization of this project was one of my biggest achievements and represented the end of the most important academic stage that I've ever had. I would like to thank to all the persons that had a relevant role along this journey.

First, to Professor Ana Venâncio for the guidance, time and patience that had for me during the realization of this project.

Secondly, to my parents that were always supportive and helped me kept motivated.

And Last but not least, to my friends for the support during this journey.

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# Nike, Inc

Buy

Medium risk 15 October 2019 U.S

# Nike, Inc: Leveraging the power of Mobile

(YE2020 Price Target of \$88.66 (+15.23%); recommendation is to Buy)

# 1. Research Snapshot

We initiate a **BUY** recommendation for Nike, Inc with a fiscal 2020YE price target of \$88.66 using the Discounted Cash Flow model, implying a 15.23% upside potential from the May 31<sup>st</sup> 2019 closing price of \$76.94. The relative valuation through multiples support our recommendation. On the other hand, the Dividend Discount Model recommends to sell. The potential downside from the last model arises from the conservative assumption of dividend payout ratio.

Nike is the leading footwear and sports apparel company, with a market share of 35%. As global inflation decreases, CPI levels are rising and purchasing power has become one of Nike's main growth driver. The other main growth driver is the expansion of E-commerce in China.

Nike will grow revenues in all its four regions and increase margins in China. The company will develop and expand its Digital App in more countries, reinforce relationships with Chinese retail partners and sponsor China's top athletes in order to increase participation in sport and fitness in that region. The combinations of these strategies with the macroeconomic prospects in U.S, China and the global outlook, result in total revenues increase at a CAGR of 8.56% between 2019-24F.

The company has a solid financial position, mainly resulted from the overall increase in demand. Nike is mostly financed with equity (71%) and it has the ability to generate positive operating cash flows. The combination of these two factors leave the company with margins to allow investments in manufacturing capabilities (CAPEX) and to increase its advertising costs, in order to gain more market share.

The main risk issues of Nike are related to failure in delivering products that satisfy consumers constant changing preferences, macroeconomic factors that may lead to a decrease in the purchasing power of consumers, and political instability, related to trade wars and regulation, that may lead to a slowdown in production, and a consequent increase in the selling price of products.

Figure 1 – Nike Shares Price Movement

94.88
90.00
70.00
50.00

Source: Reuters

Table 1 - Analyst's Risk Assessment

Low Medium	High
------------	------

Source: Author

Table 2 - Market Profile

Market Profile		
Previous Close	\$ 93.88	
Open price	\$ 94.20	
Volume	1,257,584	
52 Week High	\$ 95.25	
52 Week Low	\$ 66.53	
Shares Out (MIL)	1,561.05	
Market Cap (MIL)	\$ 146,551.60	
Dividend (Yield %)	0.94	

Source: Author, Reuters Data

Table 3 - Valuation Output

Valuation	YE 2020 TP	Potential
DCF	\$ 88.66	15.23%
Multiples	\$ 79.45	3.26%
DD Model	\$ 27.78	-63.90%

Source: Author

## 2. Business Description

**Nike, Inc** is an American multinational corporation, founded in 1967 and based in Oregon, United States of America. Nike is traded in the New York Stock Exchange (NYSE) with the NKE symbol and its main business activity is the design, development, marketing and selling of athletic footwear, apparel, equipment, accessories and services. It is the world's largest supplier of athletic shoes and apparel. The company has approximately 76,700 employees worldwide, including retail and part-time employees and sell its products through Nike-owned retail stores and through digital platforms. Its portfolio brand consists of **NIKE**, **Jordan**, **Hurley** and **Converse**.

#### **Key Brands**

**NIKE** is the main brand and designs athletic footwear and apparel primarily for athletic use, although a large percentage of products are worn for casual purposes. Nike does also design shoes and apparel for outdoor activities like golf, tennis, baseball, soccer, volleyball, bicycling, cheerleading, wrestling, aquatic activities, hiking and other athletic uses. Regarding equipment, Nike brand sells a line of performance equipment that includes sport balls, skates, eyewear, gloves, bats and other equipment designed for sports activities. Nike is also selling accessories like timepieces and electronic media devices.

**Jordan Brand**, is responsible for designing, distributing and licensing footwear, apparel and accessories usually focused on basketball using the Jumpman trademark, its sales are reported within the respective Nike brand geographic operating segments.

**Converse**, a company purchased by Nike on September 4, 2003, is a wholly-owned subsidiary brand headquartered in Boston, Massachusetts, designs and distributes athletic and casual footwear, apparel, and accessories under the Converse, Chuck Taylor, All Star, One Star, Star Chevron and Jack Purcell trademarks. Converse brand sales are reported on a stand-alone basis.

**Hurley** International LLC is another wholly-owned subsidiary, headquartered in Costa Mesa, California and is responsible for designing and distributing a line of action sports apparel for surfing, skateboarding, snowboarding and youth lifestyle apparel and footwear under the Hurley trademark. Its sales are included in the Nike brand's North America geographic operating segment.

#### **Business Units**

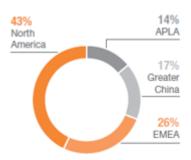
Nike brand products are offered in six key categories: Running, Nike Basketball, the Jordan brand, Football, Training and Sportswear.

Sportswear, Running and the Jordan brand are currently the top-selling footwear categories while Sportswear, Training and Running are the top-selling apparel categories and the company expects these categories to keep on leading its sales.

Although Nike brand offers these six categories, they report its sales by major product line: **Footwear**, **Apparel** and **Equipment**, which contributed, in 2019, with 65%, 31% and 4% for the total Nike brand revenues, respectively.

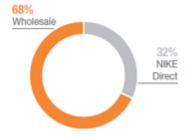
**Footwear** – In 2019, footwear revenues increased by 12% due to growth in nearly all key categories, led by Sportswear. Unit sales increased by 8% and a higher average selling price (ASP) per pair generated 4% of footwear revenue growth. For this product line the company was supplied by 112 footwear factories located

Figure 2 - Sales by Region



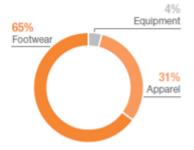
Source: Author, Company Data

Figure 3 – Sales by Distribution Channel



Source: Author, Company Data

Figure 4 - Sales by Product



in 12 countries. The country that contributed with more manufactured products was Vietnam (49%), followed by China and Indonesia, which manufactured approximately 23 and 21% of total Nike footwear, respectively.

**Apparel** – In 2019, apparel revenues increased by 11% due to growth in nearly all key categories, led by Sportswear. Unit sales increased by 6% and a higher ASP per unit generated 5% of apparel revenue growth. The company had, during 2019, 334 apparel factories located in 36 countries and the one that contributed with more manufactured apparel was China (27%), followed by Vietnam and Thailand which manufactured approximately 22 and 10% of total Nike apparel, respectively.

#### **Geographic Units**

The company reports its operations based on geographic location and each geographic segment operates in one industry: the design, development, marketing and selling of athletic footwear, apparel and equipment. Nike brand reportable operating segments are: North America, Europe, Middle East & Africa (EMEA), Greater China and Asia Pacific & Latin America (APLA). These segments include Nike, Jordan and Hurley operations. Converse is reported as another operating segment, including operations directed to consumers and digital commerce.

**North America** – It is the region that most contributed with revenues for the Nike brand, representing 43% of total revenues and registered a growth of 7% in the fiscal year of 2019, driven by the growth in nearly all key categories, led by Sportswear.

**Europe Middle East & Africa** – It is the second region that most contributed with revenues for the Nike brand, representing 26% of total revenues and registered a growth of 11% in the fiscal year of 2019, driven by the growth in nearly all key categories, led by Sportswear.

**Greater China** – It is the third region that most contributed with revenues for the Nike brand, representing 17% of total revenues and registered a growth of 24% in the fiscal year of 2019, driven by the growth in nearly all key categories, led by Sportswear, the Jordan brand and Nike Basketball.

Asia Pacific & Latin America – It is the region that least contributed with revenues for the Nike brand, representing 14% of total revenues and registered a growth of 13% in the fiscal year of 2019, driven by high revenues in every territory and by the growth in nearly all key categories, led by Sportswear and Running.

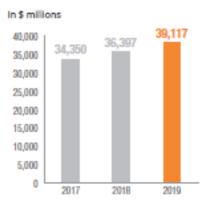
#### **Company Strategies**

**Nike App expansion**: The Nike App is a digital platform, present in USA and six European countries (France, Germany, Italy, Netherlands, Spain and UK), where customers can view and shop their favorite items from anywhere. Nike App had a triple-digit revenue growth in 2019 and the company intends to increase even more its revenues for the next years by launching the Nike App in China and in 13 new EMEA markets.

Introducing new digital concepts: Nike is planning to introduce and develop, in the last quarter of 2019, a new digital concept in order to solve some of the consumer's problems related with sizing. Usually, three out of every five people are likely to wear the wrong size shoe, said Nike. Their solution for this problem is called Nike Fit, an app that will allow consumers to scan their foot either through their smartphone or through their camera, in order to get "hyper-accurate" sizing

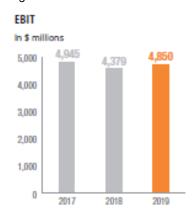
Figure 5 - Total Revenues

#### REVENUE



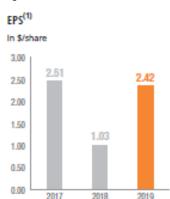
Source: Author, Company Data

Figure 6 - Nike's EBIT



Source: Author, Company Data

Figure 7 - Nike's EPS



recommendation for their shoes. The tool uses augmented-reality technology to scan the feet with a smartphone camera and sizing predictions are programmed using artificial intelligence. With this new concept, the company intends to reduce returns by consumers and save costs from shipping.

**Manufacturing reinforcement**: Nike digital has been in great demand for the last year and to fulfill the constant needs of customers, the company intends to make significant investments in its manufacturing capabilities by building an additional manufacturing center in the United States. One of the company main goals is to create the best product while respecting workers and the environment, therefore, Nike is teaming up with academic partners in order to explore new methods to increase the value created in factories and share it with workers.

