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# Adidas acquires Under Armour: a new era in Sporting Goods

Vítor Hugo Silva Nunes

Student Number: 152416010

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Professor António Borges de Assunção

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## **Abstract**

What would happen to the **Sporting Goods Industry** if the largest sportswear manufacturer in Europe and second largest in the world decided to buy one of the fastest growing companies, with a very strong presence in the USA?

The aim for this dissertation is to correctly evaluate the pricing for both **Adidas AG** and **Under Armour, Inc.**, in a deal that would strengthen the German company. The objective is simple: dominate the largest market in the world, North America, and dethrone the giant Nike.

This dissertation will center on valuing both companies, with a focus on the combined synergies resulting from the merger. For that, I computed three valuation methods: Discounted Cash-Flow (DCF), Adjusted Present Value (APV), and Relative Valuation (Multiples).

I will also provide an industry and company overview, in order to extract the main conclusions, and its impact on a worldwide level.

In the end, my recommendation is that Adidas acquires Under Armour with a premium of 34% over each share class, as follows: Class A valued at €17,97, Class C valued at €15,62 and Class B, not publicly traded, at €39,12.

This will result in a total value of €8.139 million, €2.067 million over the Market Capitalization.

**Keywords:** Sporting Goods Industry, sportswear manufacturer, Adidas AG, Under Armour Inc., Nike, North America, synergies, dominate.

## Sumário Executivo

O que aconteceria na indústria de artigos desportivos se a maior fabricante da Europa e segunda maior do mundo decidisse comprar uma das empresas com maior crescimento, com uma presença muito forte nos EUA?

O objetivo desta dissertação é avaliar corretamente o preço da Adidas AG e da Under Armour, Inc., num acordo que tornaria a empresa alemã mais forte. O objetivo é simples: dominar o maior mercado do mundo, a América do Norte, e destronar a gigante Nike.

Esta dissertação irá centrar-se na avaliação de ambas as empresas, com foco nas sinergias combinadas resultantes da fusão. Para isso, calculei três métodos de avaliação: Discounted Cash-Flow (DCF), Adjusted Present Value (APV), and Relative Valuation (Multiples).

Realizei ainda uma análise geral da indústria e das empresas, de modo a extrair as principais conclusões e o seu impacto a nível mundial.

No final, a minha recomendação é que a Adidas adquira a Under Armour com um prémio de 34% sobre cada classe de ações, da seguinte forma: Classe A avaliada em €17,97, Classe C avaliada em €15,62 e Classe B, não negociada no mercado de ações, a €39,12.

O resultado é uma avaliação de €8.139 milhões, €2.067 milhões acima da Capitalização de Mercado.

**Palavras-chave:** Indústria de artigos desportivos, Adidas AG, Under Armour Inc., Nike, América do Norte, sinergias, dominar.

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## Table of Contents

1.	Introduction .....	10
2.	Literature Review .....	11
2.1	M&A Overview .....	11
2.1.1	M&A issues .....	12
2.1.2	Synergies: Value creation or destruction? .....	13
2.1.3	Payment Methods .....	14
2.2	Valuation Methods .....	15
2.2.1	DCF .....	15
2.2.1.1	Free Cash-Flow to the Firm (FCFF) .....	16
2.2.1.1.1	WACC .....	16
2.2.1.1.2	Required Return on Equity .....	17
2.2.1.1.3	Cost of Debt .....	17
2.2.1.1.4	Growth Rate .....	18
2.2.1.1.5	Terminal Value (TV) .....	18
2.2.1.2	APV – Adjusted Present Value .....	19
2.2.1.3	Multiples – Relative Valuation .....	20
2.3	Cross Border Valuation .....	20
3.	Industry Overview .....	22
3.1	PEST Analysis .....	23
3.2	Porter 5 Forces .....	24
3.3	Global Demand .....	25
3.4	Industry Trends .....	28
4.	Company Overview .....	30
4.1	Adidas AG .....	30
4.2	Under Armour, Inc. ....	33
5.	Adidas Valuation .....	37

## Adidas acquires Under Armour: a new era in Sporting Goods

5.1	Consolidated Income Statement .....	37
5.1.1	Revenue .....	37
5.1.2	Cost of Goods sold / Gross Margin .....	37
5.1.3	Operating Expenses .....	37
5.1.4	Net Interest Expense.....	38
5.1.5	Income Taxes – Tax Rate .....	38
5.2	Consolidated Balance Sheet .....	39
5.2.1	Current Assets.....	39
5.2.2	Current Liabilities.....	39
5.3	Capital Expenditures – CAPEX .....	40
5.4	Discounted Cash Flow – DCF .....	40
5.4.1	Cost of Equity.....	40
5.4.2	Growth Rate.....	40
5.4.3	Capital Structure .....	40
5.4.4	Weighted Average Cost of Capital - WACC.....	41
5.5	Adjusted Present Value – APV .....	41
5.6	Multiples Valuation .....	43
5.7	Conclusion.....	44
6.	Under Armour Valuation.....	45
6.1	Consolidated Income Statement .....	45
6.1.1	Revenue .....	45
6.1.2	Cost of Goods sold / Gross Margin .....	46
6.1.3	Selling, General and Administrative Expenses .....	46
6.1.4	Net Interest Expense.....	46
6.1.5	Income Taxes – Tax Rate .....	47
6.2	Consolidated Balance Sheet .....	47
6.2.1	Current Assets.....	47

6.2.2	Current Liabilities.....	48
6.3	Capital Expenditures – CAPEX .....	48
6.4	Discounted Cash Flow – DCF .....	48
6.4.1	Cost of Equity.....	48
6.4.2	Growth Rate.....	49
6.4.3	Capital Structure .....	49
6.4.4	Weighted Average Cost of Capital - WACC.....	49
6.5	Adjusted Present Value – APV .....	50
6.6	Multiples Valuation .....	51
6.7	Conclusion .....	51
7.	Merged Entity Valuation .....	53
7.1	Merged Entity without synergies.....	53
7.2	Merged Entity with synergies.....	54
7.2.1	Operational Synergies.....	54
7.2.2	Gross Margin / Cost of goods sold .....	55
7.2.3	Selling General and administrative expenses .....	55
7.2.4	CAPEX.....	56
7.2.5	Integration costs.....	57
7.2.6	Transaction costs .....	57
7.3	Valuation Merged Entity with Synergies .....	57
8.	Acquisition.....	58
8.1	Premium Offered .....	58
8.2	Acquisition Type .....	59
9.	Conclusion .....	60

## List of Figures

Figure n°1: Market Capitalization.....	22
Figure n°2: Sports Market Revenue.....	25
Figure n°3: Market Revenue Share by Region.....	26
Figure n°4: Market Revenue Share by Region.....	26
Figure n°5: North America’s Market Value.....	27
Figure n°6: China’s Market Value.....	27
Figure n°7: E-commerce share of Total Retail Sales.....	28
Figure n°8: Health and Fitness Apps.....	29
Figure n°9: Adidas Ownership.....	30
Figure n°10: Adidas Revenue.....	30
Figure n°11: Adidas Net Income.....	31
Figure n°12: Adidas Margin.....	31
Figure n°13: Adidas Revenue by Segment.....	32
Figure n°14: Adidas Revenue by Region.....	32
Figure n°15: Under Armour Revenue.....	34
Figure n°16: Under Armour Net Income.....	34
Figure n°17: Under Armour Margin.....	35
Figure n°18: Under Armour Revenue by Segment.....	35
Figure n°19: Under Armour Revenue by Region.....	36
Figure n°20: North America Market Share.....	54
Figure n°21: Adidas CAPEX by Region.....	56



## List of Tables

Table n°1: Types of Multiples.....	20
Table n°2: Adidas Consolidated Income Statement.....	33
Table n°3: Under Armour Consolidated Income Statement.....	36
Table n°4: Adidas Debt Structure.....	41
Table n°5: Adidas DCF Valuation.....	41
Table n°6: Adidas APV Valuation.....	43
Table n°7: Adidas Peer Group.....	43
Table n°8: Adidas Multiple Valuation.....	44
Table n°9: Adidas Valuation.....	44
Table n°10: Under Armour Debt Structure.....	49
Table n°11: Under Armour DCF Valuation.....	50
Table n°12: Under Armour APV Valuation.....	50
Table n°13: Under Armour Peer Group.....	51
Table n°14: Under Armour Multiple Valuation.....	51
Table n°15: Under Armour Valuation.....	52
Table n°16: Merged Entity Valuation.....	53
Table n°17: Gross Margin calculation.....	55
Table n°18: SG&A calculation.....	56
Table n°19: Transaction costs.....	57
Table n°20: Merged Entity Valuation.....	57
Table n°21: Under Armour Share Price.....	58
Table n°22: Under Armour Premium.....	58
Table n°23: Premium Calculation.....	59
Table n°24: Synergies Calculation.....	59
Table n°25: Gains Calculation.....	60

## List of Abbreviations

APV	Adjusted Present Value
$\beta_L$	Levered Beta
$\beta_U$	Unlevered Beta
CAPEX	Capital Expenditures
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
COGS	Cost of Goods Sold
D&A	Depreciation and Amortization
DCF	Discounted Cash Flow
EBT	Earnings before Taxes
EBIT	Earnings before Inters and Taxes
FCFE	Free Cash Flow to the Equity
FCFF	Free Cash Flow to the Firm
GDP	Gross Domestic Product
M&A	Mergers and Acquisitions
NPV	Net Present Value
PD	Probability of Default
PV	Present Value
$r_D$	Cost of Debt
$r_E$	Cost of Equity
$r_f$	Risk-free rate
$r_U$	Cost of Unlevered Equity
UA	Under Armour
WACC	Weighted Average Cost of Capital
WC	Working Capital
YoY	Year over Year

## 1. Introduction

The purpose of this dissertation is to focus on the merger of **Adidas AG** and **Under Armour, Inc.**, with the former buying the latter through a deal that would revolutionize the Sporting Goods Industry. In order to achieve such deal, several factors have to be weighed in, with special attention to the Financial Statements of both companies.

This merger presents the possibility of a new market giant and should, therefore, be analyzed carefully. Both valuations are very large, within two strong and established companies in the sector, with very strong Management Boards.

This dissertation is divided into 4 parts. In the first section, the literature review that gives reliability to the methods used, as well as provide a solid basis for the analysis conducted.

The following part examines the industry as a whole and both companies, taking into account all the relevant facts leading the decision making close the deal.

The third section is comprised by each company standalone valuation, in accordance to the literature review. Three valuation techniques were computed: Discounted Cash-Flow (DCF), Adjusted Present Value (APV), and Relative Valuation (Multiples).

The final part covers the Merged Entity valuation, as well as the transaction method and which premium to pay in order to gain control of the company.

## 2. Literature Review

In 2017, Mergers and Acquisitions registered its fourth consecutive year exceeding \$3 trillion, a number which is expected to grow by the end of 2018, according to Thomson Reuters.

In this section, we will start with an overview of several topics related to M&A transactions. We will start by giving an overview, main motives and issues related to them, as well as analyze the creation (or destruction) of value they can represent. Moreover, we will focus on the synergies that can arise from such transactions and the main errors companies make when estimating these, as well as the different deals and payments methods existent. It will then be presented several valuation methods, and its respective components, benefits and drawbacks. We will finalize with an overview on Cross Border Valuation, a topic which is of fundamental analysis in this deal.

### 2.1 M&A Overview

M&A transactions are a form of corporate restructuring. In other words, a company has the possibility to grow not only organically, but also through the purchase of assets, increase of leverage, through divestitures, among many other forms. These strategies are usually divided into three main subjects: Corporate, Financial and Operational Restructuring (Gibbs, 1993).

Several motivations can be found when companies engage in M&A transactions, such as **strategic realignment** (mainly due to technological change), **tax considerations** or **diversification**. Nevertheless, the main goal when dealing with M&A are the **synergies** obtained. Therefore, a special focus has to be given to this topic, one of the primary reasons for M&A miscalculations and premium overpayment (Bruner, 2004).

Mergers and Acquisitions are transactions that combine two or more businesses, and where the resulting company is larger than the sum of the independent parts (Damodaran, 2005):

$$V(AB) > V(A) + V(B)$$

Where:

*V(AB) = Value of a firm created by combining A + B*

*V(A) = Value of firm A, operating independently*

*V(B) = Value of firm B, operating independently*

This is only possible given the resulting synergies the merged company will benefit from. Further, we will assess the valuation of synergies, its implications and biggest errors.

M&A can be represented through a series of transactions, either through plain acquisitions, tender offers, consolidations, or even purchase of assets.

Given its complexity, many studies have been made in order to break down some of the reasons that make these deals successful. In fact, despite all the variances different M&A transactions might have, one reason stands out as a motive for minimizing risk and increasing efficiency: **due diligence**. Cullinan, Le Roux and Weddingen (2004) indicate that “due diligence act as a counterweight to the excitement that builds when managers begin to pursue a target”. This reflects the need to answer some simple but very important questions, such as: what’s the independent valuation of our target?; which synergies will occur from the deal?; what is the maximum amount we are willing to pay? Consequently, it is important to get acquainted with several factors, such as customers, competitors, costs and capabilities.