**Improve of Data Analysis**: The company needs to keep the tracking of its inventories and place them according to the belonging category. In order to satisfy this need and to improve data information, Nike has launched and is improving, in 2019, radio frequency identification (RFID), one of its best tools to complete the view of its inventories and to meet a consumer's specific need at any time.

**Environment protection**: Nike is minimizing its environmental footprint with a target of 100% renewable energy globally by 2025 and driving sustainability through recycled material in its sneakers soles. Nowadays, 75% of all Nike shoes and apparel contain some recycled material.

**Cost leadership**: Nike uses outsourced manufactured units. This allows the company to cut costs by employing workers at a reduced rate or paying less than it would for an associate of the firm. This strategy allows Nike to invest additional profits in other business areas such as advertising.

**Product Development**: This is an intensive strategy that involves the introduction of new products to grow sales revenues. The company is focused on innovation applied to shoes through new concepts and designs. With the use of cutting edge technology in the design of sport shoes, apparel and equipment, the company is able to differentiate its products from competitors and satisfy some of the consumer preferences.

**Market Development**: This strategy consists of targeting new markets or market segments in order to increase market share and boost the revenues of the company. For example, Nike entered in new markets in China to increase its athletic shoe revenues and gain market share in a developing region. Nowadays, Nike brand has a global presence.

**Marketing Capabilities**: Nike is one of the best marketers in the industry. The footwear industry is highly competitive due to the presence of a large number of local and international players, therefore, it is important to have a differentiated marketing policy, that's why Nike usually invests 10% of total sales (around \$3,5 B), in marketing, not only by contracting athletes, actors and artists to be the face of their brand, but also to show emotional branding, by transmitting motivational messages and stories to overcome adversity, like the slogan "Just Do It".

## Management and Corporate Governance

Nike, Inc follows an **Anglo-Saxon model** (one-tier system) and it is constituted by a Board of Directors, an Audit Committee and a Statutory Auditor (PwC).

The Board of Directors supervise the global risks that the company is facing and consider it in their business decisions as part of the company strategies. In order to oversee critical risks, the Board is broken down in 4 committees: **Audit & Finance Committee**, which provides assistance to the Board in meeting its legal and fiduciary obligations; **Compensation Committee**, which its main tasks are to evaluate CEO's performance and approve compensation of executive officers; **Corporate, Responsibility, Sustainability & Governance Committee**, which oversees the company's community, corporate reputation and impact efforts; and **Executive Committee**, which is authorized to act in place of the full board when there are conflicts.

#### **Board Members**

The Board of Directors is composed by 12 members which are part of a specific committee. The **Audit & Finance Committee** is administrated by **John G. Connors**, who has a bachelor degree in accounting from the University of Montana and is a Nike board member since 2005; **John J. Donahoe II**, has a bachelor's degree in economics from Dartmouth College, an MBA from Stanford Business School and is a Nike board member since 2014, and **Alan B. Graf, Jr.**, the Chairman of the Committee, has a bachelor and master's degree in business administration from Indiana University, is a board member since 2002 and it is the Chairman of the University of Memphis.

The Compensation Committee is administrated by Cathleen A. Benko, who holds an MBA degree in business administration from Harvard Business School, it is the Vice Chairman of Deloitte LLP since 2011 and is a Nike board member since 2018; Elizabeth J. Comstock, has an undergraduate degree from The College of William & Marry and is a board member since 2011, and Timothy D. Cook, the Chairman of the Committee, has a bachelor's degree industrial engineering from Auburn University and an MBA in business administration from Duke University, he is the CEO of Apple, Inc since 2011 and is a Nike board member since 2005.

The Corporate, Responsibility, Sustainability & Governance Committee is administrated by Peter B. Henry, who has a bachelor's degree in economics from The University of North Carolina, a PhD in economics from the Massachusetts Institute of Technology and is Nike board member since 2018; John C. Lechleiter, has a bachelor's degree in chemistry from Xavier University and a masters and doctoral degrees in organic chemistry from Harvard University, he is the CEO of Eli Lilly Company and is a Nike board member since 2009; John W. Roger, has a bachelor's degree in chemistry and in physics from the University of Texas, is the Chairman of Ariel Investments LLC since 1983 and is a Nike board member since 2018, and Michelle A. Peluso, the Chairman of Pennsylvania's Wharton School of Business, a graduate degree from University of University and is a Nike board member since 2014.

Finally, the **Executive Committee**, is administrated by **Travis A. Knight**, who has a bachelor's degree in social science from Portland State University, is the CEO of Laika Inc and is a Nike board member since 2015, and **Mark G. Parker**, Chairman of the Committee, of the Board and CEO of the company, has a

Figure 8 – Board Overview by Gender
GENDER DIVERSITY



Source: Author, Company Data

Figure 9 – Board Overview by Ethnic GENDER/ETHNIC DIVERSITY



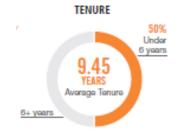
Source: Author, Company Data

Figure 10 – Board Overview by Age



Source: Author, Company Data

Figure 11 - Board Overview by Tenure



bachelor's degree in Political Science from Penn State University, is a board member of Walt Disney Co since 2016 and President/CEO of Nike since 2006.

#### **Shareholder Structure**

Nike, Inc shares are divided into two classes: Class B Common Stock and Class A Common Stock.

Class B Common Stock is listed on the NY Stock Exchange under the symbol NKE. As of July, 2019, there were 1.253 billion shares, 23,305 holders, each shareholder is entitled to one vote at the annual meetings and this class elects three directors.

Class A Common Stock is not publicly traded but each share is convertible into one share of Class B Common Stock, there were 315 million shares, 13 holders as of July, 2019, each shareholder is entitled to one vote at the annual meetings and this class elects nine directors.

The major individual shareholders of Nike are Philip Knight (second largest individual shareholder), one of Nike's founders, with 26 million Class A shares and 19.1 million Class B shares; Travis A. Knight (largest individual shareholder), Nike founder Phil Knight's son and current CEO of the company, as of Q3 2019, he holds 20,273 shares directly, and 291 million Class A Nike shares through its subsidiaries; Mark Parker, Nike's Chairman, as of Q3 2019, he holds nearly 2 million shares, and Trevor Edwards, the fourth largest individual Nike shareholder, as of Q3 2019, he holds nearly 1.79 million shares. The individual stakeholders represent only 2.49% of total ownership. Nearly 85%

The individual stakeholders represent only 2.49% of total ownership. Nearly 85% of the shares held by the company are owned by institutional shareholders and the top 10 mutual funds/institutions can be seen in table 4.

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Table 4 – Top 10 Institutional Shareholders

			in dollars
Holder	Shares	% Out	Value
Vanguard Group, Inc. (The)	105,374,269	8.42%	8,846,169,882
Blackrock Inc.	87,672,220	7.00%	7,360,082,869
State Street Corporation	59,445,682	4.75%	4,990,465,003
Capital World Investors	42,141,938	3.37%	3,537,815,695
Capital Research Global Investors	37,237,555	2.97%	3,126,092,742
Wellington Management Company, LLP	28,019,010	2.24%	2,352,195,889
Bank Of New York Mellon Corporation	25,925,764	2.07%	2,176,467,887
FMR, LLC	25,676,391	2.05%	2,155,533,024
Price (T.Rowe) Associates Inc	24,003,576	1.92%	2,015,100,205
Jennison Associates LLC	23,510,331	1.88%	1,973,692,287

Source: CNN Business

#### **Share Repurchases**

Nike board of Directors have approved, in June 2018, a four-year program to repurchase shares in \$15 billion. As of August 31, 2019, a total of 23.5 million shares had been repurchased under this program for approximately \$2 million.

#### **Corporate Responsibility**

Nike's purpose is organized around three main pillars: Sustainability, Social and Community Impact, and Diversity & Inclusion. The Corporate, Responsibility, Sustainability & Governance Committee is responsible for reviewing and evaluate Nike's significant strategies, contracting manufacturer labor practices, participating in charitable activities, providing oversight of the company's community and social

Figure 12 - Types of Shareholders



Source: Author, CNN Business

impact efforts, among other duties.

Nike teams focus on sustainability. The company has a **Sustainable Business & Innovation team** that connects sustainability and leadership across its business chain, including innovation and product creation, sourcing, logistic and retail.

The company has sustainability focused teams in the areas of product creation, Nike Direct, global sourcing & manufacturing, supply chain and brand. These teams report to the leaders of those areas that end up meeting directly with the SB&I team to discuss responsibility issues and implement or change sustainability policies.

In 2012, Nike launched the **Sustainable Manufacturing and Sourcing Index** (SMSI), a system that combines factory manufacturing and human resource management with health, safety and the environment. The system considers environmental and human resource management performance equally weighted with business metrics, increases transparency to reduce noncompliant practices, and creates incentives to improve performance and go beyond compliance. The SMSI has become a very important factor when it comes to factory selection, encouraging performance improvement, eliminating underperformance in factories, driving business to those that perform best and protect the rights of workers to create a safe working environment.

Nike has also launched the **Materials Sustainability Index** (MSI), an index that allows the company to choose the best materials from the "healthiest vendors", by comparing the environmental footprints of more than 50 million different materials, supplied by more than 700 vendors. The index considers the chemicals, the energy, the water and the wastes used when making materials and provides a score for the materials based on these environmental factors, forming the basis for how the company measures product sustainability. By using the MSI, Nike teams can choose materials with lighter environmental footprints and improve the sustainability scores of products by using better materials, such as cotton that is recycled, or using materials that required fewer chemicals.