We can conclude that planning is key for management in order to create value. In fact, the value creation has to be bigger through M&A transactions than it would be had the company chosen to organically pursue the investment, as well as reduce the amount of time it takes to accomplish the target goal.

### 2.1.1 M&A issues

Throughout the years, several studies have stated that Mergers and Acquisitions are a **loser’s game**. Not only due to the fact that, supported by empirical studies, they show most transactions fail, but also because the reasons why companies engage in such deals are not the correct ones. Sirower and Sahni (2006), indicate that average returns to acquiring companies were -4.1%, with a majority of 64% of them being viewed as negative deals.

The **winner’s curse** was the subject of a study by McKinsey and Co. (2004), who used their years of experience in analyzing several companies in different industries, geographies and deal types. The conclusion was clear: “Nearly 70 percent of the mergers in our database failed to achieve the revenue synergies estimated by the acquirer’s management.” The two main estimation errors, states the article, are that companies ignore or underestimate the customer losses that result from integration, as well as assume growth rates out of line with the market or competitive dynamics.

This phenomenon was even more evident between 1998 and 2001. Moeller, Schlingemann and Stulz (2005) show that shareholders from acquiring firms lost in total \$240 billion in that time period with failed acquisitions, led by a decrease in stock market value.

Nevertheless, there is also literature supporting the opposite. Robert Bruner (2004) stated that the acquirers average adjusted return, post acquisition, was positive by 1.1%, and that some studies have showed that a small but highly unprofitable number of deals only yield negative results given the “inconsistency between the dollar and percentage returns”.

Although the acquiring company shareholders returns have divergent literature and little consensus (Goergen and Renneboog, 2002), there is more evidence that merger and acquisitions deals bring value to the target company shareholders. Kaplan and Weisbach (1992) and Jarrell and Lehn and Poulsen (1989), state that the target abnormal returns are 29%, with the last affirming that “friendly and hostile takeovers have no influence in their results”.

### **2.1.2 Synergies: Value creation or destruction?**

Mergers and Acquisitions exist largely because value can be created mainly through synergies, which can be divided into two types (Damodaran, 2005): **operational synergies**, either in the form of economies of scale, complementary technical assets and skills or with the entrance in new markets or higher growth in existing ones; and **financial synergies**, with a lower cost of capital, through diversification, by strategic realignment, with new opportunities for growth or by elimination competition, or simply because of tax considerations, providing tax shields beneficial to the acquiring company.

To correctly estimate a transaction, the acquirer firm must achieve the result for four valuations: the intrinsic value, market value, purchase price and synergy value (Eccles, Lanes and Wilson, 1999). The intrinsic value is based on the NPV of expected future cash flows, as of independently from any acquisition. Market value corresponds to the first one plus the market premium that indicates the valuation done by the market participants (share price). The purchase price is the price the bidder has to pay to be accepted by current shareholders. Finally, the synergy value establishes the NPV of future cash flow that will arise from the merger with the acquirer. On top of all, we can estimate the Value Gap, by deducting the intrinsic value to the purchase price.

In order to estimate the Synergy value, the acquirer must bear in mind five different sources (Eccles, Lanes and Wilson, 1999):

1. **Cost savings** – the most common type of synergy, usually arising from eliminating related expenses or economies of scale;
2. **Revenue enhancements** – mainly through a higher level of sales growth due to more customers and area of operation;
3. **Process improvements** – resulting from using best practices and core competences in the target company;
4. **Financial engineering** – merging two companies can result in a size increase big enough to bring economic benefits such as working capital requirements or surplus cash;
5. **Tax benefits** – the combined tax rate of the merged company is equal or lower than the independent tax rate of both companies, previous to the transaction;

The general case verified in M&A deals is that companies have an easier time reducing costs than increasing revenues (Sirower and Sahni, 2006). The main cause is the shared common expenses, such as facilities or headcounts, and the way revenues are affected by competitors and customers reactions.

Synergies are the most referred cause of M&A transactions worldwide. Nevertheless, after decades of research, most studies still identify the same mistakes when calculating them. Management tends to overestimate synergies as they convince themselves the deal is strategic and will benefit the company.

According to Eccles, Lanes and Wilson (1999), “the key to success in buying another company is knowing the maximum price you can pay and then having the discipline not to pay a penny more”.

However, this is easier said than done. Grubb and Lamb (2000) indicate that only 20% of all M&A deals really succeed, mainly because the acquirer estimations, either through cost saving or revenue increase, are miscalculated. Sirower and Sahni (2006) studied over 300 M&A transactions that happened between 1995 and 2001 and discovered that 61% of acquirers lagged their industry peers. Moreover, they saw that while buyers lost on average, shareholders of selling companies earned an average of 20% peer-adjusted return.

### 2.1.3 Payment Methods

The analysis of the payment method for an M&A transaction is crucial regarding its success. Therefore, this is a very studied topic, with conclusions being objective: deals paid with cash earn higher returns than the ones paid with stock.

The reasoning for this is because stock payments indicate that managers believe the firm's shares are overpriced (Bruner, 2004), and therefore are used in more friendly transactions, when the ownership is spread and stock price is high, and the acquirer has less cash.

Moreover, paying with cash is a signal of more confidence, as the acquirer takes the entire risk that the synergy resulting from the deal will not appear (Sirower and Sahni, 2006). On the other side, on a stock deal, the synergy risk is shared in proportion to the percentage of the shares each shareholder will own. In their study, they observed that cash deals outperform stock deals returns by 8.3% one year after completion, with 73% of stock deals presenting a return of -26.8% in the same time period.

Another interesting finding was that price matters, as acquirers who paid lower premiums were performing better, on average, than the ones paying higher premiums.

## **2.2 Valuation Methods**

Valuation is the foundation for any M&A deal and plays a crucial role in their success. In this section, we will analyze the most important methods.

Luerhman (1997) said that "behind every major resource-allocation decision a company makes lies some calculation of what that move is worth". Therefore, it is important to analyze every method very carefully and use the ones who fit the transaction best.

In this section we will examine several studies and research's, in order to better value the transaction proposed. This dissertation will focus mainly on the Discounted Cash Flow approach, Relative Valuation and Adjusted Present Value.

### **2.2.1 DCF**

The Discounted Cash Flow approach is the most widely used one in almost every M&A transaction, as it is transversal to any industry and type of deal. Damodaran (2006) states that in the DCF method, the value of the asset is the present value of expected cash flows on the same, discounted at a rate that reflects the risk of these cashflows.

Mukherjee, Kiyamaz and Baker (2003) state that DCF valuations are highly sensitive to assumptions made regarding growth, profit margin and terminal value. On top of that, the purchase price paid by the acquiring company will influence future cash flows.

One of the key components of a DCF valuation is the discount rate used to obtain the present value of future cash flows. Several studies have been made regarding the topic, with many



different ideas. The most used one, backed by Marren (1993), is the Weighted Average Cost of Capital (WACC), which uses either the Capital Asset Pricing Model (CAPM) or the Arbitrage Pricing Theory (APT). Moreover, is it also possible to discount the future cash flows using the target's cost of equity (Brigham and Ehrhardt, 2002) or by using the acquirer's cost of capital (Rappaport, 1986).

### **2.2.1.1 Free Cash-Flow to the Firm (FCFF)**

FCFF is the most commonly used valuation method and one of the important valuation technique when estimating the value of a business, according to Marren (1993). It represents the operating cash flow generated by operations, without taking into account the financial debt, after tax, (Fernández, 2007).

In this method we value the business as a whole by discounting all the free cash flows to the firm by the weighted average cost of capital, which includes both the risk for debt and equity holders (Damodaran, 2006). Implicit here is the tax benefits to the company as well as the expected bankruptcy costs.

$$FCFF = EBIT (1 - t) + Depreciations - CAPEX \pm \Delta WC$$

Where

EBIT = Earnings before interests and taxes

CAPEX = Capital Expenditures

$\Delta WC$  = Changes in Working Capital

There are two points crucial to the calculation of the FCFF, according to Fernández (2007). First, we must ignore the company's financing for operations and focus on the financial return on the company's assets after tax. Second, and related to another valuation method, if the company had no debt, the free cash flow would be equal to the FCFE.

#### **2.2.1.1.1 WACC**

The weighted average cost of capital, which includes the weighted average cost of debt and equity of the firm, is calculated by weighting the cost of debt and the cost of equity, regarding the company's financial structures (Fernández, 2007).

The formula for the weighted average cost of capital is given by:

$$WACC = \frac{E}{E + D} \times r_E + \frac{D}{E + D} \times r_D \times (1 - t)$$

Where

$E$  = Market value of Equity

$D$  = Market value of Debt

$r_E$  = Cost of equity

$r_D$  = Cost of debt

Luehrman (1997) states that the WACC is obsolete, due to the fact that it works best in simple capital structures, otherwise it needs to be adjusted extensively. Therefore, he suggests that another valuation method should be used, the Adjusted Present Value (APV), which calculates the effects of the cost of equity and cost of debt separately. Further in this dissertation we will analyze this method.

### **2.2.1.1.2 Required Return on Equity**

The Required Return on equity is commonly calculated using the CAPM method, developed by William Sharpe (1964). The model establishes a relation between the systematic risk, the beta, and the assets' expected return, which is calculated by subtracting the risk-free rate to the market expected return.

$$r_E = r_f + \beta_L \times [ E(r_M) - r_f ]$$

Where

$r_f$  = Rate of return for risk-free investments

$\beta_L$  = Company's levered beta

$r_M$  = Expected market return

### **2.2.1.1.3 Cost of Debt**

The best way to estimate the cost of debt is by using the yield to maturity of long-term company bonds (Skardziukas, 2010). They should be liquid enough in order for prices to respond market conditions, and be options-free, as they would affect the price.

$$r_D = (r_f + \text{Default Spread})$$

The default spread shows how likely is the company to default, added to the risk-free rate, and is calculated in order to compensate the lender for assuming default risk. The higher the risk of default, the higher the spread.

#### **2.2.1.1.4 Growth Rate**

The growth rate determines how fast will the company increase its revenues in a given period. It is important to estimate it correctly as Revenues are linked to most of the projections and can affect significantly the final valuation.

Damodaran (2005) states that a good indicator of future growth rates is the historical ones as they indicate where the company is coming from, and if its strategy is paying off. Another good indicator is usually the projections the own company makes. Although these are usually just a short-term prediction, it can indicate how confident the firm is, as well as give us an indicator of an increasing or decreasing growth rate.

Another very good indicator is to analyze the most direct competition. In most industries, mainly the ones who are very competitive, if one company (usually the market leader) is performing not so well this could mean two things: either the industry is facing a slowdown, or some company has been gaining market share to its competitors. Either way, this can give us a very good indication of the path to follow.

#### **2.2.1.1.5 Terminal Value (TV)**

Most DCF forecasts estimate future cash flows in a 10-year period, since it's very difficult, if not impossible, to predict cash flows for a longer period, or even forever. Therefore, the Terminal Value gives us the company's present value of all those future cash flows.

There are three ways for estimating Terminal Value, according to Damodaran (2012):

##### **1. Liquidation of firm's assets**

In this variation, we estimate that at one point the company will cease to exist. Therefore, we either sell the assets at book value, adjusting for inflation, or we calculate the sell price using the asset's earning power. However, when valuing equity, we must estimate the value of debt outstanding in the terminal year, and then subtract it to the liquidation value.

##### **2. Multiples approach**

In this method we use a multiple, such as firm's earnings or revenues in terminal year, in order to estimate the Terminal Value. If valuing equity, we can only use equity multiples such as price earnings ratios to arrive at the terminal value.

### 3. Stable growth model

Last but not least, the most common of the three. In order to estimate the Terminal Value, we assume a long period of time where the company reaches a steady state and a stable growth, reinvesting cash flows into the business.

$$\text{Terminal Value}_t = \frac{CF_{t+1}}{r-g \text{ (stable)}}$$

#### 2.2.1.2 APV – Adjusted Present Value

In the Adjusted Present Value, created by Stewart Myers (1974), we focus on two main cash flows: on one side revenues, cash operation costs and capital expenditures, connected to the business operation, and on the other the financing part, with tax shields, issue costs, hedges and subsidized financing (Luehrman, 1997). This is in line with the Modigliani and Miller's (M&M) theorem.