*Table 5* – Fiscal 2019 Salary of Named Executive Officers

Named Executive Officers	Fiscal 2019 Salary	%Change
Mark G. Parker	\$1,700,000	9.7%
Andrew Campion	\$1,050,000	7.7%
Eric D. Sprunk	\$1,150,000	4.5%
Elliott J. Hill	\$1,150,000	N/A
Hilary K. Krane	\$1,050,000	16.7%

Source: Author, Company Data

# 4. Industry Overview and Competitive Positioning

#### **Macroeconomic Environment (Demand & Supply)**

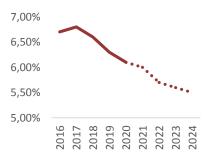
There are several macroeconomic factors that contribute to a favorable environment in the footwear industry. In order to analyze these factors and the competitive environment of the industry, a **PESTL** analyze was made and it was also included the effect in demand and supply for each factor.

**Political factors**: Different policies, such as minimum wages, hygienic working conditions in factories and stipulated working hours per week are critical factors for companies to establish manufacturing bases in China while keeping the R&D at their home countries. Political crises or instability can lead to substantial currency exposure.

**Economic factors (by region)**: The inflation rate, purchasing power of customers and labor costs in **China** have a huge impact on company's sales.

China increased its inflation from 2.1 to 2.8% during July 2018-19 and consumers spent, on average, 9% more which helped China GDP to continue to increase but at a lower growth rate during 2017-18, by 6.6%. The rise in consumer price index (CPI) levels (approximately 3 index points) between 2017-19, reflected an increase of 21% YoY in Nike's revenues for the region, from 2017 to 2019. China's GDP is expected to continue to grow in the short term (around 6% YoY) and to decline slightly in the

Figure 13 - China GDP Growth



Source: Author, IMF Data

medium term, mainly, due to the trade war with the USA. The inflation rate is expected to increase from 2.5 to 3%, between 2020 and 2023.

In the last two years, we have seen a constant decrease in the inflation rate of **USA**, from 2.1 to 1.7% during 2017-19, nevertheless, CPI has been increasing, consumers spent more 3.6% in 2019 than in January 2018 and GDP increased 5% during 2017-18. One of the factors that contributes to the increase in consumption is the decline in interest rates that went from 2.5% in 2018 YE to 2% in September, 2019. With the decline in interest rates, people do not have incentives to save their money and this leads to more investment and consuming. Nike revenues increased 7% in North America, from 2018 to 2019.

The US revenues regarding total footwear market amounts to \$91.2 billion in 2019 (+2.4% vs 2018) and the market is expected to grow annually by 2.3% (CAGR 2019-23), according to Statista projections. North America's GDP is expected to continue to growth but at a slow pace, while inflation rate is expected to increase in the next years.

In **Europe**, GDP expanded 1.4% YoY in the 2Q of 2019, the growth rate has been decreasing since 2017 (from 2.9 to 1.4%) mainly due to the downturn in the German economy and the likelihood that Britain will leave the European union. GDP is expected to increase in a level of 1.7% for the next four years. Inflation rate has not change much during the last years and it is expected to increase slightly in the next years, from 2.2 to 2.4%, during 2019-23.

Regarding emerging markets, **Middle East and Africa's** GDP growth rate decreased, from 5.3 to 1.3%, during 2016-19. The main cause of this decline is the slower oil sector growth in some countries, the trade tensions between US and China, and geopolitical tensions in other countries. For the next four years, GDP is expected to grow YoY around 2.8%. Inflation rate has been decreasing, from 13.7 to 9.2%, between 2017-19, reflecting cheap oil prices and a downturn in certain real estate markets such as Qatar and Saudi Arabia. Inflation is expected to keep on decreasing YoY to a level of 8.4% in the next four years.

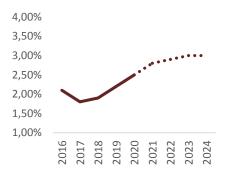
Latin America had a sharp decline in GDP until 2015 (-0.6% growth rate) and then started to improve its economy and had positive growth of 1.4% in 2018. With the elevated policy uncertainty in some large economies of the region and the US-China trade tensions, the region expects to have a slow pace recovery for the next years. In Asia and Pacific, GDP growth rate has been declining, from 5.8 to 5.1%, between 2017-19, mainly due to the global expansion that began in 2015 and which is becoming less synchronized across economies. The trade tensions between US and China, climate change and natural disasters, contribute for this economic slowdown. The GDP of the region is expected to maintain a level of 5.2% growth rate during the next four years. The inflation in Asia Pacific & Latin America decreased from 7.1 to 5.6%, between 2017-18 and it is expected to keep decreasing until a level of 3.5%, in 2024, contributing to an increase in the purchasing power.

The **Global Economic outlook** is **uncertain**. Global GDP growth rate has been decreasing since 2017, from 3.8 to 3.3%, in 2019, and reflects the uncertainty regarding the trade war between China and US, a conflict that is also monetary and technological and led already to a slowdown in industrial production and a diversion of investments. Global GDP growth rate is expected to increase to a steady level of 3.6% during the next four years, according to International Monetary Fund projections, but it might be lower due to the recent events that are occurring, mainly, the military tension between US and Iran, that have already led to rising oil prices and may result in a scenario of economic stagnation, followed by inflation, and the possibility of United Kingdom leaving European Union without a deal, which may lead to monetary wars if euro and pound depreciate against the dollar.

The Global inflation rate decreased from 3.7 to 3.6%, between 2018-19, and it is expected to decline to a level of 3.4% for the next four years, reflecting an increase in consumer's purchasing power.

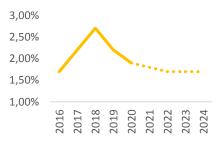
Despite the global uncertainty outlook, the footwear industry has not seen its demand levels decreasing, and therefore, it is expected to show an annual growth rate (CAGR 2019-23) of 8.3%, according to Statista projections.

Figure 14 - China Inflation Rate



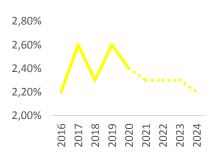
Source: Author, IMF Data

Figure 15 - U.S GDP growth



Source: Author, IMF Data

Figure 16 - U.S Inflation Rate



Source: Author, IMF Data

**Social factors**: As of 2018, consumers who buy footwear products are mainly between 25-34 years old, representing 33.2% of total share, followed by consumers between 35-44 years (23.9%) and 18-24 years (22.6%). Regarding gender, 51.9% of users are females, while 48.1% are males, and 39% of users are in the high income group, followed by the medium income (32%) and the low income group (29%), where the high income group refers to people that earn > \$12,375, medium group between \$1,026-12,375 and low income refers to people that earn < \$1,025 per month. Nike focus its advertising on motivational messages to overcome difficulties and tries to transmit the benefits of doing sports to become a healthier person and to regain self-confidence.

As obesity rate is rising and people are becoming more "health conscious", this translates into more individuals moving towards better lifestyles, buying more footwear and sports apparel. In most countries, participation in sports Is already embedded in their culture. In the footwear industry, brand preferences and high quality over price have a great value.

**Technological factors**: Social media and the increase in ecommerce allows marketing and revenues of footwear and apparel companies to increase.

New technologies are emerging, allowing corporations to improve their sneakers, increase its comfort, performance and become more energy efficient as well as reducing manufacturing costs.

**Legal factors**: Some companies in this sector avoid paying substantial amount of taxes (shifting of profits to offshore tax havens).

Companies have to make sure that all their promotions give a true representation of the products being advertised, in order not to break the laws of the Trade Descriptions Act.

#### **Effects in Demand and Supply for PESTL Factors**

The increase of regulation in China regarding labor rights and conditions have a negative impact in supply because companies will have to pay more for their labor in order to maintain the production. The World real GDP has been increasing since 2016, from 3.1% to 3.66% annual growth rate in 2018.

Employment rate has always been increasing from 2013 to 2018, in European Union and United States. In 2017, 60.1% of people from United States and 70.2% from European Union were employed. The raise of GDP and the increase in the employment rate have a positive influence in the environment, it can reflect an increase in the purchasing power of families which leads to a higher demand for footwear products, and consequently, will increase the supply and generate more revenues for the companies of the industry.

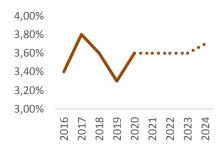
Ecommerce markets shows a different view of products and attract customers that prefer to shop on online platforms. This contributes to a very positive impact in demand and supply.

The low amount of taxes paid by Nike, by sharing profits to subsidiaries in tax-free territories, through the payment of royalties for trademarks, allows the company to invest more in new products and develop their production, contributing to an increase in supply.

The false advertisement of promotions by the company may damage the brand and change consumer's preferences, which will have a negative impact in demand.

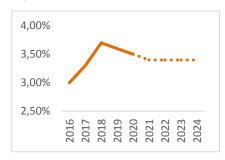
With this being said, it is possible to conclude that footwear's industry environment has a positive demand and supply effect that has been increasing over the past 4 years, and so, it has been satisfying both, the customers and the supplier firms.

Figure 17 - Global GDP Growth



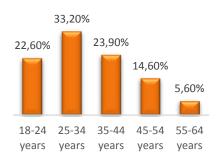
Source: Author, IMF Data

Figure 18 - Global Inflation rate



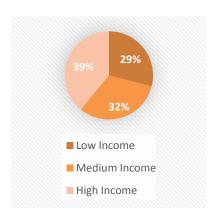
Source: Author, IMF Data

Figure 19 - Consumers by Age



Source: Statista

Figure 20 - Consumers by Income



Source: Statista

#### **Key Drivers of Industry Profitability**

In order for the footwear companies to become more competitive and improve its performance, it is necessary to analyze the key drivers of profitability, the challenges that they face and the solutions to mitigate some of the issues.

Main Revenue Driver: One of the main revenue driver is the brand power because the biggest names in the footwear industry, such as Nike and Adidas will always have the upper hand relative to other brands since they are well established in the industry and the increasing number of stores helps them boosting their revenues. The increase in purchasing power of consumers is also a key revenue driver since it allows families to have more money available to spend on goods, and consequently, to consume more products.

The other main factor is **innovation** – In a sector like footwear, new designs are important factors, so you can't always be making the same product over and over. Therefore, idealizing new products and pushing through the "status quo" will attract new customers and thus increase revenues.