APV estimates the value of debt benefits and costs separately from the value of operating costs. Therefore, according to Luehrman (1997), it is a better method than the WACC as it requires less assumptions, which restrict and sometimes carry valuations errors.

$$\text{Firm Value (APV)} = 100\% \text{ equity financed company (Unlevered Value)} + \text{PV Expected Tax Benefits of Debt} - \text{Expected Bankruptcy Costs}$$

According to (Damodaran, 2005), the first step in the APV approach is to estimate the unlevered firm value.

$$\text{Value of Unlevered Firm} = \frac{FCFF_0 (1+g)}{\rho_u - g}$$

Where

$FCFF_0$  = current after-tax operating cash flow to the firm

$\rho_u$  = unlevered cost of equity

$g$  = expected growth rate

The second step is to calculate the expected tax benefit for a given level of debt.

$$\text{Value of Tax Benefits} = \sum_{t=1}^{t=\infty} \frac{\text{Tax Rate}_t * \text{Interest Rate}_t * \text{Debt}_t}{(1+r)^t}$$

### 2.2.1.3 Multiples – Relative Valuation

Another method of valuing a firm is by engaging into relative valuation, i.e., comparing the company with similar/comparable firm, in relation to a key statistic, usually earning or cash flow related.

According to Suozzo et al (2001), there are two types of multiples: Enterprise and Equity Multiples. The first ones indicate the value of the whole firm, while the second indicate the value of shareholders' claims on the assets and cash flow of the business.

Table n°1: Types of Multiples

<b>Enterprise Multiples</b>	<b>Equity Multiples</b>
EV/EBITDA; EV/Sales; EV/EBIT; EV/FCF	PER; P/BV; P/S; PEG;

Source: Corporate Finance Institute

Kaplan and Ruback (1996) state that relative valuation relies on two assumptions. The first is that the companies we select as comparable must have a growth rate of expected future cash flows and the same level of risk as the firm being valued. Second, “the value of the company is assumed to vary in direct proportion with changes in the performance measure”.

Although the multiples valuations has several advantages, such as being simple, useful and straightforward, it also bear some disadvantages, making it very difficult to use sometimes, as well as misleading in some deal. Some of the drawbacks lie mainly in the difficulty to compare many companies, as well as being to simplistic and static over time (Suozzo et al 2001).

## 2.3 Cross Border Valuation

The number of Cross-Border M&A deals is increasing every year and is becoming more and more recurrent, with 40% of total M&A transactions by 2007 (Zenner et al, 2008). Being this a deal between companies from two different countries (and different continents), cross-border valuation plays a crucial role.

As in most M&A, several steps and valuations are required, but the methods used and the integration phase are the ones which bring the most problems. Shimizu et al (2004) states that the three fundamental steps are due diligence, negotiation and integration, and each of the phases bring more concerns, such as dissimilar institutional environments, valuation and payment methods and even social and cultural divergences.

Bruner (2004) states that all M&A activity is local, as it's in the acquirer company to perform due diligence and examine the integration phase. Furthermore, Bruner enumerates four key points in order to make any M&A deal successful.

1. **Strategy**, in regards to due diligence, focus vs diversification of products and markets and synergies;
2. **Investment opportunity**, being it towards strategic assets, undervaluation of firms or target restructuring;
3. **Deal design**, mainly through payment methods;
4. **Governance**, affecting the deal type, friendly or hostile and the anti-takeover measures;

Regarding the valuation methods, Zenner et al (2008) state that even though Cross-border M&A deals are very similar to domestic transactions, they should be adjusted mainly for risk, tax and account differences. The main problem comes with currency risk, as both companies operate in different currencies, and are, therefore, subject to foreign exchange rate risk.

The article also states that the financing of the deal can bring some issues, as the acquirer needs to decide in which currency will the transaction be made and where the debt will be domiciled. Other problems may arise when dealing with ongoing corporate taxes, due to ownership percentages.

Finally, regarding the valuation methods, Zenner et al (2008) state that multiples could be problematic due to the fact that comparable transactions, especially between the same countries and industries, might be very difficult to come up. Therefore, they suggest the DCF valuation method due to its flexibility when estimating tax and accounting differences.

### 3. Industry Overview

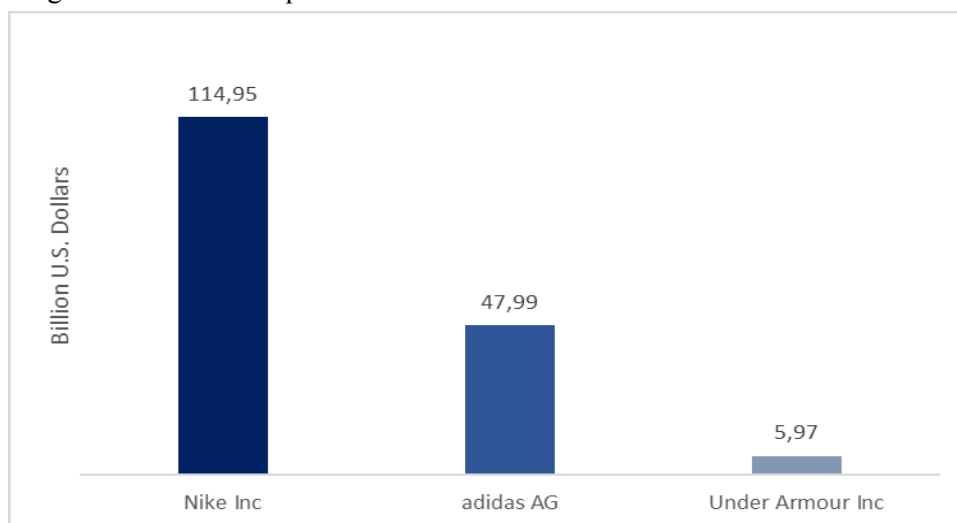
The Sporting Goods Industry faces a very segmented market, where demand is constantly changing and companies need to reinvent their products accordingly, coming up with new and appealing styles for their targets.

The total size of the Global Sports Industry was estimated in \$1.3 trillion in 2017. However, this not only involves media rights but also sports contracts, gate revenues, among many others streams. Sporting Goods, such as apparel and footwear, are less relevant inside the industry, but still amount for \$348.51 billion in 2017, with predictions to reach \$388.64 billion by 2020.

The industry is clearly dominated by a small number of companies, with three having the most fame and recognition. Nike, the American sportswear giant, is clearly ahead of the competition. Not only does the brand possess undisputed leadership in the North American market but is also a great competitor in Europe and growing rapidly in China. The company has a market capitalization of \$114.95 billion, which is more than its two direct competitors combined. Adidas comes in second, with a market cap of \$47.99 billion; while Under Armour comes in third with \$5.97 billion.

Adidas' main objective is to become “the best sports company in the world”, but in order to do so, they would require a very high paced growth over the next 10 years. Therefore, a merger between Adidas and Under Armour could bring the company closer, mainly in the North American market, as Under Armour registered a growth of 56,5% between 2014 and 2016, more than any of its direct competitors.

Figure n°1: Market Capitalization



Source: Statista

### 3.1 PEST Analysis

#### Political – Legal Context

Every industry is susceptible to the political environment in which they operate. The Sporting Goods Industry is no different and is subject to several factors which bring threats to the operating business model.

The four main indicators of such political environment are: **international trade agreements**, mainly between different continents and countries where the business has a higher volume, such as North America and Europe; **product safety laws**, specific to each country, but with a set of worldwide guidelines; **labor laws**, connected to human rights and unions; **consumer safety product regulations**, specific to each country, usually tighter in North America.

#### Economical Context

With the world economy now recovered from the Financial crisis and growing at 3,1% in the last year, the climate is favorable to do business. As economies increase, so do the incomes and quality of life of the citizens. New and better conditions are created, and companies continue to invest in order to supply the increasing demand.

Moreover, the main indicators for this context are: **economic growth**, not only for large economies such as the US and Germany, but also emerging markets such as China, Russia and India; **income level**, mainly disposable income from middle to upper classes; **dependency on the low cost of labor**, mainly in Eastern European countries and China.

#### Social Context

Taking into account the current mass migration of refugees in Europe, the social environment plays a crucial role when addressing the scenario in which companies operate. Not only that, but human rights face an increasing focus, given that many countries still ignore these.

Regarding the social aspect, the main indicators are: **health consciousness**, in factories and distribution; **dubious production processes**, mainly in developing countries, with child labor and suboptimal conditions; **consumption patterns**, as people become more active and adopt a healthier life style.



## **Technological Context**

Technology is growing at a very fast pace, even on manufactured goods. Therefore, companies must keep up with the latest trends. **New natural material replacements** are growing, with companies using these mainly in apparel and footwear; the use of **website** and **social media**, in order to reach a larger audience; new segments, such as **wearables** like smartwatches, that track your lifestyle and give you recommendations.

## **3.2 Porter 5 Forces**

### **Rivalry among existing firms**

The main issue with the Sporting Goods Industry is that competition is hard and margins are relatively low. Therefore, in order to experience consistent sales growth, companies need to gain market share from the main competitors, which is not an easy task. Moreover, product differentiation is crucial, but very challenging to accomplish, as customer demands change frequently and differ between regions.

### **Threat of new entrants**

Capital requirements make it very difficult for new companies to become part of the industry. However, when it happens, customers have no problem switching, as brand loyalty is fairly low and products are all that matter to them.

### **Threat of substitute products**

Here lays the main problem of the Sporting Goods Industry. Products are similar between firms and customers are not very loyal to brands. Therefore, apparel and footwear products can be purchased from any of company without significant changes for the consumer. They are easily accessible and have similar price points.

### **Bargaining power of buyers**

We have to divide the business in order to analyze bargaining power of buyers. On one side, the retail part is very solid as customers cannot influence the price point. On the other side, if we look at the wholesale side of the business, firms such as JD Sports, Dicks Sporting Goods and Footlocker play a major role. Therefore, Nike, Adidas and Under Armour all need to have a special relationship with these firms, in order to increase sales.

### Bargaining power of suppliers

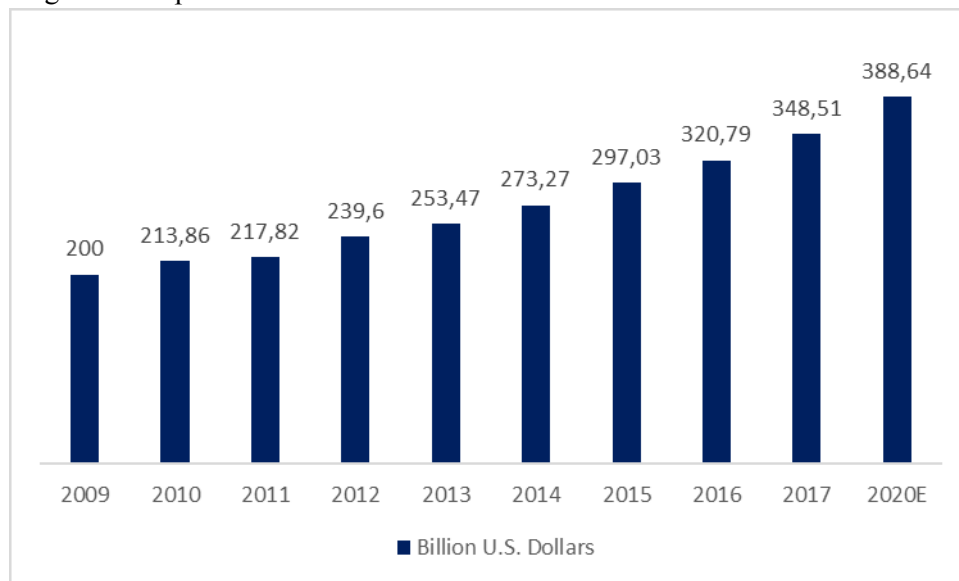
Unless companies need special materials for their products (as Adidas partnership with Continental for rubber), this has little effect on their business, as switching costs are fairly low and materials easily accessible.

### 3.3 Global Demand

With increasing competition and costs associated with producing good reliable products, margins are tendentially low, especially for unestablished firms. The need for sustainability brings higher costs, as consumers plea for companies to be more environmentally friendly.

The Sporting Goods Industry has been growing over the past decade and is expected to continue at a rate of 3,7% a year. By the end of 2020, the total market revenue will surpass \$388 billion, an increase of 11,52% from the \$348.51 billion in 2017. If we compare with the \$200 billion registered in 2009, that's an increase of 94,32% in just 11 years.