**Main Cost Driver**: The main cost driver is **marketing**. Whether to advertise or persuade athletes/teams to sign contracts and to make ads, footwear companies spend a lot of money.

**Challenges**: There are several challenges that footwear companies are facing and need to adapt/overcome in order be more competitive:

One of the main challenges is the **environmental impact of production**. Over the years, footwear companies have been pressured to change their way of production, since the shoe making process uses materials that are very harmful to the environment and can't be recycled, such as leather. Nike and Adidas have been releasing new products using "environment friendly materials such as fly leather and shoes made out of ocean plastics.

Another challenge that footwear companies face is the **emergence of online commerce**. More and more, customers prefer the online platforms to make purchases. Once there, customers can see the different models and colors, which might not be available in the physical stores. Furthermore, customers also have at their disposal critiques from other people regarding the same products.

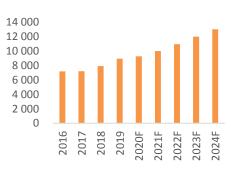
The **limited fulfillment capabilities** are also affecting the footwear and apparel companies. The technology and processes of heritage systems and operations are quickly becoming ineffective. Upgrades to warehouse management systems, inventory controls and the development, or optimization, of an e-commerce platform are essential.

Lastly, the **increase in complexity of supply chain**, as the channels to generate revenue increase. Tracking inventory and creating efficiencies can be key differentiators in the footwear sector. The more streamlined your supply chain is, the greater impact it can have on your bottom line.

In order to mitigate some of these challenges, companies have implemented several actions:

- The use of recycled materials. Nike and Adidas have already launched new products using environment materials such as fly leather and shoes made out ocean plastics and old fishing nets;
- A creation of a line of shoes that sells only on physical stores (allowing an increase in the final price);

Figure 21 – Marketing expenses (M\$)



Source: Author, Company Data

 An upgrade to the warehouse and inventory management systems and the optimization of the online platforms.

#### **Competitive Position**

Table 6 - SWOT analysis

Strengths	Weeknesses
- Brand Image	- Overdependence of US
- International Presence	Market
- Distribution Network	<ul> <li>Increasing marketing</li> </ul>
- Diversified products	expenses
- Innovation	- Dependence of China for
- Online Markets (Nike apps)	manufacturing
Opportunities	Threats
- Mergers and Acquisitions	- Competitive Pressure
- International Expansion	- Fraud Products
- New product lines	- Economic Environment

Source: The Author

#### Porter's 5 Forces

**Threat of New Entrants (Low)**: Nowadays, it is not easy to get in the footwear industry, there are several factors that create barriers to entry.

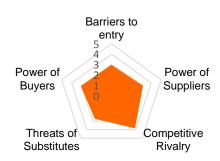
New companies need to get access to inputs used in the manufacturing of shoes. They have to spend time and a lot of money on marketing to get a brand awareness (the market is becoming saturated with small enterprises) and then, they would also need to get access to distribution and wholesalers. The emergence of ecommerce, however, might facilitate the entry of small shoe and apparel manufacturing.

**Bargaining Power of Suppliers (Low)**: There is a high overall supply of raw materials used in the industry and the suppliers are largely spread all over the globe. There is also an importance of volume for suppliers because they focus on the amount of raw materials supplied rather than on price.

**Bargaining Power of Buyers (High)**: There are low switching costs from one sneaker brand to another and a wide variety of brands to choose from. These days, consumers have a lot of information, they can easily find what they are looking for at the best possible price. The amount of product differentiation facilitates consumers on picking something different and do not force them to stick to one single type of shoe/brand.

Threat of Substitutes (Moderate): The switching costs are very low within the industry, from brand to brand. Nowadays, consumers may be inclined to try substitutes as there has more comfortable shoes and apparel appeared in the market, at a lower price than big brands like Nike and Adidas. The appearance and trading of replicas and fake shoes on the black market, manufactured in China and exported to US, is also a threat for Nike. The counterfeit brand-name shoes is a multi-million dollar criminal industry. The price-performance trade-off of substitutes, however, is a valuable factor that influences buyers. Not all sneakers perform the same way, specially the athletic ones, that's why most people prefer the quality and

Figure 22 - Porter's Five Forces



design of Nike products, the most recognized and wanted brand. Overall, the threat from substitute products is moderate.

**Competitive Rivalry (High)**: In the footwear industry, there are a lot of firms competing to be the best in a specific area and there is an emphasis put on non-price competition.

The companies are increasing its range of products in order to capture more market share, Nike for example, implemented in 2019 a new core footwear that features Air Max and Zoom Air, investing, therefore, in the creation of hybrid shoes.

The marketing and advertising are very important to attract consumers and the brand image/customer loyalty is a huge factor that determines consumer's preferences. As said before, Nike is known for its strong marketing strategy, the company usually invests 10% of its revenues in marketing. In 2019, marketing expenses amounted to \$3.7 billion (+\$475 million vs 2016), and Adidas invested, in 2017, \$2.8 billion, an increase of \$800 million since 2014, reflecting the high level of competition in the sport shoes and apparel industry.

## 5. Investment Summary

The final recommendation for Nike, Inc stands for **BUY**, with a price target of \$88.66 and an upside potential of 15.23% relative to the price on May 31st 2019.

The main drivers of Nike's future prospects are: Purchasing Power and the E-commerce in China. Despite the global slowdown in economy, GDP is expected to grow at a steady rate and global inflation is expected to decrease, contributing to an increase in purchasing power. The region that most contributes for Nike's revenues (41%), North America, has been growing over the past few years despite some political instability, its inflation levels are declining and the consumer price index is increasing, reflecting higher levels of purchasing power. China is increasing its CPI levels and it is the region that has shown the highest demand over the past three years. This is already reflected in Nike's revenues. China is the only region that has always been increasing its weight in the total company's revenues, from 11.7% to 15.9%, between 2016-19, and it is expected to continue this growth over the next years, mainly due to the emerging of E-commerce and the collaborations of Nike with China's main retailers (Tmall) and social media platforms (WeChat).

#### **Valuation Methods**

The final price target of \$88.66 was computed using the Discounted Cash Flow model (DCF). The Relative Valuation through Multiples supports the final recommendation, with an average price target of \$79.45 and an upside potential of 3.3%. Both methods indicate that Nike, Inc stocks are currently undervalued. Besides the main valuation method (DCF) and the Relative valuation, it was also computed the Dividend Discount Model, with a target price of \$27.78 and a downside potential of 63.9%, reflecting an unrealistic price and sell recommendation due to conservative assumption of dividend payout ratio.

### **Deleveraging strategy and Sustainable Profitability**

Since Nike's short term debt is decreasing and a Japanese note maturing, the company will increase its weight of equity in the capital structure from 71% to 77%, between 2020-24F, allowing higher margins to invest without the need of debt financing. The company expects an improve in EBIT Margin and in ROE

Table 7 - Valuation Summary

DCF Valuation		
Enterprise Value	\$ 141 125.43	
Target Price	\$ 88.65	
Multiples Valuation		
P/E Target Price	\$ 108.03	
EV/EBITDA	\$ 82.79	
EV/SALES	\$ 47.52	
Multiples Average	\$ 79.45	
Difference		
\$ 9.2	10%	

Source: Author, Company Data

Figure 23 – Change YoY on total weight of Revenues, by region



from 12.2% to 15.35% and 44.57% to 64.67% respectively, between 2019-24F, reflecting an improvement in performance and sustainability.

#### **Investment Risks**

Investors must be aware that Nike, Inc earnings are subject to several factors that cannot be controlled by the company's management, such as the volatility of EUR/USD and USD/CNY rates, political instability and China regulation.

Moreover, we performed a sensitivity analysis for Nike's price target, to access the impact of changing variables that are in the key components of the DCF valuation model.

#### 6. Valuation

Three standard approaches have been used to value Nike, Inc: **Discounted Cash Flow (DCF)** approach, for the relative valuation model, the **Market Multiples** approach, and finally, the **Dividend Discount Model (DDM)** approach.

For the absolute valuation model, we used the **Discounted Cash Flow (DCF)** approach. This is considered the most appropriate method to value the company since there is considerable uncertainty concerning the dividend policy. The cash flows are expected to be positive in the forecasted years, there is a capital reinvestment strategy and the company expects to apply a deleveraging policy-main factor that led us to the use of FCFF.

The DCF valuation was computed in accordance with the constant-growth FCFF model, for 5 years forecast, until 2024, and resulted in a target price of **\$88.66** for Nike's 2020 fiscal YE, an upside potential of 15.23% considering the price on May 31st 2019 and a **BUY recommendation**.

For the relative valuation model we used the **Market Multiples** approach. In order to evaluate the firm within the industry, **Peer Companies** were selected and it was performed a valuation through EV/EBITDA, EV/SALES and P/E multiples.

Regarding **DDM** approach, future dividends were discounted to their present value through investor's rate of return (Re) estimated using the Capital Asset Pricing Model (CAPM), and the price target was reached by dividing the present value of dividends by the total number of shares outstanding.

**Forecast Analysis** 

**Revenues**: Nike revenues were estimated based on the company's projections and the macroeconomic outlook for each region.

The company expects a growth of a single digit in 2020, slightly higher than 2019 YE and it is expected to grow in all the four geographies the next few years:

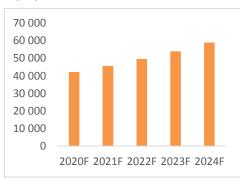
- In North America, Nike App revenue is growing triple digits and gaining significant share with strategic wholesale partners;
- In EMEA, Nike will fully leverage the power of mobile, launching the Nike App into 13 additional countries in fiscal year 2020;

Table 8 - DCF Method

DCF Method	
Enterprise Value	\$ 141 125
Net Debt	-2 325
Equity Value	\$ 143 451
No. of issued Shares	1 618
Equity Value per Share	\$ 88,66
Price Target	\$ 88,66
Price on May 31st, 2019	\$ 76,94
Upside Potential	15,23%

Source: Author, Company Data

Figure 24 – Total revenues forecasted (M\$)



In China, growth is led by Nike Digital, fueled by SNKRS App, a digital platform that allows consumers to buy available sneakers online, and the strength with partners such as Tmall and WeChat. Nike is investing in its local team by sponsoring China's top athletes, federations and teams in order to increase participation in sport and fitness in China.

Furthermore, the macroeconomic outlooks for all regions complement this high demand expected for the company's revenues by reflecting an increase in purchasing power of consumers, fueled by a decrease in interest rates and increase in consumer price index. The conjugation of Nike's expectations with macroeconomic prospects in all regions, suggested a sustainable incremental growth rate of 0.35% for all the next years except for 2023, which is expected an incremental growth rate of 0.45% due to the football world cup that will take place in Qatar and this event usually boosts the company's yearly revenues. Despite the growth in all of the four regions, only China will be increasing its weight in total revenues from 15.87 to 23.67%, during 2020-24F, due to the partners that Nike is working with, such as Tmal, a Chinese website for business-to-consumer (B2C) that represents 60% of China online retail market, and WeChat, a social media and mobile payment app that represents 40% of China mobile payment market, and the launch of Nike App in China scheduled for 2020.

North America is expected to lose weight in total revenues, from 40.65 to 37.5%, EMEA from 25.08 to 23.6% and Asia Pacific & Latin America from 13.43 to 10.9%, during 2020-24F.

With these inputs, total revenues are expected to increase at a CAGR of 8.56% during 2019-24F, in line with Statista projections of an annual 8.3% CAGR during 2019-24F, considering Nike the biggest player in the market with a market share of around 35%.

**Gross Margin** and **COGS**: We assumed an YoY increase of 50bps for the % of Gross Margin based on "NIKE-Inc.-Q419-OFFICIAL-Transcript-with-QA-FINAL", this expansion is related to strategic Supply Chain investments such as RFID and Manufacturing Innovations. The COGS are directly linked to revenues through Gross Margin and are, therefore, expected to increase at a sustainable level, representing around 54% of total revenues.

**Demand creation expense**, related to marketing, and **operating overhead expenses** are expected to grow in line with revenues, representing 10 and 22% of sales, respectively, during the forecasted period.

CAPEX and D&A: Nike plans to invest in manufacturing capabilities by adding a Nike Air manufacturing center in the USA and to invest in more hybrid sneakers (a mix between two or more model of sneakers). Last year the company has invested a lot in the SNKRS and NIKE app and now intendeds to prioritize other platforms like React and Air which are expected to scale across Performance and Sportswear, in order to meet some consumer needs. Since the company has been doing similar investments with similar amounts over the last four years, we assumed a CAPEX of around \$1 B per year, including maintenance and expansion (40% of CAPEX maintenance). The maintenance CAPEX will equal the depreciations forecasted based on the historical depreciation rate.

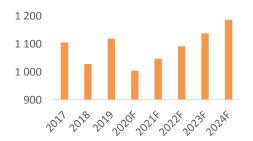
**Net Working Capital (NWC)**: Accrued liabilities were maintaining a value of \$3 B between 2016-18 but rose in 2019, from 3 to \$5 B. This financial heading is

Figure 25 – Proportion of sales by region in the forecasted period



Source: Author, Company Data

Figure 26 – Nike Capital Expenditures



expected to grow as percentage of selling and administrative expenses, being the component with higher weight and leading to a reduction in NWC of 47%, from 2.2 to \$4 B, between 2019-20F. (see appendix 9 for more information).

**Debt Structure**: Nike's financial situation is solid, its capital structure is mainly composed by equity (70%) and the company expects to increase this value to 77% by the end of 2024F.

The short-term debt is not significant, represents only 0.2% of total debt and based on the company's annual report of 2019, short-term debt will decrease until 2022F (from 6 to \$0 M) and increase in 2023F (from 0 to \$500 M), due to the need of financing for the world cup. Regarding long-term debt, it is expected a decrease of 9 M\$ from 2019 to 2020F due to a Japanese yen note that will mature during that period, and it is expected to maintain a value of \$3,455 M during 2020-24F since no more notes will mature until the end of the forecasted period.

**WACC Assumptions**: To discount the FCFF, we used the WACC method. The rate for 2020F is 5.48% and it is rising during 2020-24F to 5.53%. In order to reach the value of the WACC rate, it was necessary to compute and find information regarding its inputs:

Rf – Considered a risk free rate of 1.48% (10Y USA Treasury Yield);

**βE** – It was computed based on the unlevered industry beta of 0.75 provided by Aswath Damodaran, a Debt to Equity ratio and a Tax rate of 17%;

**MRP & CRP** – Considered the values provided by Aswath Damoradan, updated on January 2019, for USA (MRP:5.96% & CRP:0%);

**Ke** – It was calculated using the Capital Asset Pricing Model (CAPM), generating a value of 7.19% for 2020F:

**Kd** – Considered the interest cover ratio, resulting in a cost of debt of 1.41%.

**Terminal Value Assumptions**: For the terminal value, we followed the **Perpetuity Growth Model** approach. It was computed a **Perpetuity WACC** of 5.7% based on the input rates for the terminal year and a **Perpetuity Growth Rate** (g), based on the Stable Growth Model, resulting in a g of 0.57%, lower than the projected GDP and inflation rates.

**Multiples Valuation**: In order to obtain the target price by using this method, we considered these three multiples: **EV/EBITDA**, **EV/Sales** and **P/E**, and seven Nike peer companies: Puma SE, Adidas AG, Skechers Inc, Wolverine World Wide Inc, Deckers Outdoor Corp and Under Armour inc.

The peers were used to compute the average for each multiple in order to obtain the price target for Nike by using the forward valuation for multiples.

Using **EV/EBITDA**, we obtained a price target of **\$82.79** for Nike's 2020 fiscal YE, representing an upside potential of 7,6% relative to the price on May 31<sup>st</sup>, 2019.

Figure 27 – Weighted of equity in the capital structure



Table 9 - EV/EBITDA Output

EV/EBITDA	2020F
EV/EBITDA PEER	16
Nike EBITDA(Fwd Avg)	8 000
Nike EV	\$ 131 630
Source: Author Company I Net Debt	<sup>Data</sup> -2 325
Equity Value	\$ 133 955
No. of issued Shares	1 618
Equity Value per Share	\$ 82.79
Price on May 31st, 2020	\$ 82.79
Price on May 31st, 2019	\$ 76.94
Upside Potential	7,60%

Source: Author, Reuters

Table 10 - EV/Sales Output

EV/Sales	2020F
EV/Sales PEER	1
Nike Revenues(Fwd Avg)	50 051
Nike EV	\$ 74 572
Net Debt	-2 325
Equity Value	\$ 76 897
No. of issued Shares	1 618
Equity Value per Share	\$ 47.53
Price on May 31st, 2020	\$ 47.53
Price on May 31st, 2019	\$ 76.94
Downside Potential	-38,23%

Source: Author, Reuters

Using **EV/Sales**, we obtained a price target of **\$47.53** for Nike's 2020 fiscal YE, representing a downside potential of 38.23% relative to the price on May 31<sup>st</sup>, 2019.

Using **P/E**, we obtained a price target of **\$108.04** for Nike's 2020 fiscal YE, representing an upside potential of 40.42% relative to the price on May 31<sup>st</sup>, 2019.

Considering the price targets achieved with the multiples, by computing a simple average of the three prices I obtain a price target of \$79.45, representing an upside potential of 3.3% which reinforces my recommendation to **BUY**, in this case, by using the **Market Multiples** approach.

**Dividend Discount Model**: Since the company has a stable growth, a dividend growth similar to FCFE growth and a stable beta over time, we also used the DDM to obtain the target price of the company. First, we assumed the payout ratio of the company to remain constant during the forecasted period, in the same level as of 2019, a payout ratio of 33%. After obtaining the value of the future dividends, we discounted them at the cost of equity (Re) rate, summed the PV of all the dividends and divided it by the total number of outstanding shares, resulting in a price target of \$27.8, representing a downside potential of 64.9% and a **SELL** recommendation.

This method provides an unrealistic target price due to the conservative assumption of the dividend payout ratio. The expected dividends for the forecasted period are not enough to make a real assumption regarding the price target of the company.

## 7. Financial Analysis

Nike, Inc revenues have been increasing over the past years due to the creation of digital platforms like the SNKRS App, the enlargement of the brand through investments in other geographical regions and the focus on the direct-to-consumer business, a way of having consumers buying directly from the brand as opposed to retailers. **Revenues** grew 21% from 2016 to 2019 with a CAGR of 6.5% and they are expected to keep on growing during 2019-24F with a CAGR of 8.6%.

The company's **EBIT** has always been positive, showing sustainable operating profits, and is expected to increase at a 13.7% CAGR fueled mainly by the increase in revenues. The two main costs/expenses are: cost of sales (7.5% CAGR) and total selling expenses (8.8% CAGR), which is expected to grow as proportion of sales, both expenses represent 55% and 32% of total revenues, respectively.

The **Net Income** has been increasing during the last 4 years at an annual CAGR of 2% and it is expected to increase between 2020-24F, from 4.7 to \$7.6 billion, at an annual CAGR of 10%.

Regarding the company's profitability measured by **Return on Equity (ROE)**, it has been increasing between 2016-19, from 31% to 44.6%. It is expected an increase in 2020F of 9,6% (from 44,6% to 54,2% between 2019-20F) and an

Table 11 - P/E Output

P/E	2020F
P/E PEER	29.06
No. of issued Shares	1618
Nike EPS (Fwd Avg)	3.72
Nike Price	\$ 108.04
Price on May 31st, 2020	\$ 108.04
Price on May 31st, 2019	\$ 76.94
Upside Potential	40,42%

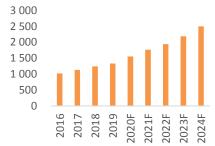
Source: Author, Reuters

Table 12 - DDM Method

DDM Method	
Total PV(DIVt)	\$ 44 942
No. of Outstanding Shares	1 618
Equity Value per Share	\$ 27.78
Price on May 31st, 2020	\$ 27.78
Price on May 31st, 2019	\$ 76.94
Downside Potential	-63,90%

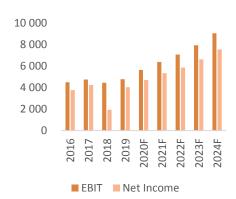
Source: Author, Company

Figure 28 - Dividends (M\$)



Source: Author, Company Data

Figure 29 - EBIT and Net Income (M\$)



overall growth at a CAGR of 7.7% during the valuation period. These values are a consequence of a sharp increase in net and a reduction on equity. Nike has started a plan to repurchase its own shares which is slightly impacting retained earnings and consequently, shareholder's equity.