Figure n°2: Sports Market Revenue

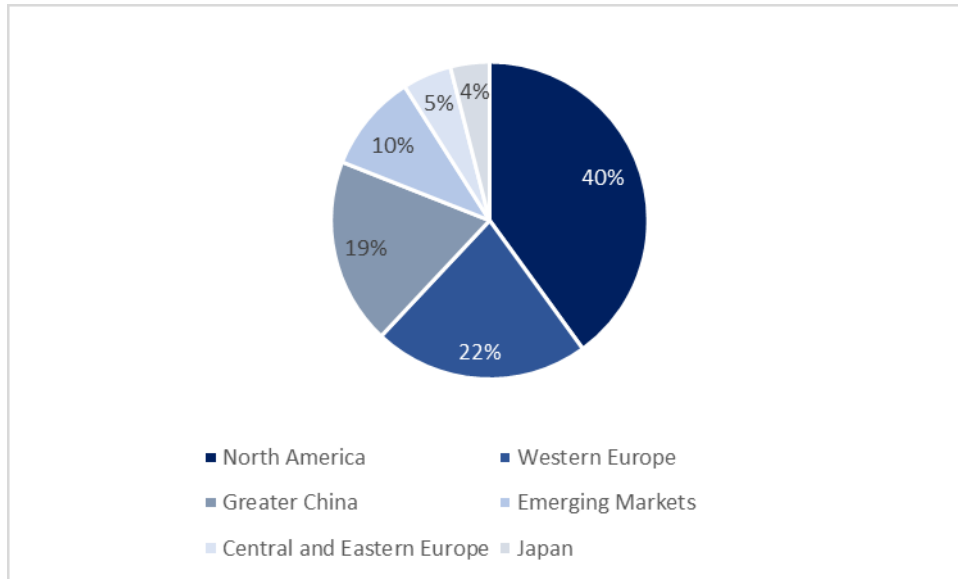


Source: Statista

These results bring several opportunities for sports companies, but also concerns, as firms are required to keep up the fast pace, deal with competition and bring new products that become trendy.

The North American market is the largest in the world, responsible for 40% of total global sales, far ahead of Western Europe with 22%. Therefore, in a market worth \$99.40 billion, the market leader is ahead of the competition and capable of dictating trends, which have more expression in other markets worldwide.

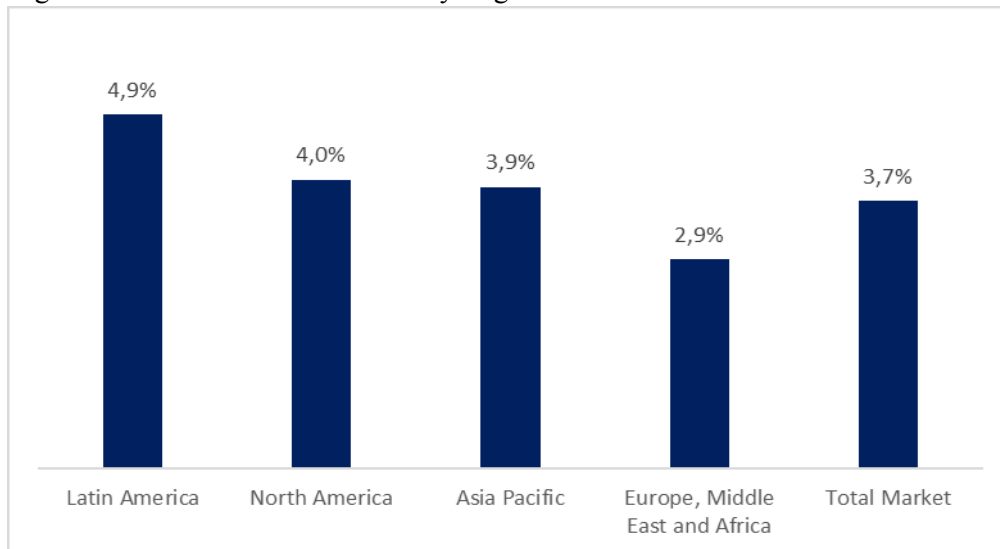
Figure n°3: Market Revenue Share by Region



Source: Statista

If we consider market growth, the American market is very mature, as well as the European. Due to this, companies are investing strongly in Asia, especially in China, with its increasing middle class which has more disposable income every year. Emerging markets, such as Latin America, Africa and Middle East are growing at a good rate, but still account for a smaller portion of the market, and fashion trends tend to be more difficult to reach, as cultural differences create a gap.

Figure n°4: Market Revenue Share by Region

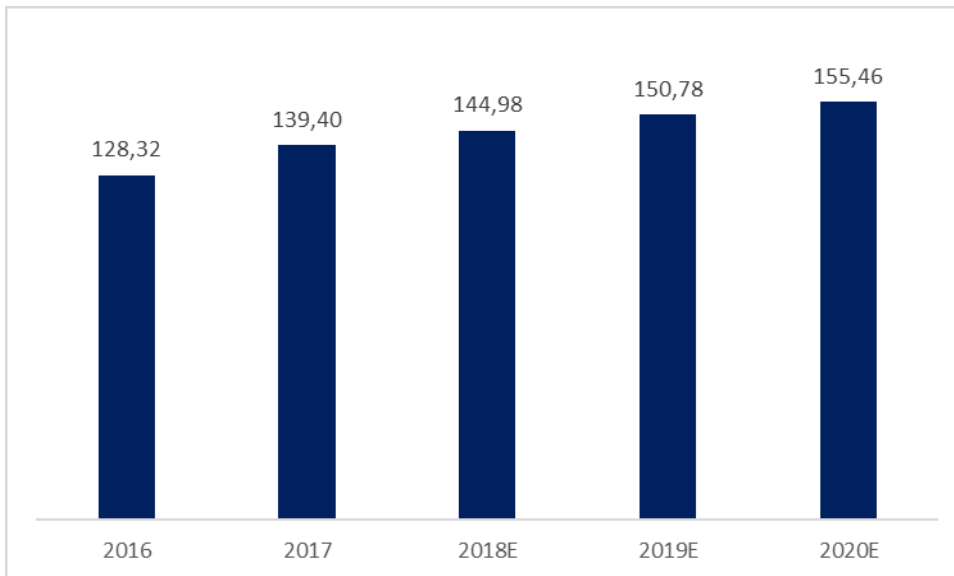


Source: Statista

As mentioned before, the North American market, composed by the USA and Canada, is the largest market worldwide. Not only represents 40% of Total Global Revenue, but also presents an expected growth of 4% YoY until 2020. This will result in a total market of \$155.46 billion,

where sports play a vital role in people's lives and brands experience higher margins and, subsequently, revenues.

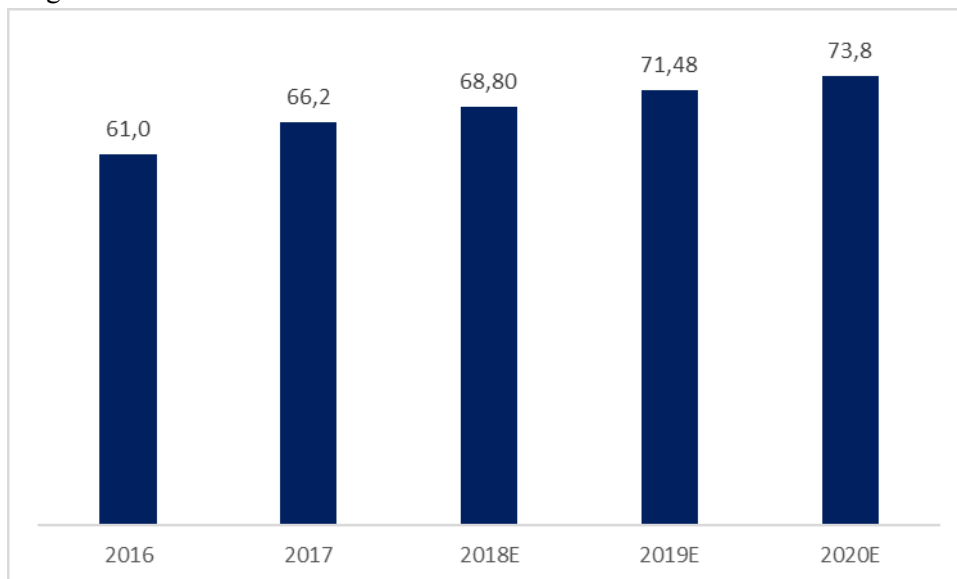
Figure n°5: North America's Market Value



Source: Statista

Despite the North American market possessing leadership in the industry, the country where brands invest the most is China. With a population of nearly 1.4 billion people, China represents a fast-growing market, where opportunities continue to expand. The government's investment in sports and infrastructures is booming, and the industry is expected to reach \$73.8 billion by 2020, an increase of 21% when compared to 2016. Sports such as Football, Basketball and Martial Arts are among the most popular, with around 500 million people exercising regularly.

Figure n°6: China's Market Value



Source: Statista

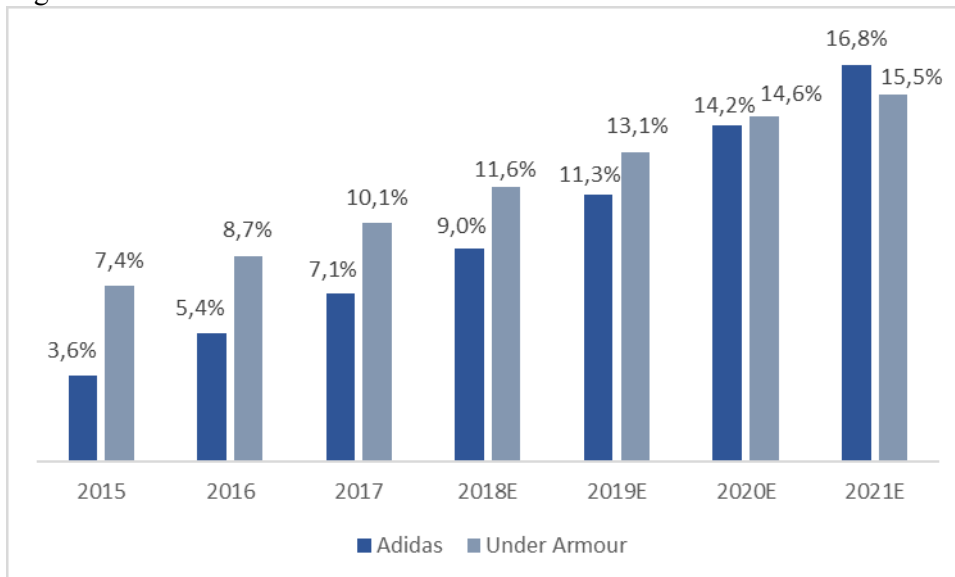
### 3.4 Industry Trends

With the start of the new millennium came the internet boom. Almost two decades later, the internet has expanded, and is present in almost every single aspect of our lives, every day, everywhere.

The possibility to shop online brought new business models, and companies started to evolve. E-commerce became standard for all companies, and most market leaders rely on digital business as promoter for growth and higher profit margins.

In 2015 Under Armour’s E-commerce accounted for 7,4% of Total Global Retail Sales, a value which is expected to increase to 15,5% by 2021, while Adidas is investing heavily in E-com initiatives such as omnichannel, expecting that in 2021 16,8% of its total revenue comes from this channel’s sales.

Figure n°7: E-commerce share of Total Retail Sales

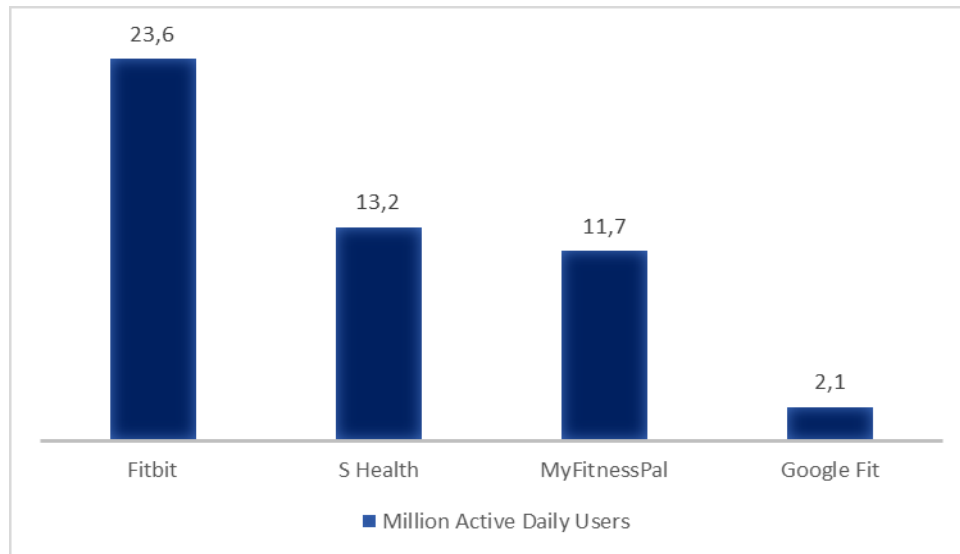


Source: Statista

A new category that has been growing over the past 5 years, inserted in the smartphones and wearables (smartwatches) segment, are the Health and Fitness Apps. The idea is to monitor day-to-day life by tracking exercises, whether is running, walking or any form of exercise, while making us eat healthier and be more active.

MyFitnessPal, acquired by Under Armour in 2015, is one of the most famous applications with 11.7 million active daily users. Fitbit, a smartwatch that tracks heart rate while sleeping and practicing sports, has grown very fast, and has currently 23.6 million users.

Figure n°8: Health and Fitness Apps



Source: Statista

## 4. Company Overview

### 4.1 Adidas AG

Adidas AG was founded in 1949 in Germany and is currently the world's second largest sportswear manufacturer. It consists of several brands, including Adidas, Reebok (which was purchased in 2006), TaylorMade, as well as an 8,33% ownership of Bayern Munich football club. The brand's most iconic products are the Stan Smith and the Superstar sneakers, which combined have sold over 25 million pairs just in 2016.

Figure n°9: Adidas Ownership

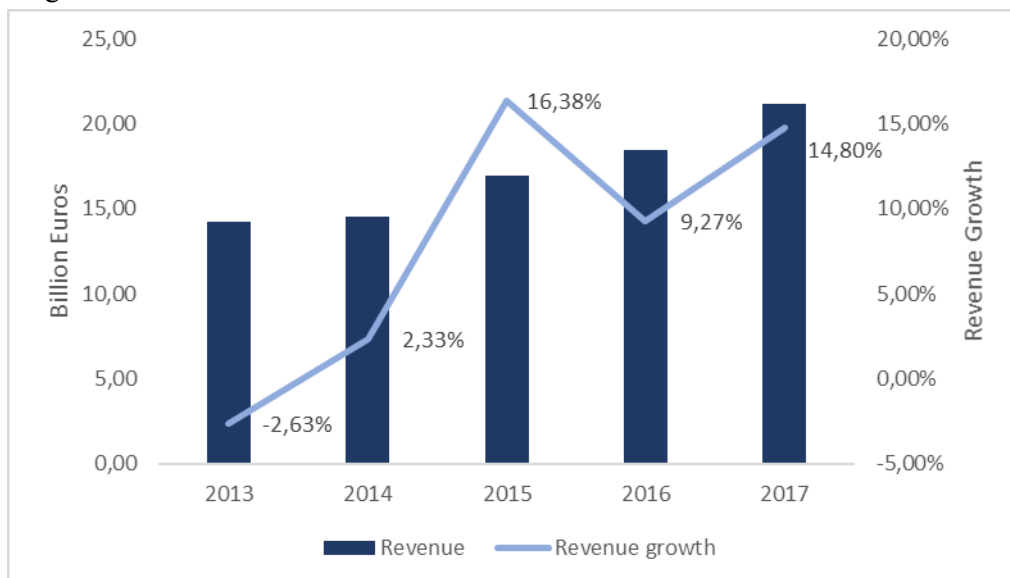


Source: Adidas website

Adidas has been growing at a very fast pace over the last 3 years, putting to place the strategy “creating the new”. Over this period of time, the company managed to grow faster than any of its direct competitors, especially Nike, and closed the gap between both firms, mainly in the USA.

Adidas revenue grew from €14.20 billion in 2014 to €21.22 billion in 2017, with the company expecting to grow at a 10% rate YoY in the next 3 years.

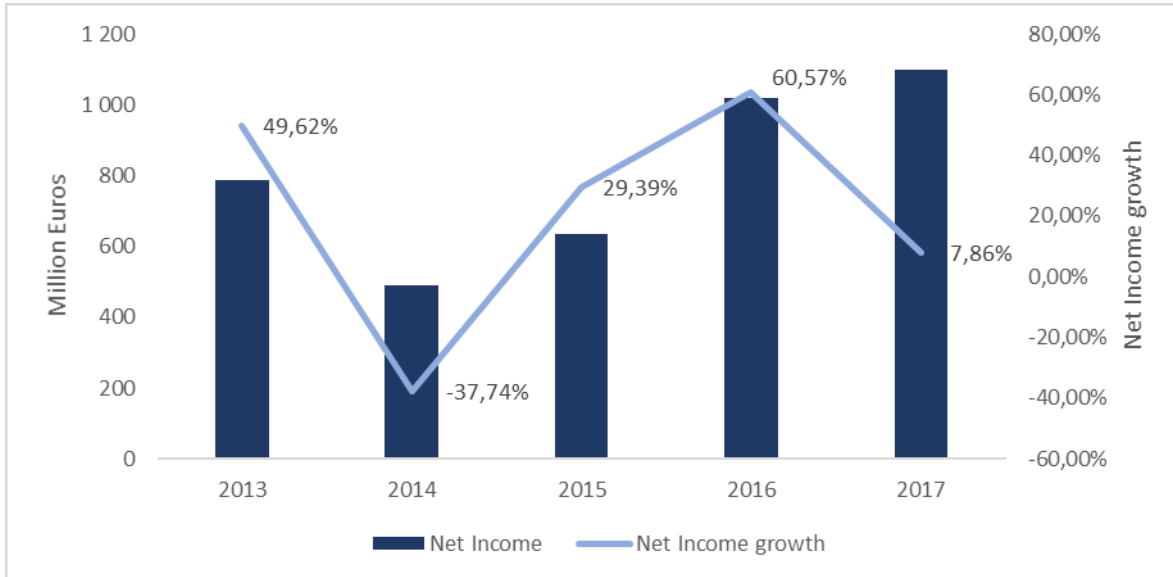
Figure n°10: Adidas Revenue



Source: Adidas website

In terms of Net Income, Adidas also managed to grow, achieving a result of €1.098 million, or 5,17% of revenue. In an Industry where margins are characteristically low, these results are favorable to the company, which expects a positive outlook for 2018.

Figure nº11: Adidas Net Income

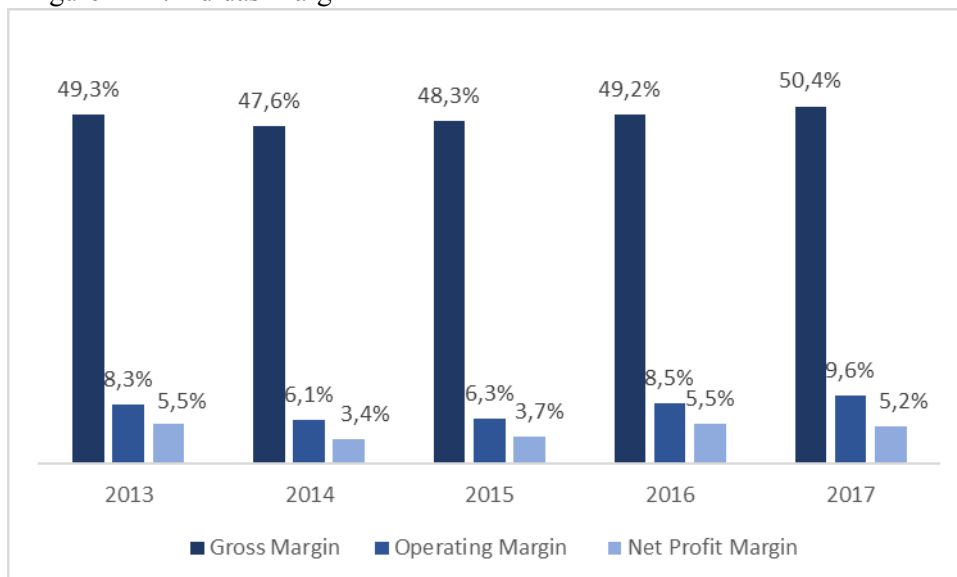


Source: Adidas website

If we analyze Figure nº12, we can see that Adidas presents a very high Gross Margin across the years but delivers much lower Operating and Profit Margins. This is because the firm has very high operating costs, such as facilities, high number of employees, depreciation of fixed assets, among others.

Nevertheless, the Board expressed its satisfaction with increasing the Operating Margin to 9,6% in 2017, which can be considered medium high in the Industry.

Figure nº12: Adidas Margin

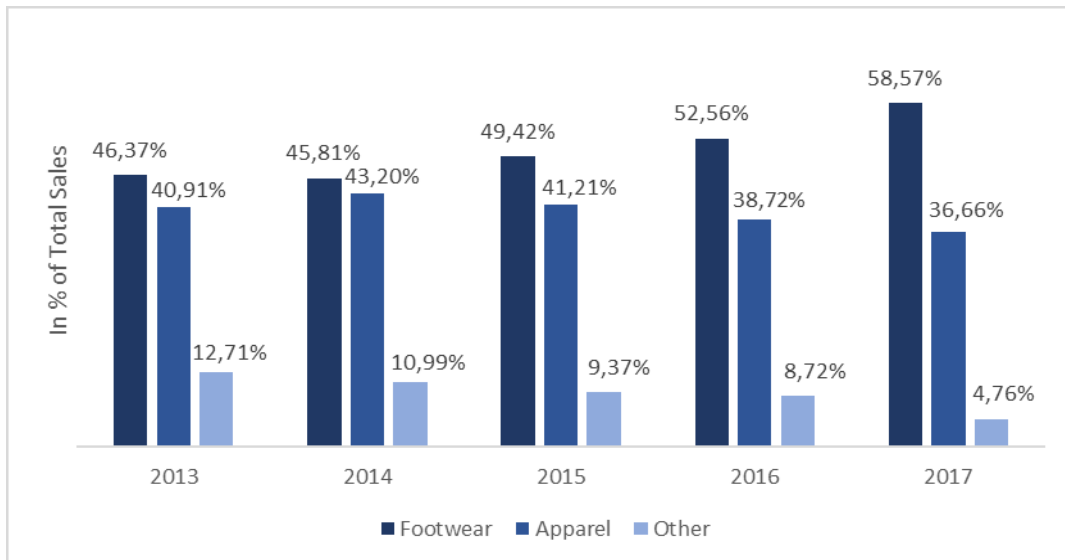


Source: Adidas website



## Adidas acquires Under Armour: a new era in Sporting Goods

Figure nº13: Adidas Revenue by Segment



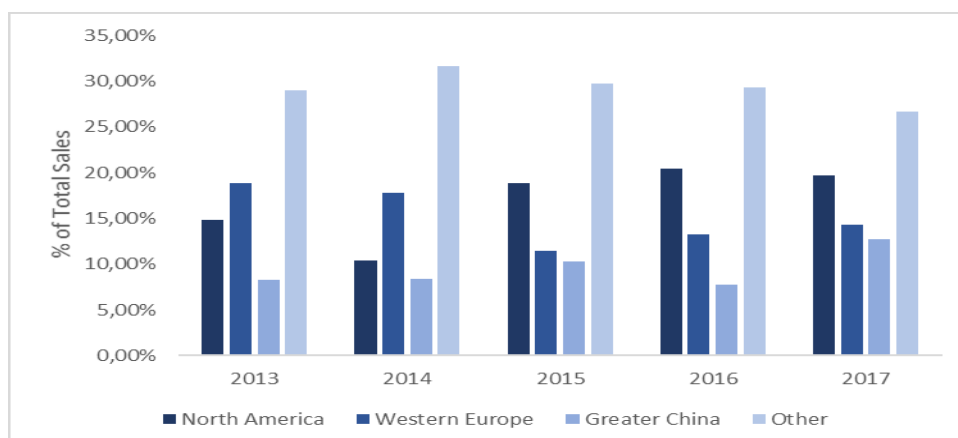
Source: Adidas Website

Adidas two main product categories are footwear and apparel, as most companies in the Sporting Goods Industry. These two combined produce more than 95% of the company's revenue and are the main focus for the firm's strategy. In 2017, Adidas managed to increase both product categories' revenue, to an all-time of €12.43 million and €7.78 million for an increase of 22,6% and 4,2%, for footwear and apparel, respectively.

In terms of geographical location, Adidas is present in almost every country in the world. However, due to its importance, North America and Western Europe are the main focus. The company stated that the goal is to close the gap to Nike in the USA, and therefore increase competitiveness in the largest market worldwide.

Another key point is to invest in China, as the country's economy continues to grow. Adidas grew 88,5% between 2016 and 2017 in this country, which accounted for 17,9% of total revenue of the company.

Figure nº14: Adidas Revenue by Region



Source: Adidas Website

Analyzing Adidas Consolidated Income Statement, we can observe that the company is in good financial health, with results improving year over year, especially after 2014. The increase in revenue, combined with a slower increase on Costs and Expenses gave the company a higher Gross Profit. The same can be perceived from Other Operating Expenses, resulting in a higher Operating Profit.

With a Net Income superior to €1 billion in 2016 and 2017, Adidas managed to reinvest in new products and increase brand awareness in North America, while partnering with fashion icons such as Kanye West and Pharrell Williams.