Nike has a **Debt to Equity** ratio of 0.38x which means that most of its activity is financed with equity. The company will further reduce its leverage to 0.3x by the end of 2024F because it is not assumed a significant debt increment. With this decrease in leverage, the **capital structured** of the company is also expected to change, from the initial 72%-28% to 77%-23% during 2016-24F.

In the last three years, Nike has always invested around \$1 billion in Capex and the Fixed Assets Turnover has been increasing between 2016-19, from 5.08 to 5.44.

For the next years, the company will invest in new manufacturing capabilities, to build an additional NIKE Air manufacturing center in the U.S, and consumer support, so it was considered a Capex expansion that is expected to raise the **Fixed Assets Turnover** from 5.44 to 6.74 during 2019-24F, growing at 4.38% CAGR.

Liquidity ratios have been decreasing between 2016-19. During the valuation period, the values of liquidity are expected to continue to decline, the **Current**, **Quick** and **Cash** ratios are expected to grow at a -4% CAGR, indicating an increase in short term risks. Regarding the **cash-flow statement**, it is expected that the company will generate enough cash from its operating activities to finance its investment and financing activities, allowing net cash balances to grow at a 1.2% CAGR (vs 9% CAGR between 2016-19).

**Dividend policy** is attractive for the investors. The company has been increasing the quarterly dividends since 2004. Shareholders are paid a dividend on January 5, April 5, July 5 and October 5. The dividend payout ratio is usually around 30% and the company is expected to have a good performance so we assumed 33% (value of 2019) as the dividend payout ratio for the forecasted period.





Source: Author, Company Data

Figure 31 – Liquidity Ratios



Source: Author, Company Data

### 8. Investment Risks

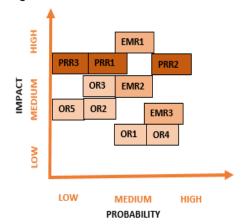
Nike, Inc is exposed to several risks with a certain associated probability and that may have a low or high impact in its performance and financial wealth. In order to assess and determine the main company risks, it was created a risk matrix. The creation of the matrix was based on three main risk areas: **Operational risk**, **Economic and Market risk**, and **Political and Regulatory risk**.

#### **Operational Risks**

**Supply chain visibility (OR1)**: It may lead to a wrong distribution and waste of products if suppliers cannot meet their obligations in the delivery and tracking of the products. It is necessary to have an accurate database and technological system in order to avoid tracking deviations.

**Product innovation and design (OR2)**: The innovation and design of Nike products contribute to the increase in profitability for the company every year and to differentiate its products from the competitors. If the company is not able to "feed"

Figure 32 - Risk Matrix



Source: The Author

consumers with the innovative products that they are expecting and fail to meet market expectations, this may lead to a slowdown in revenues, a decline in stock's price and a negative impact on the brand image.

Concentration of manufacturer suppliers (OR3): Nike is supplied by 112 footwear factories that are located in 12 countries. The company does not own any of the footwear manufacturing facilities, relies on independent contract manufacturers to manufacture the products sold. In fiscal year 2019, the aggregate manufacturers accounted for 61% of NIKE brand footwear production. The company's ability to meet consumer needs, depends on the relationship and supply of products from its independent contract manufacturers. If some of the significant suppliers decide to cut or change terms of the relationships with Nike, the company may not be able to replace products in time to meet customer's requests and that could consequently lead to a material adverse effect in the company operational results.

**Ineffective internal controls (OR4)**: The company's internal control over financial reporting may not detect misstatements due to its inherent limitations, which include the possibility of human errors. If Nike fails to maintain the adequacy of its internal control or experience difficulties in its implementation, the business and operating results could be adversely affected and the company could fail to meet its financial reporting obligations.

**Natural disasters (OR5)**: Extreme weather conditions are not likely to occur and are somewhat mitigated by the diversity of Nike retail stores and manufacturer firms around the world. However, natural disasters such as hurricanes, earthquakes and tsunamis in China or Vietnam could cause a disruption in operations, since those are the two main countries that most contribute with manufactured products.

#### **Economic and Market Risks**

**Purchasing power (EMR1):** It is the factor that may cause a higher impact if it decreases. Purchasing power of families may decrease due to low salaries or high inflation rates and the consequence of such events is the decrease in demand for footwear products which will affect in a negative way the revenues and profits of the companies in the industry.

Leverage and interest rates (EMR2): The increase in leverage and interest rates it is a medium risk factor because it limits the borrowing needs of companies and, consequently, the ability to invest in new products. An interest rate increase policy encourages families to savings and to decrease its consumption, which leads to a decrease in demand by consumers and may lead to a decline in Nike's revenues.

**Foreign currency exchange rates (EMR3)**: Forex rates are likely to have an impact in company's imports. EUR/CNY and USD/CNY rates increased from 2017 to 2018. This effect was a helpful factor for Nike since the company has headquarters in Europe (Netherlands) and in the US, with production bases in China. With this effect, the company was able to pay less for imports.

#### **Political and Regulatory Risks**

**Increase in regulation of taxes (PRR1)**: Nike is subjected to tax laws in U.S and several foreign jurisdictions. The company uses subsidiaries in tax havens countries to benefit from the lower or inexistent tax rates compared to the U.S. If these countries increase its regulation and tax rates, there will be an impact in the company's effective tax rate, Nike may lose its tax benefits and this could have a direct negative impact in the company's profits.

**Political instability (PRR2)**: Changes in U.S or international political and regulatory conditions, as well as negative sentiment towards the US as a result of such changes, may adversely affect the company's business. The U.S president has proposed changes in policies by imposing higher tariffs on Chinese imports into the U.S, economic sanctions on individuals, corporations, and other government

regulations affecting the trade between the U.S and other countries where Nike's business operates. As a result of these recent policies, there may be disincentives on international trade and the imposition of tariffs leads certain foreign governments to consider imposing retaliatory measures on certain U.S goods. Nike, as well as other multinational corporations, has significant business that could be impacted by changes in the trade policies of the U.S and foreign countries.

**China regulation (PRR3)**: Increased regulation in China is not likely but if it does, the increase in minimum wages, definition of less working hours per day, among other measures may have a medium-high impact in Nike's operating results because the labor costs will increase drastically and this will be reflected in the company's performance.

#### **Risk to Price Target**

A sensitivity analysis was performed in order to access the impact of several risks on Nike's final price target. These risks included key components of the DCF valuation model and a combination of changes in both Growth Rate and Perpetuity WACC, respectively.

Presented in table x are the risk factors (Growth rate and Perpetuity WACC) that may influence Nike's final price target. By looking at the table, it is possible to conclude that the company is sensible to a decrease in the Growth Rate while WACC rate increases. This leads to a negative impact on the company's price target due to the huge weight and impact that these variables have on the Terminal Value. However, if Growth Rate increases while WACC goes down, the opposite effect occurs, leading to an increase in Nike's final price target.

Table 13 - Sensitivity analysis: Perpetuity WACC and Growth Rate

						(	Growth R	ate				
	88,66	-1,93%	-1,43%	-0,93%	-0,43%	0,07%	0,57%	1,07%	1,57%	2,07%	2,57%	3,07%
	8,20%	49,51	51,34	53,37	55,64	58,19	61,07	64,36	68,14	72,54	77,73	83,92
	7,70%	51,80	53,86	56,16	58,75	61,67	65,00	68,84	73,30	78,55	84,83	92,47
ည	7,20%	54,36	56,69	59,31	62,27	65,65	69,54	74,07	79,40	85,76	93,51	103,13
WACC	6,70%	57,23	59,88	62,89	66,32	70,26	74,85	80,25	86,71	94,57	104,32	116,77
	6,20%	60,47	63,51	66,99	70,99	75,65	81,13	87,68	95,64	105,54	118,17	134,83
Perpetuity	5,70%	64,15	67,68	71,74	76,46	82,02	88,66	96,74	106,78	119,58	136,49	159,83
rpe	5,20%	68,38	72,50	77,28	82,92	89,66	97,86	108,04	121,03	138,17	161,85	196,66
Pe	4,70%	73,27	78,13	83,85	90,68	98,99	109,32	122,50	139,89	163,91	199,22	256,26
	4,20%	78,98	84,79	91,72	100,15	110,63	124,00	141,64	166,01	201,83	259,69	368,94
	3,70%	85,74	92,78	101,34	111,97	125,53	143,43	168,15	204,49	263,19	374,03	661,98
	3,20%	93,86	102,54	113,33	127,09	145,25	170,33	207,20	266,76	379,22	671,38	3 285,59