Table n°2: Adidas Consolidated Income Statement

<b>Consolidated Income Statement</b>					
(€ Million)	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Revenue</b>	<b>14.203</b>	<b>14.534</b>	<b>16.915</b>	<b>18.483</b>	<b>21.218</b>
Costs and Expenses	7.202	7.610	8.748	9.383	10.514
<b>Gross Profit</b>	<b>7.001</b>	<b>6.924</b>	<b>8.168</b>	<b>9.100</b>	<b>10.703</b>
Other Operating Income	245	240	215	367	248
Other Operating Expenses	6.065	6.281	7.323	7.885	8.882
<b>Operating Profit</b>	<b>1.181</b>	<b>883</b>	<b>1.059</b>	<b>1.582</b>	<b>2.070</b>
Financia Income	26	19	46	28	46
Financial Expenses	94	67	67	74	93
<b>Net Income before taxes</b>	<b>1.113</b>	<b>835</b>	<b>1.039</b>	<b>1.536</b>	<b>2.023</b>
Income Taxes	340	271	353	454	668
Losses	17	68	46	62	254
<b>Net Income</b>	<b>790</b>	<b>496</b>	<b>640</b>	<b>1.020</b>	<b>1.101</b>

Source: Adidas Website

## 4.2 Under Armour, Inc.

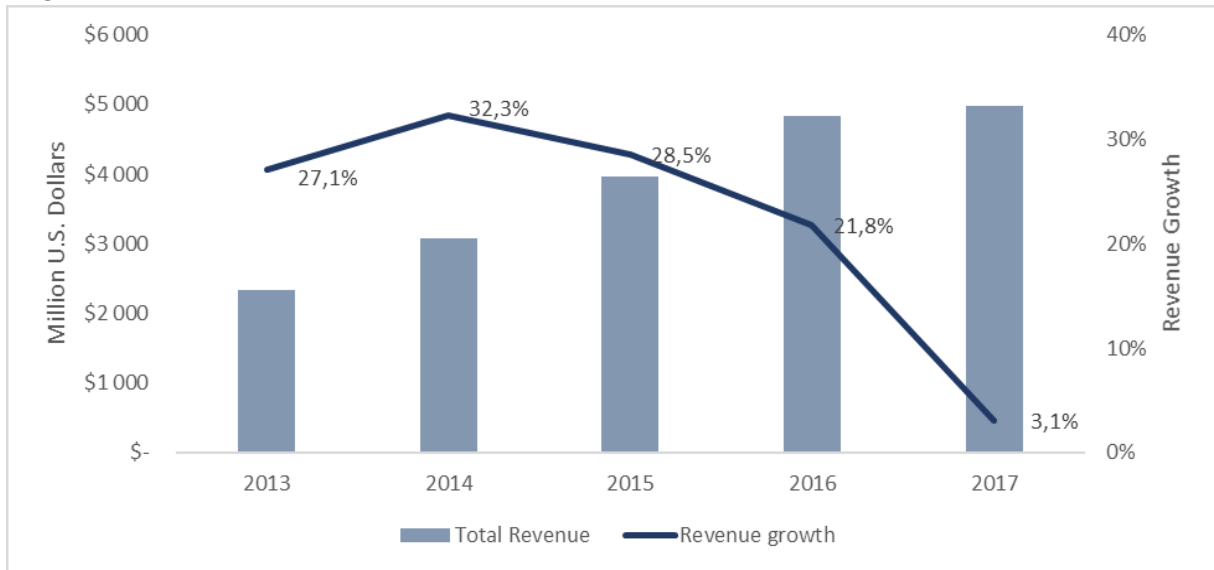


Under Armour (UA) was founded in 1996 by its current Chairman and CEO, Kevin Plank in Baltimore, USA. The company is currently the third largest sports manufacturer in the world, behind the industry giants Nike and Adidas.

Despite being relatively young and new in the industry, Under Armour managed to grow at a very high rate. The fact it operates in the largest market worldwide facilitated brand awareness and the firm managed to achieve stability. The investment made mainly in the NBA and MLB gave UA the necessary leverage to introduce new products and trends, bringing financial returns.

Under Armour succeeded in its internationalization process, and is currently know all around the world, with offices in all five continents.

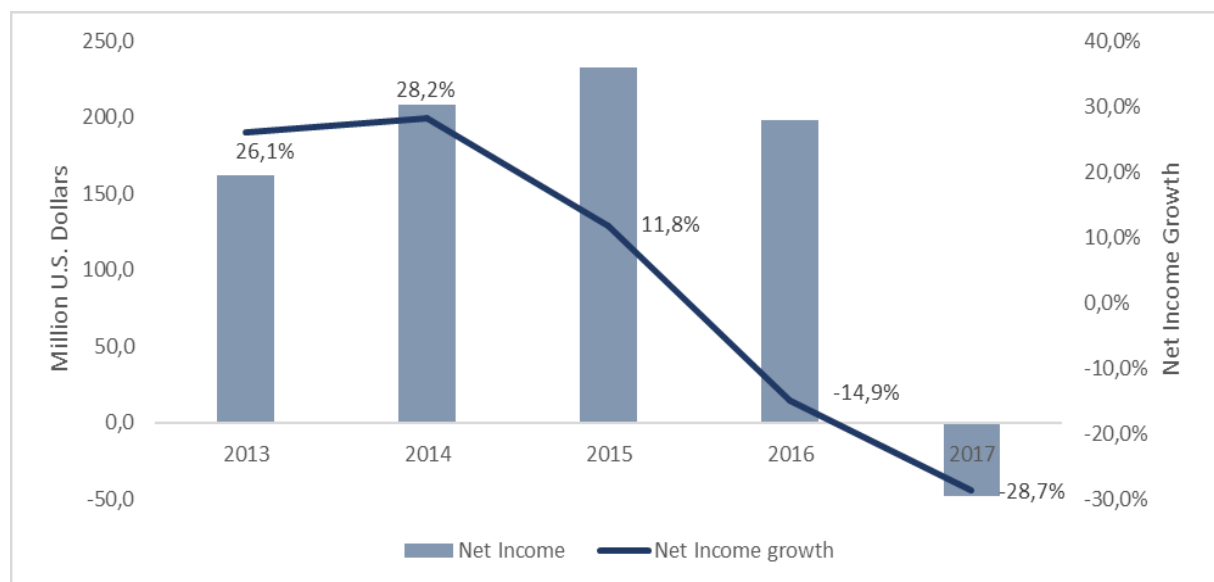
Figure n°15: Under Armour Revenue



Source: Under Armour's Website

The company's revenue has been increasing consistently over the past two decades and reached almost \$5 billion in 2017. Nevertheless, the revenue growth decreased after 2014, when it was at a surprising 32,3%, to 3,1% in 2017. This represents the maturity phase the company is in, as well as the increased difficulty of the firm to gain market share from direct competitors.

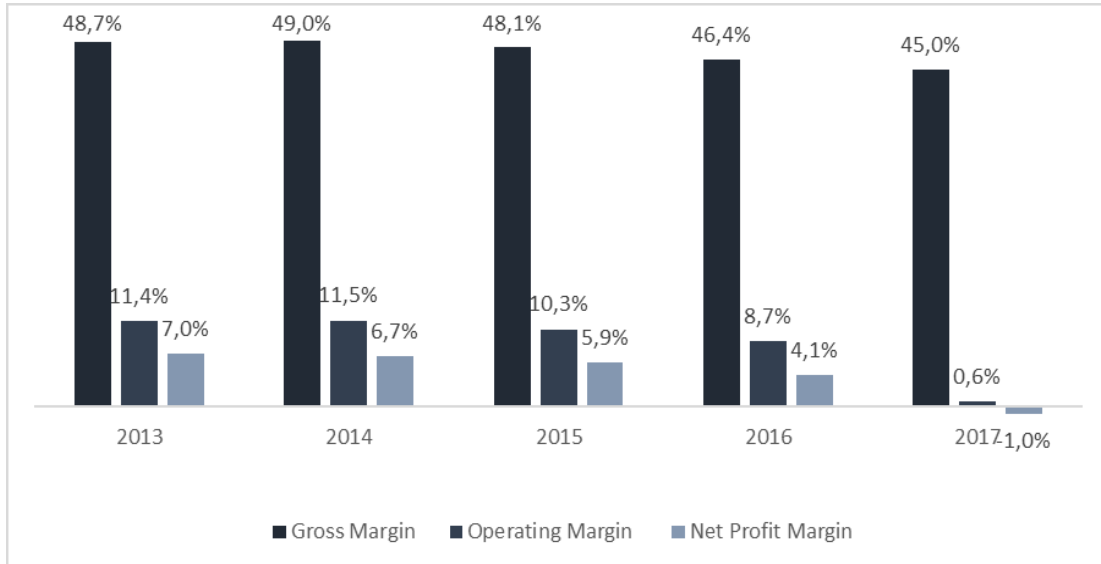
Figure n°16: Under Armour Net Income



Source: Under Armour's Website

Their Net Income experienced the same curve, having decreased after 2014 from 28,2% to -28,7% in 2017, due to the fact that the revenue stabilized while Operating Expenses increased, mainly in Selling, General and Administrative Expenses.

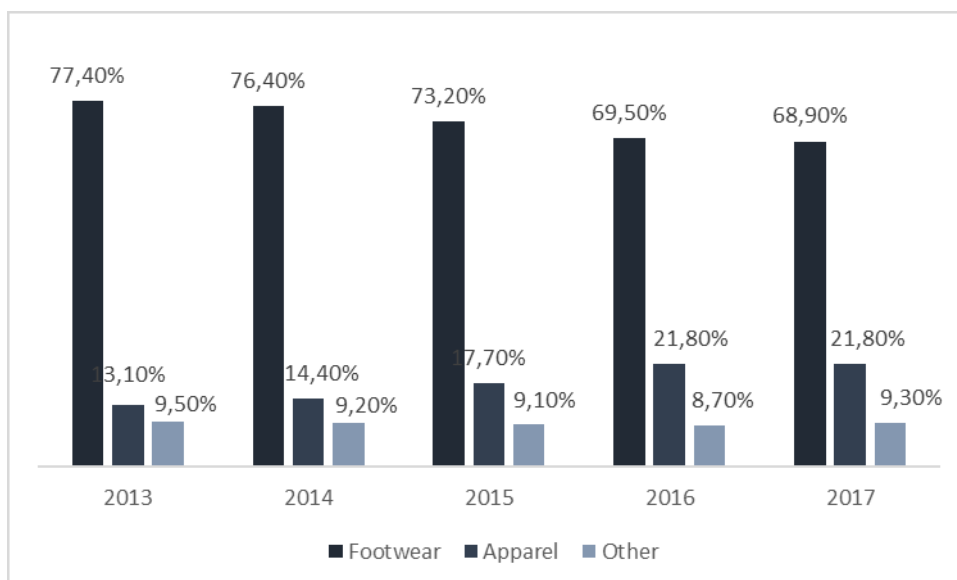
Figure n°17: Under Armour Margin



Source: Under Armour's Website

UA Margins have been decreasing over the past 4 years, experiencing a negative Net Profit Margin in 2017. This is a result from the increased rivalry in the industry, where price points have to be competitive.

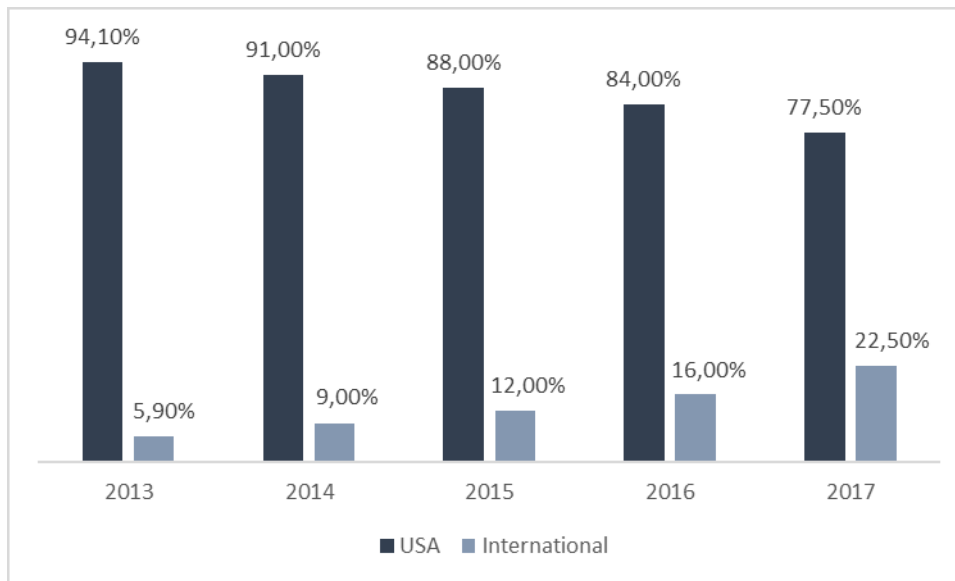
Figure n°18: Under Armour Revenue by Segment



Source: Under Armour's Website

In terms of revenue by Product Category, Footwear is still the main driver for sales, at \$3.428 million, although apparel has been increasing and surpassed \$1 billion in 2017.

Figure n°19: Under Armour Revenue by Region



Source: Under Armour’s Website

Under Armour experienced really high growth rates in the past decade mainly because its headquarters are in the USA, giving the company advantages when it comes to doing business in North America. Nonetheless, UA started its internationalization years ago, and the strategy has paid off. The firm is now experiencing a growth rate of 25% internationally and is expected to continue at the same rate for the next couple of years. In 2017 UA reached \$1.1 billion in revenue, with Western Europe and China leading the way.