Source: The Author

# **Appendices**

Appendix 1: Statement of Financial Position

			Annual as repo	rted in millions	of U.S. Dolla	ars			
BALANCE SHEET	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
Assets	31-May-2016	31-May-2017	31-May-2018	31-May-2019					
Cash and equivalents	3 138	3 808	4 2 4 9	4 466	5 786	5 3 1 0	5 124	5 855	6 125
Short-term investments	2 3 1 9	2 371	996	197	197	197	197	197	197
Accounts receivable	3 241	3 677	3 498	4 272	4 3 4 9	4 705	5 106	5 5 6 4	6 082
Inventories	4838	5 055	5 261	5 622	6 167	6 634	7 178	7 828	8 578
Prepaid expenses and other current a	1 489	1 150	1 130	1968	1696	1834	1991	2 169	2 372
Current assets	15 025	16 061	15 134	16 525	18 195	18 680	19 595	21 613	23 354
Property, plant and equipment, net	3 520	3 989	4 454	4744	5 244	5 7 3 4	6 2 1 7	6 694	7 170
Identifiable intangible assets, net	281	283	285	283	283	283	283	283	283
Goodwill	131	139	154	154	154	154	154	154	154
Other non-current assets	2 439	2 787	2 509	2 011	1797	1 607	1 436	1284	1 147
Non-current assets	6 3 7 1	7 198	7 402	7 192	7 479	7 778	8 090	8 4 1 5	8 754
Total Assets	21 396	23 259	22 536	23 717	25 674	26 458	27 685	30 028	32 108
Liabilities									
Current portion of long-term debt	44	6	6	6	6	3	0	500	0
Notes payable	1	325	336	9	9	9	9	9	9
Accounts payable	2 191	2 048	2 279	2 612	2 692	2 885	3 103	3 350	3 628
Accrued liabilities	3 037	3 0 1 1	3 269	5 0 1 0	7 247	7 7 6 8	8 353	9018	9 7 6 6
Income taxes payable	85	84	150	229	229	229	229	229	229
Total current liabilities	5 358	5 474	6 040	7 866	10 183	10895	11 693	13 105	13 631
Long-term debt	2 010	3 471	3 468	3 464	3 455	3 455	3 455	3 455	3 455
Deferred income taxes and other liabi	1770	1 907	3 2 1 6	3 347	3 347	3 347	3 347	3 347	3 347
Non-current liabilities	3 780	5 378	6 684	6811	6 802	6 802	6 802	6 802	6 802
Total Liabilites	9 138	10852	12 724	14 677	16 985	17 697	18 495	19 907	20 433
Equity									
Share Capital	5 041	5 7 1 3	6 387	7 166	7 166	7 166	7 166	7 166	7 166
Accumulated other comprehensive in	318	(213)	(92)	231	231	231	231	231	231
Retained earnings	6 899	6 907	3 5 1 7	1 643	1 292	1 3 6 5	1793	2724	4 278
Total shareholders' equity	12 258	12 407	9 8 1 2	9 040	8 689	8 7 6 2	9 190	10 121	11 675
TOTAL LIABILITIES AND SHAREHOLDERS	21396	23 259	22 536	23 717	25 674	26 458	27 685	30 028	32 108

**Appendix 2: Income Statement** 

			Annual as	reported in mill	ions of U.S. D	ollars			
INCOME STATEMENT	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
	31-May-2016	31-May-2017	31-May-2018	31-May-2019					
Revenues	32 376	34 350	36 397	39 117	42 177	45 624	49 513	53 956	58 986
North America	14764	15 216	14 855	15 902	17 149	18 400	19 706	20 989	22 297
Europe, Middle East & Africa	7 568	7 970	9 242	9812	10 523	11 246	11997	12 949	13 921
Greater China	3 785	4 2 3 7	5 134	6 208	7 381	8 669	10 150	11870	13 962
Asia Pacific & Latin America	4 3 1 7	4737	5 166	5 254	5 3 2 3	5 475	5 694	5 989	6 430
Other Business (Converse)	1955	2 042	1886	1 906	1814	1871	2 005	2 185	2 389
Global Brand Divisions (Jordan and	73	73	88	42	38	36	40	43	47
Corporate (Foreign currency hedge §	(86)	75	26	(7)	(51)	(73)	(79)	(70)	(59)
Cost of Sales	17 405	19 038	20 441	21 643	23 125	24787	26 652	28 774	31 162
Gross Margin	14 971	15 312	15 956	17 474	19 052	20837	22 861	25 182	27 824
Demand Creation Expense	3 278	3 341	3 577	3 753	4 141	4 445	4825	5 247	5 7 5 6
Operating overhead expense	7 191	7 222	7 934	8 949	9 2 7 0	10 001	10964	11994	13 017
Total selling and administrative exper	10 469	10 563	11 511	12 702	13 411	14 445	15 789	17 241	18 773
Operating Income (EBIT)	4 502	4 749	4 445	4 772	5 641	6 3 9 2	7 072	7 940	9 052
Interest expense	19	59	54	49	49	49	49	56	49
other (income) expense	(140)	(196)	66	(78)	(75)	(87)	(48)	(90)	(93)
EBT	4 623	4 886	4 3 2 5	4 801	5 667	6 4 3 0	7 071	7 974	9 096
Income tax expense	863	646	2 392	772	963	1 093	1 202	1356	1546
Net Income	3 760	4 240	1933	4 029	4 704	5 3 3 7	5 869	6 6 1 9	7 550

**Appendix 3: Common-Size Statement of Financial Position** 

BALANCE SHEET	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
Assets	31-May-2016	31-May-2017	31-May-2018	31-May-2019					
Cash and equivalents	15%	16%	19%	19%	23%	20%	19%	19%	19%
Short-term investments	11%	10%	496	196	1%	1%	1%	196	1%
Accounts receivable	15%	16%	16%	18%	17%	18%	18%	19%	19%
Inventories	23%	22%	23%	24%	24%	25%	26%	26%	27%
Prepaid expenses and other current assets	7%	5%	5%	8%	7%	7%	7%	7%	7%
Current assets	70%	69%	67%	70%	71%	71%	71%	72%	73%
Property, plant and equipment, net	16%	17%	20%	20%	20%	22%	22%	22%	22%
Identifiable intangible assets, net	1%	1%	1%	1%	1%	1%	196	196	1%
Goodwill	196	1%	1%	196	196	1%	196	196	0%
Other non-current assets	11%	12%	11%	8%	7%	6%	5%	496	4%
Non-current assets	30%	31%	33%	30%	29%	29%	29%	28%	27%
Total Assets	100%	100%	100%	100%	100%	100%	100%	100%	100%
Liabilities									
Current portion of long-term debt	096	0%	096	0%	0%	0%	096	2%	0%
Notes payable	0%	1%	1%	0%	O96	0%	0%	0%	0%
Accounts payable	10%	9%	10%	11%	10%	11%	11%	11%	11%
Accrued liabilities	14%	13%	15%	21%	28%	29%	30%	30%	30%
Income taxes payable	0%	0%	1%	1%	1%	1%	1%	1%	1%
Total current liabilities	25%	24%	27%	33%	40%	41%	42%	44%	42%
Long-term debt	9%	15%	15%	15%	13%	13%	12%	12%	11%
Deferred income taxes and other liabilities	8%	8%	14%	14%	13%	13%	12%	11%	10%
Non-current liabilities	18%	23%	30%	29%	26%	26%	25%	23%	21%
Total Liabilites	43%	47%	56%	62%	66%	67%	67%	66%	64%
Equity									
Share Capital	24%	25%	28%	30%	28%	27%	26%	24%	22%
Accumulated other comprehensive income	1%	-1%	0%	196	1%	1%	196	196	1%
Retained earnings	32%	30%	16%	796	5%	5%	6%	9%	13%
Total shareholders' equity	57%	53%	44%	38%	34%	33%	33%	34%	36%
TOTAL LIABILITIES AND SHAREHOLDERS' EQUIT	ነ 100%	100%	100%	100%	100%	100%	100%	100%	100%

Appendix 4: Common-Size Income Statement

INCOME STATEMENT	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
	31-May-2016	31-May-2017	31-May-2018	31-May-2019					
Revenues	100%	100%	100%	100%	100%	100%	100%	100%	100%
North America	46%	44%	41%	41%	41%	40%	40%	39%	38%
Europe, Middle East & Africa	23%	23%	25%	25%	25%	25%	24%	24%	24%
Greater China	12%	12%	14%	16%	18%	19%	21%	22%	24%
Asia Pacific & Latin America	13%	14%	14%	13%	13%	12%	12%	11%	11%
Other Business (Converse)	6%	6%	5%	5%	496	496	496	496	496
Global Brand Divisions (Jordan and Hurley)	096	096	096	096	096	0%	0%	0%	096
Corporate (Foreign currency hedge gains and	096	096	O96	O96	O96	096	0%	096	096
Cost of Sales	54%	55%	56%	55%	55%	54%	54%	53%	53%
Gross Margin	46%	45%	44%	45%	45%	46%	46%	47%	47%
Demand Creation Expense	10%	10%	10%	10%	10%	10%	10%	10%	10%
Operating overhead expense	22%	21%	22%	23%	22%	22%	22%	22%	22%
Total selling and administrative expense	32%	31%	32%	32%	32%	32%	32%	32%	32%
Operating Income (EBIT)	14%	14%	12%	12%	13%	14%	14%	15%	15%
Interest expense	096	0%	O96	0%	096	0%	0%	0%	0%
other (income) expense	096	-196	O96	0%	O96	0%	0%	096	096
EBT	14%	14%	12%	12%					
Income tax expense	3%	296	796	2%	296	2%	2%	3%	3%
Net Income	12%	12%	5%	10%	11%	12%	12%	12%	13%