The financial situation of the company is not as solid as Adidas, especially considering that in 2017 the company experienced a decrease in growth and a negative Net Income. The constant need to reinvest and produce new products and services led to a deterioration in the Income Statement, with Expenses increasing at a faster pace than revenue.

Table n°3: Under Armour Consolidated Income Statement

<b>Consolidated Income Statement</b>					
(\$ Million)	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Revenue</b>	<b>2.332</b>	<b>3.084</b>	<b>3.963</b>	<b>4.825</b>	<b>4.978</b>
Costs and Expenses	1.195	1.572	2.058	2.585	2.738
<b>Gross Profit</b>	<b>1.136</b>	<b>1.512</b>	<b>2.241</b>	<b>2.241</b>	<b>2.239</b>
Other Operating Income	0	0	0	0	0
Other Operating Expenses	872	1.158	1.497	1.823	2.211
<b>Operating Profit</b>	<b>265</b>	<b>354</b>	<b>409</b>	<b>418</b>	<b>28</b>
Financia Income	0	0	2	0	0
Financial Expenses	4	12	24	29	38
<b>Net Income before taxes</b>	<b>261</b>	<b>342</b>	<b>387</b>	<b>388</b>	<b>-10</b>
Income Taxes	99	134	154	131	1
Losses	0	0	0	0	39
<b>Net Income</b>	<b>162</b>	<b>208</b>	<b>233</b>	<b>257</b>	<b>-48</b>

Source: Under Armour’s Website

## 5. Adidas Valuation

In order to obtain the Equity Value for Adidas AG, three valuation techniques were used: Discounted Cash Flow, Adjusted Present Value and Relative Valuation (Multiples).

### 5.1 Consolidated Income Statement

#### 5.1.1 Revenue

Adidas is pursuing its strategy of “creating the new”. The company set ambitious but achievable 2020 targets in order to face competition and gain market share, especially in North America. The three pillars are **Key Cities**, such as New York, Los Angeles, Paris, London, Shanghai and Tokyo; **Speed**, in satisfying consumer needs and internal decision-making; and **Open Source**, through partnerships and collaborations, to release new hype products.

In 2017 Adidas was able to grow its revenue by 14,8% and is expecting to continue growing at a rate of around 10% a year by 2020. Their 2018 Outlook is firmly reinforced by several key ratios, which supported this analysis and laid base for future years. Therefore, it is assumed the company will grow at a 10% rate until 2020. From then on, it was estimated a growth rate of 7% until 2027, supported by the company’s strategy and growth rate in North America (27%), Western Europe (13%) and Greater China (29%), which account for 47% of the company’s total sales.

#### 5.1.2 Cost of Goods sold / Gross Margin

Adidas expects a Gross Margin of 50,7% in its 2018 Outlook, 30 basis points higher than the previous year, with a continuous increase over the past 5 years. Through economies of scale, Adidas is able to achieve higher sales while maintaining its fixed costs. The expansion in North America and Asia allowed for company to reach more countries/cities and therefore increase margins.

Although Adidas has been increasing their margin over the past years, 50,7% is already very good, and it will therefore be maintained for the full time period. It is not expected that the company is able to increase their margins by a substantial amount and is therefore preferable to be a little conservative in this case.

#### 5.1.3 Operating Expenses

The increase in margins has been associated with Adidas’ ability to decrease its Operating Expenses, especially its Other Operating Expenses. In 2017 this ratio, in percentage of revenues, was of 41,9%. Although the company projects a reduction for 2018, to 41,7%, it is

not expected Adidas can keep such a low level of Operating expenses, especially bearing in mind the optimistic growth rate the firm expects for the future. Therefore, I assumed that the margin would stay at 41,9% of the revenue for the full time period.

The value for Depreciation and Amortization required extra computation, as this account is tightly linked to both CAPEX and Property, Plant and Equipment. Therefore, I decided to estimate it using the Straight-Line Method, using a value of 22,6% of PP&E, in line with what the company depreciated in 2017, thus giving a depreciation period of around 5 years. Consequently, the value for Depreciation and Amortization was computed as the value of the previous year while not having 5 years (starting in 2017) plus the 22,6% of CAPEX the company spent in that year and the previous 4 years.

The remaining accounts were estimated with the values presented in 2017, for lack of better information.

#### **5.1.4 Net Interest Expense**

Adidas does not project any Interest Expense for 2018. Nevertheless, the company states in their Annual Report that the average Interest Rate paid on its debt is 2,7%. This rate was multiplied by the Short and Long-Term Debt the company will present in future years.

On its Annual Report, Adidas States a line of credit of €3.3 billion, both for short and long-term borrowings. In order to estimate the correct values, it was computed the percentage of the past 5 years that the company uses for both of its debts. We can see that on average, Adidas has 27,6% of its total debt in short-term borrowings and the remainder 72,4% in long-term borrowings. The €3.3 billion were then multiplied by this percentages and divided equally among the 10 years of estimation. Short-term debt was estimated as the previous year plus the €91 million reached, and long-term debt as the previous year plus €239 million minus the debt payments the company has to make. This value was obtained as an average of the past 5 years debt repayments stated in the company's Annual Report.

#### **5.1.5 Income Taxes – Tax Rate**

Adidas states in its Annual Report that's is subject to a tax rate of 31,9%, as a result of a “statutory corporate income tax rate of 15% plus a surcharge of 5,5%”, as well as “municipal trade tax” of 11,4%. Therefore, this rate was assumed for the full time period of the projections.

## **5.2 Consolidated Balance Sheet**

### **5.2.1 Current Assets**

The Current Assets part of the Balance Sheet of Adidas is comprised by eight accounts, of which five were maintained at the 2017 level for lack of information.

In the first place, Cash and Cash equivalents were estimated as a percentage of total revenue. Although the company has been decreasing this account as a result of its investment strategy in markets such as North America and Asia, given the consistent increase of revenues over the past 5 years it was assumed that the company would maintain the past 5-year average at 9,3%.

Regarding Accounts Receivable (AR), they were computed according to the Days Sales Outstanding, by dividing AR with the total revenue and multiplying the result by 365 days in a calendar year. Since Adidas is a very large company with several suppliers, it was assumed the company is interested in maintaining the low number of Day Sales in order to get paid, and thus maintaining the value of 2017 of 39,8 days.

Inventories followed the same logic as the previous account, being calculated in terms of days inventory is held regarding Cost of Goods Sold (COGS). It was assumed the 2017 value of 63,5 days.

### **5.2.2 Current Liabilities**

As stated previously, Adidas has a line of credit of €3.3 billion, both for short and long-term borrowings. The value for Short-Term debt was estimated based on its weight of 27,6% of total debt, and then divided equally among the 10 years, for a value of €91 million reached, plus the value of the previous year.

Regarding Accounts Payable, it is in line with Accounts Receivable: it was first computed the number of Days Payable Outstanding, by dividing AP with the total revenue and multiplying the result by 365 days in a calendar year. It was assumed the company would maintain the number of Days Payable Outstanding until 2027, as this creates a positive difference between Days Receivable and Days Payable.

The values for the remaining accounts were maintained at the value presented in 2017 or calculated with the same growth rate presented in said year.



### **5.3 Capital Expenditures – CAPEX**

Adidas expects to reach a value around €900 million in Capital Expenditures for 2018, an increase of 19,7% when compared to the €752 million in 2017. This increase represents 3,9% of revenues, a target assumed to remain constant over the next 10 years when estimating the company's CAPEX.

The reason for that is Adidas is growing consistently over the past 5 years and is expected to do so in the future. The company's needs are increasing and the growth in North America requires new products and services available, which require strong investments. Moreover, the Asian market is also growing exponentially, and the company is taking advantage of that by opening several stores.

### **5.4 Discounted Cash Flow – DCF**

#### **5.4.1 Cost of Equity**

As mentioned in the Literature Review, the Cost of Equity was calculated using the CAPM method.

In order to achieve the Beta value, I used monthly observations over a 5-year period, for a Beta of 0,82. The Market risk premium was achieved through different literature and using Damodaran data, at 5,08%.

In terms of Risk free rate, the value assumed was the one used in the 30-year German Bonds, which are at 1,20%.

#### **5.4.2 Growth Rate**

The growth rate used in order to estimate Terminal Value (TV) was obtained from the World Bank. Since Adidas operates in nearly every single country in the world, the global GDP growth rate was used. The organization expects that for 2018 the global economy grows at a 3,1% rate when compared to the previous year.

It is important to mention that the FCFE grows at a rate of around 2%, thus giving the nominal growth rate of 5,1%.

#### **5.4.3 Capital Structure**

The Capital Structure for Adidas in 2017 is composed as follows:

Table n°4: Adidas Debt Structure

<b>Debt</b>	1 120
<b>Equity</b>	40 423
<b>Debt/Equity</b>	2,77%

Source: Adidas Website

It was assumed the current Capital Structure would stay constant over the time period chosen to perform the valuation, as the company shows a stable Debt/Equity ratio over the previous years and has no information regarding its optimal capital structure.

#### 5.4.4 Weighted Average Cost of Capital - WACC

In order to achieve the company's WACC, it is necessary to estimate its Cost of Debt. This value can be achieved by computing the Default Spread, by calculating the firm's Interest Coverage Ratio (EBIT/Interest Expense) and adding the risk-free rate. In the case of Adidas, the Cost of Debt is as follows:

$$r_D = 1,20\% + 0,54\% = 1,74\%$$

With all the value previously stated, we can now compute WACC, which gives us a value of 5,25%.

After all the computations, we are able to calculate the value for the company's FCFF.

Table n°5: Adidas DCF Valuation

<b>DCF VALUATION</b>	
<b>FCFF</b>	
Present Value	6 321 €
PV Terminal Value	36 884 €
Enterprise Value	43 205 €
(-) Net Debt	-478 €
Equity Value	43 683 €
<b>Share Price</b>	<b>214,13 €</b>

Source: Own calculations

#### 5.5 Adjusted Present Value – APV

As mentioned in the Literature Review, the purpose of the Adjusted Present Value method is to compute a firm's value as if it was fully equity financed.

The value achieved for the Beta Unlevered was 0,8 and for the Unlevered Cost of Equity was 5,29%. We then use this rate to discount all future cash flows to the present value. The Net Present Value (NPV) of these future cash flows from 2018 to 2027 was €6.308 million.

In order to obtain the Unlevered Enterprise Value, we need to compute the NPV of the Terminal Value (TV), which is calculated through several steps. First, we multiply the TV by the growth rate, and divide the result by the difference between the WACC and the growth rate. Then, we divide the value obtained by one plus the unlevered cost of equity elevated to the number of years projected. The Unlevered Enterprise Value is then obtained by adding the NPV of FCF to the NPV of the TV.

A big component of the APV method is the Tax Shield that arises from Interest Expenses. The previously forecasted values are multiplied by the Tax Rate in order to obtain the Tax Shield, which in turn are discounted by the Unlevered Cost of Equity in order to estimate their Present Value. The NPV and the NPV of the TV are then estimated as we previously did for the Cash-Flows.

The last part of the calculation is to estimate the NPV of Bankruptcy Costs. The first step in order to do so is to establish a percentage of Direct and Indirect Bankruptcy Costs the company will face in case such case happens. It was estimated that these values are 20% and 5%, respectively. Second, we input the Default Probability (PD) of the company given by Agency Ratings. In Adidas' case, given its A+ rating, the PD is 0,57%. The last step is to multiply all these values by the Unlevered Enterprise Value, for a total of €61 million.

The Enterprise Value is obtained by adding the NPV of Tax Shields, the NPV of TV of Tax Shields, the NPV of Bankruptcy Costs and the Unlevered Enterprise Value. To this total we subtract the value of Adidas debt, for an Equity Value of €43.676 million.

Table n°6: Adidas APV Valuation

APV VALUATION	
NPV of FCFF	6 308 €
Terminal value	60 543 €
NPV of terminal value	36 162 €
Unlevered Enterprise Value	42 470 €
NPV of tax-shields	131 €
NPV TV Tax Shield	658 €
NPV Bankruptcy costs	61 €
Enterprise Value	43 198 €
Value of debt	-478 €
Equity Value	43 676 €
<b>Price per Share</b>	<b>214,10 €</b>

Source: Own Calculations

## 5.6 Multiples Valuation

As mentioned previously, Relative Valuation provides a relatively easy and straightforward method of valuing a firm, although with several drawbacks.

When computing Adidas' valuation, I chose to use three different Multiples: EV/EBITDA, EV/EBIT and EV/Sales.