# **Appendix 5: Assumptions for Balance Sheet**

Description	Units	2019	2020F	2021F	2022F	2023F	2024F	Assumption
				Б	ALANCE	SHEET		
Assets								
Current Assets								
Cash and equivalents								
Short-term investments	USD	197	197	197	197	197	197	Remains constant until the end of the forecasted period
Accounts receivable	% Rev		10,31%	10,31%	10,31%	10,31%	10,31%	Based on a 4 year historical average as a % of rev because this item varies close to revenues.
Inventories	USD		6 167	6 634	7 178	7 828	8 578	Assumed the value of Inventories as a percentage of sales (moving average) because this percentage and the turnover ratio did not change much during these years and Inv/Sales result it is close to the one provided by Damodaran for the Industry (14,7%).
Prepaid expenses and other current assets			4,02%	4,02%	4,02%	4,02%	4,02%	Based on a 4 year historical average as a % of rev because this item varies close to revenues.
Non-Current Assets								
Property, plant and equipment, net	USD		5 244	5 734	6 2 1 7	6 694	7 170	For more information: Notes
Identifiable intangible assets, net	USD		283	283	283	283	283	Nike Statement (Annual Report 2018) intangible assets consist of indefinite-lived trademarks and other intangible assets subject to amortization. Since indefinite-lived trademarks are not subject to amortization and represent a fix value of 281 million 5 every year (aprox 99% of total intangible assets), I've assumed the value of the last year to be the forecast for the next years.
Goodwill	USD		154	154	154	154	154	Nike Statement (Annual Report 2018) there is no accumulated impairment
Deferred income taxes and other assets	USD		1797	1 607	1 436	1284	1 147	balances for Goodwill so it is expected to stay the same. For more information: Notes
Liabilities								
Current Liabilities			_					
Current portion of long-term debt	USD	9	6 9	3	9	500	0	Nike Statement (Annual Report 2019) reported by the Company
Notes payable	USD %	9	-	9	-	9	9	Remains constant until the end of the forecasted period
Accounts payable Accrued liabilities	% %		11,64% 31,34%	11,64% 31,34%	11,64%	11,64% 31,34%	11,64% 31,34%	Based on a 4 year historical average as a percentage of COGS.
Income taxes payable	USD	229	229	229	229	229	229	Based on a 4 year historical average as a percentage of SG&A.  Remains constant until the end of the forecasted period
Non-current Liabilities	030	223	223	223	223	223	223	kemains constant until the end of the forecasted period
Non-current Liabilities								Nike Statement (Annual Report 2019) assumed the nominal value of 2019
Long-term debt	USD	3 464	3 455	3 455	3 455	3 455	3 455	minus 9 million \$ since it refers to the only long term debt, japanese yen notes, that will mature before the forecasted period, in may of 2020.
Deferred income taxes and other liabilities	USD	3 347	3 347	3 3 4 7	3 347	3 3 4 7	3 347	Remains constant until the end of the forecasted period
Equity								
Share Capital	USD	7 166	7 166	7 166	7 166	7 166	7 166	Remains constant until the end of the forecasted period
Accumulated other comprehensive income	USD	231	231	231	231	231	231	Remains constant until the end of the forecasted period

## **Appendix 6: Assumptions for Income Statement**

Di-Ai	Units	2019	2020F	2021F	2022F	2023F	2024F	Assumation
Description	Units	2019	ZUZUF					Assumption
				INC	OME STA	ATEMENT	<u> </u>	
Gross Margin	96	44,67%	45,17%	45,67%	46,17%	46,67%	47,17%	Assumed a YoY increase of 50 bps based on Conf. Call, this expansion is related to strategic Supply Chain investments such as RFID and Air Manufacturing Innovations.
Cost of Sales	96		54,83%	54,33%	53,83%	53,33%	52,83%	100% - Gros Maring
Demand Creation Expense	% Rev		9,82%	9,74%	9,75%	9,72%	9,76%	Moving Average from the last 4 years regarding % of Revenues associated to Demand and Creation Expenses
Operating overhead expense	% Rev		21,98%	21,92%	22,14%	22,23%	22,07%	Moving Average from the last 4 years regarding % of Revenues associated to Operating overhead expenses
Interest expense	USD		48,87	48,83	48,79	55,85	48,79	Assumed the last year interest rate for the forecasted period Assumed other income of 75 million USD for 2020 based on Conf. Call and for
Other (income) expense	USD		-75	-87	-48	-90	-93	the next years, a moving average regarding % of Revenues associated to other
Income tax expense	96	16,08%	17,00%	17,00%	17,00%	17,00%	17,00%	(income) expense Considering the corporate tax reduction from 35 to 21% in US which was first applied in 2019, the foreign earnings taxed in US (which reduzes the effective tax rate) and the projection of the effective tax rate in the mid-to-high teens range on the Conf.Call, I've assumed a fix rate of 17% for the next years.

## **Appendix 7: Cash Flow Statement**

				Millions of U.S.	Dollars				
CASH FLOW STATEMENT	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
	31-May-2016	31-May-2017	31-May-2018	31-May-2019					
Operating Activities					7 3 6 2	5 799	6 350	7 023	7 908
+EBIT					5 641	6 3 9 2	7 072	7 940	9 052
+D&A					717	748	780	813	847
-Income Tax					(963)	(1093)	(1 202)	(1356)	(1546)
-DNWC					1967	(247)	(300)	(375)	(445)
Investment Activities					(1 004)	(1 047)	(1 091)	(1 138)	(1 186)
-CAPEX					(1004)	(1047)	(1091)	(1138)	(1 186)
+-Other Inv.					0	0	0	0	0
Financing Activities					(5 038)	(5 229)	(5 444)	(5 154)	(6 452)
-Interest paid					26	39	(1)	34	45
-Dividends	(1022)	(1 133)	(1243)	(1332)	(1 555)	(1765)	(1940)	(2.188)	(2 496)
-Repurchase of Common Stock	(3 238)	(3 223)	(4 254)	(4 286)	(3 500)	(3 500)	(3 500)	(3 500)	(3 500)
-DDebt					(9)	(3)	(3)	500	(500)
Change in Cash					1 320	(476)	(186)	731	271
Begining					4 466	5 786	5 3 1 0	5 124	5 855
End					5 786	5 3 1 0	5 124	5 855	6 125

**Appendix 8: Key Financial Ratios** 

Key Financial Ratios	2019	2020F	2021F	2022F	2023F	2024F
Liquidity Ratios						
Current Ratio (x)	2,10	1,79	1,71	1,68	1,65	1,71
Quick Ratio (x)	1,39	1,18	1,11	1,06	1,05	1,08
Cash Ratio (x)	2,67	2,35	2,20	2,11	2,10	2,16
Efficiency Ratios						
Total Assets Turnover (x)	1,65	1,64	1,72	1,79	1,80	1,84
Accounts Receivables Turnover (x)	6,96	6,84	6,88	6,90	6,89	6,88
Collection Period (days)	40	38	38	38	38	38
Inventory Turnover (x)	6,96	6,84	6,88	6,90	6,89	6,88
Days in Inventory (days)	52	53	53	53	53	53
Payables Turnover (x)	14,98	15,67	15,81	15,96	16,11	16,26
Payables Period (days)	24	23	23	23	23	22
Operating Cycle (days)	92	91	91	91	91	91
Cash Cycle (days)	68	68	68	68	68	68
Fixed Assets Turnover	5,44	5,64	5,87	6,12	6,41	6,74
Profitability Ratios						
Gross Profit Margin (%)	44,67%	45,17%	45,67%	46,17%	46,67%	47,17%
EBITDA Margin (%)	14,00%	15,08%	15,65%	15,86%	16,22%	16,78%
EBIT Margin (%)	12,20%	13,37%	14,01%	14,28%	14,72%	15,35%
Net Profit Margin (%)	10,30%	11,15%	11,70%	11,85%	12,27%	12,80%
ROA (%)	16,99%	18,32%	20,17%	21,20%	22,04%	23,51%
ROCE (%)	30,11%	36,42%	41,07%	44,22%	46,92%	48,99%
ROE (%)	44,57%	54,14%	60,92%	63,86%	65,40%	64,67%
EPS (x)	2,49	2,91	3,30	3,63	4,09	4,67
SG&A/Sale (%)	32,47%	31,80%	31,66%	31,89%	31,95%	31,83%
Solvency Ratios						
Long- and short-term Debt Ratio (%)	14,63%	13,48%	13,07%	12,48%	13,17%	10,76%
Long-term Debt Ratio (%)	14,61%	13,46%	13,06%	12,48%	11,51%	10,76%
Debt to Equity Ratio (x)	0,38	0,40	0,39	0,38	0,39	0,30
Equity Multiplier (x)	2,62	2,95	3,02	3,01	2,97	2,75
Debt to EBITDA	0,63	0,54	0,48	0,44	0,45	0,35
Interest Coverage Ratio (x)	164,55	215,91	165,61	-8612,39	233,88	203,32

# **Appendix 9: Net Working Capital**

NWC								
Description	Notes	2019	2020F	2021F	2022F	2023F	2024F	
Current Assets		12 059	10 497	10 586	10 643	10 663	10 597	
Short-term investments		197	197	197	197	197	197	
Accounts receivable		4 272	3 672	3 672	3 672	3 672	3 672	
Inventories		5 622	5 194	5 283	5 340	5 360	5 294	
Other current assets		1 968	1 434	1 434	1 434	1 434	1 434	
Current Liabilities		7 860	8 668	8 591	8 514	8 437	8 360	
Notes payable		9	9	9	9	9	9	
Accounts payable		2 612	2 268	2 248	2 227	2 206	2 186	
Accrued liabilities		5 010	6 161	6 105	6 049	5 993	5 936	
Income taxes payable		229	229	229	229	229	229	
NWC		4 199	1 830	1 995	2 129	2 226	2 237	
ΔΝWC			-2 369	166	134	97	11	

# Appendix 10: D&A, CAPEX, PP&E and Other Assets

D&A, CAPEX, PP&E and Other Assets										
Description	Notes	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
D&A	USD	649	706	747	705	717	748	780	813	847
Dep as % of PP&E and Other Asse % 10,89			10,42%	10,73%	10,44%					
Average					10,62%					
Depreciation PP&E	USD					504	557	609	660	711
Depreciation Other Assets	USD					214	191	171	152	136
CAPEX	USD		1 105	1028	1 1 1 1 9	1 004	1 047	1 091	1 138	1 186
CAPEX Maintenance	USD				705	717	748	780	813	847
CAPEX Expansion	40% of CA	40% of CAPEX Maint in order to meet Company's exp				287	299	312	325	339
PP&E	USD					5 244	5 734	6 217	6 694	7 170
Other Assets	USD					1797	1607	1 436	1 284	1 147

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#### Recommendation System

Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	0%≤	>0% & ≤10%	>10% & ≤20%	>20% & ≤45%	>45%
Medium Risk	-5%≤	>-5% & ≤5%	>5% & ≤15%	>15% & ≤30%	>30%
Low Risk	-10%≤	>-10% & ≤0%	>0% & ≤10%	>10% & ≤20%	>20%