The data for the companies was extracted directly from their respective 10k forms, all of which use the same calendar year to report their Financial Statements. In order to obtain the Peer Group a Hierarchical Cluster Analysis was computed on SPSS. I used the Centroid Method with the Interval Measure being a Squared Euclidean distance, with all values standardized to a range between -1 and 1. Lastly, I chose a range of solutions between 2 and 5, as this presented the highest measure of cohesion.

The resulting peer group was achieved:

Table n°7: Adidas Peer Group

Company	EV/EBITDA	EV/EBIT	EV/Sales
Nike	18,9x	21,6x	3,1x
Puma	19,0x	24,4x	1,4x
Asics	12,2x	18,5x	0,9x
Columbia	15,0x	18,3x	2,0x
VF Corp	19,3x	23,3x	2,8x
Skechers	13,2x	16,0x	1,5x
Kering S.A	19,3x	23,3x	3,7x
<b>Mean</b>	<b>16,7x</b>	<b>20,8x</b>	<b>2,2x</b>

Source: Own Calculations

The average of the multiple was then multiplied by the 2017 reported number for Adidas. The following results were achieved:

Table n°8: Adidas Multiple Valuation

MULTIPLE VALUATION	EV/EBITDA	EV/EBIT	EV/Sales
Enterprise Value	41 901 €	41 522 €	46 570 €
Equity Value	41 423 €	41 044 €	46 092 €
<b>Share Price</b>	<b>203,05 €</b>	<b>201,20 €</b>	<b>225,94 €</b>

Source: Own Calculations

## 5.7 Conclusion

Although all three valuation methods used present similar results, especially DCF and APV, the average value is quite superior to the Market Prices on 23/03/2018.

What we can conclude from this is that, if our estimations are close to the reality, Adidas is currently undervalued and its Market Price will increase. This will have an implication in the deal made, as we will analyze further in this dissertation.

Table n°9: Adidas Valuation

	Share Price	Equity Valuation
FCFF	214,13 €	43 683 €
APV	214,10 €	43 676 €
Multiples		
EV/EBITDA	203,05 €	41 423 €
EV/EBITDA	201,20 €	41 044 €
EV/Sales	225,94 €	46 092 €
<b>Average</b>	<b>211,68 €</b>	<b>43 184 €</b>
<b>Market Price</b>	<b>195,60 €</b>	

Source: Own Calculations

## 6. Under Armour Valuation

The same three valuation techniques were used in order to estimate the valuation of Under Armour Inc.: Discounted Cash Flow, Adjusted Present Value and Relative Valuation (Multiples).

A very important detail in the valuation is the Class Shares Under Armour possesses: only Class A and Class C Common Stock are publicly traded. However, the company is also comprised of **Class B** shares. While Class C has no voting rights and Class A gives owners one vote per share, Class B gives their **only** owner, Under Armour's CEO and founder Kevin Plank 10 votes per share. With around 34.5 million shares, Kevin Plank holds 65% of the total voting power, and is, therefore, the vital piece in this transaction.

Class B were calculated as nine times the value of each voting right, given by the difference between Class A and C, plus Class A share price. Given the price on the 23/03/2018, I fixed Share Price A to be equal to 1,15 times the Price of Share C.

### 6.1 Consolidated Income Statement

#### 6.1.1 Revenue

In 2017 Under Armour faced one of the most difficult years in its existence. After several years of high growth rates, superior to 30%, the company faced a very slow growth, of only 3,15%. Although the business in Europe and Asia continued to grow at a very fast pace, the North American market registered a stagnation, a result of the high growth registered by other direct competitors, mainly Adidas, which has a very aggressive strategy in order to gain market share to its main rivals.

Using the 2018 Outlook provided by Under Armour, the revenue growth for the year is expected at 5%, mainly driven by the European and Asian markets. The company's expectation was to reach \$7.5 billion by 2018, a target the firm will miss by far, and in the meantime revised and changed to \$10 billion, but with no particular timeframe.

In my own projections the growth rates are conservative as most analysts predict. Under Armour is going through a rougher period and is not expected to outgrow the industry and main competitors. the company's investment in the NBA and MBL could bring returns, but not enough to grow at a fast pace.

Therefore, the growth rate was maintained at 5% until 2027, the stable year.

### **6.1.2 Cost of Goods sold / Gross Margin**

Under Armour expects a Gross Margin of 45,5% in its 2018 Outlook, 50 basis points higher than the previous year, but 2 pp. lower than the past 5-year average. This indicates a small recovery from a turbulent 2017 for the company, but not to the high levels the firm faced in the previous years.

Followed by a higher growth rate, it was assumed that Under Armour will be able to increase its Gross Margin to 2015 levels on the long term. Therefore, the Gross Margin used as assumption were 46,5% for 2019, 47% from 2020 to 2023 and from then on 48%, until the stable year 2027.

### **6.1.3 Selling, General and Administrative Expenses**

The projection for Selling, General and Administrative Expenses were made bearing in mind that Under Armour expects to achieve an Operating Income of \$20 to \$30 million in 2018. Therefore, we can infer that the expected percentage in regard to revenue is 42,5%.

Nevertheless, and as mentioned previously, the company will experience an increase in revenue and Gross Margin, and therefore it is also expected that with a larger sized company some economies of scale arise. Thus, it was assumed that the percentage of Selling, General and Administrative Expenses in regards to revenue would decrease to 2017 levels at 41,9% and will remain stable until the end of the time period.

The value for Depreciation and Amortization was calculated as did for Adidas, using the Straight-Line Method with a value of 19,6% of PP&E.

Regarding restructuring and impairment charges, Under Armour indicates that for 2018 they will finish their restructuring plan at \$130 million. For the remainder of the time period, I assumed no value.

### **6.1.4 Net Interest Expense**

As per 2018 Outlook, Under Armour expects to spend \$45 million in Interests, an increase of 28,6% comparing with 2017.

In order to estimate the following year values', it was first calculated the Interest Rate that Under Armour pays on its Short and Long-Term Debt, and then used the 4,5% achieved in 2017 as the value for the full time period. It was then applied this percentage and multiplied by the sum of Short and Long-Term Debt the company will present in future years.

I didn't assume any further Long-Term Debt besides the one the company already contracted in the past, and the computation was made based on the debt repayments the company states in its 10k form.

### **6.1.5 Income Taxes – Tax Rate**

As said previously, 2017 was a difficult year for Under Armour. The company faced a slowdown in revenue, which, allied with an increase in Cost of Goods Sold and Selling, General and Administrative Expenses led to a negative Net Income, as well as a negative EBT (earnings before taxes).

My first assumption was to use the past 4 years average for the company's tax rate. However, in their 10k form, Under Armour states that's "The United States enacted the Tax Cuts and Jobs Act (the "Tax Act") on December 22, 2017 (...)" which will allow a "reduction of the U.S. corporate income tax rate from 35 percent to 21 percent for tax years beginning after December 31, 2017". Therefore, I assumed this value in my valuation.

## **6.2 Consolidated Balance Sheet**

### **6.2.1 Current Assets**

In my model I used four different accounts in order to estimate future values. In the first place, Cash and Cash equivalents were estimated as a percentage of total revenue. Over the past 5 years Under Armour kept this account at 9,8% of average but given the fact that the values experienced an accentuated decrease and Under Armour is expected to pursue higher investment values, therefore requiring more cash, I used the past 3 years average, at 4,9%.

Secondly, Accounts Receivable (AR), were computed according to the Days Sales Outstanding, by dividing AR with the total revenue and multiplying the result by 365 days in a calendar year. I then assumed the past 5-year average of 39,6 days and multiplied it by revenue divided by 365 days.

Inventories followed the same logic as the previous account, being calculated in terms of days inventory is held regarding Cost of Goods Sold (COGS). The past 5-year average of 138,2 days were the multiplied by COGS divided by 365 days in order to obtain the inventories values.

Finally, in terms of Prepaid expenses and other current assets, the past 5-year average of 4,3% was used in computation for the remaining time period.



## **6.2.2 Current Liabilities**

Regarding Short-term debt, UA states that “*We are party to a credit agreement that provides revolving commitments for up to \$1.25 billion of borrowings (...)*”. Therefore, I assumed the company would use this revolving credit agreement equally throughout the years, making it a total of \$1.25 billion. In terms of Long-term debt, I simply assumed the value to be the previous year minus the debt repayments stated in their 10k form.

The value for Accounts Payable (AP) was calculated in line with Accounts Receivable: I first computed the number of Days Payable Outstanding, by dividing AP with the total revenue and multiplying the result by 365 days in a calendar year. I then assumed the company would maintain the number of Days Payable Outstanding until 2027, as this not only gives Under Armour more days to pay, but it also creates a positive difference between Days Receivable and Days Payable.

Accrued Expenses were calculated as a percentage of Cost of Goods Sold and maintained at the 10,8% level presented in 2017, as the company expects to grow and this account has been showing signs of increase over the past 5 years.

## **6.3 Capital Expenditures – CAPEX**

Under Armour states in its 2018 Outlook that the total amount to spend in CAPEX for the year in \$225 million, a decrease from the \$275 million spent in 2017. Until then, the company had made significant investments in CAPEX, due to the fact of a fast-paced growth rate over a sustained number of years. However, 2017 brought a slowdown in said rates, and it is expected that 2018 follows the same path, hence the lower investment.

I computed the forecast based on the 2018 Outlook, as it gives us more information of the path the company wants to follow. The \$225 million invested represent 4,1% of revenue, and I assumed this value for the remaining years.

## **6.4 Discounted Cash Flow – DCF**

### **6.4.1 Cost of Equity**

As mentioned in the Literature Review, the Cost of Equity was calculated using the CAPM method.

In order to achieve the Beta value, I used monthly observations over a 5-year period. However, since Under Armour presents three different types of common shares, two of which are publicly traded: Class C- ticker “UA” and Class A- ticker “UAA”. Therefore, and since Class A presents

a negative beta while Class C has a positive beta, a weighted average of both betas according to the market capitalization of Under Armour was computed. The value reached was 0,67.

Since Under Armour operates mainly in the United States (USA), the value used for Market risk premium has to be according to that market. Therefore, a value of 5,08% was achieved through different literature and using Damodaran data.

In terms of Risk free rate, the value assumed was the one used in the 30-year US Treasury Bonds.

### 6.4.2 Growth Rate

The growth rate used in order to estimate Terminal Value (TV) was the same as the one used for Adidas, at 3,1%.

It is important to mention that the FCFE grows at a rate of around 2%, thus giving the nominal growth rate of 5,1%.

### 6.4.3 Capital Structure

The Capital Structure for Under Armour in 2017 is composed as follows:

Table n°10: Under Armour Debt Structure

<b>Debt</b>	890
<b>Equity</b>	7 147
<b>Debt/Equity</b>	12,45%

Source: Under Armour Website

I assumed the current Capital Structure would stay constant over the time period chosen to perform the valuation, as the company shows a stable Debt/Equity ratio over the previous years and has no information regarding its optimal capital structure.

### 6.4.4 Weighted Average Cost of Capital - WACC

We need now to calculate the Cost of Debt. This value can be achieved by computing the Default Spread, by calculating the firm's Interest Coverage Ratio (EBIT/Interest Expense) and adding the risk-free rate. In the case of Under Armour, the Cost of Debt is as follows:

$$r_D = 3,10\% + 0,64\% = 3,64\%$$

With all the value previously stated, we can now compute WACC, which gives us a value of 6,11%.

After all the computations, we are able to calculate the value for the company's FCFE.

Table n°11: Under Armour DCF Valuation

<b>DCF VALUATION</b>	
<b>FCFF</b>	
Present Value	\$1 645
PV Terminal Value	\$4 918
Enterprise Value	\$6 564
(-) Net Debt	\$578
Equity Value	\$5 986
Share Price A	<b>\$13,22</b>
Share Price C	<b>\$11,49</b>
<b>Class B</b>	<b>\$28,73</b>

Source: Own Calculations

### 6.5 Adjusted Present Value – APV

In order to achieve said value I first computed the value of the company's Unlevered Beta reaching a value of 0,61. The value achieved for the Unlevered Cost of Equity was of 6,20%.

We then use this rate to discount all future cash flows to the present value. The Net Present Value (NPV) of these future cash flows from 2018 to 2027 was of \$1.898 million.

The computations were done in the exact same way as for Adidas. The results are as follows:

Table n°12: Under Armour APV Valuation

<b>APV VALUATION</b>	
NPV of FCFF	\$2 057
Terminal value	\$8 893
NPV of terminal value	\$4 874
Unlevered Enterprise Value	\$6 931
NPV of tax-shields	\$72
NPV TV Tax Shield	\$175
NPV Bankruptcy costs	\$183
Enterprise Value	\$6 995
Value of debt	\$578
Equity Value	\$6 417
Price per Share A	<b>\$14,17</b>
Price per Share C	<b>\$12,32</b>
<b>Class B</b>	<b>\$30,80</b>

Source: Own Calculations

## 6.6 Multiples Valuation

I chose the same three different Multiples as for Adidas: EV/EBITDA, EV/EBIT and EV/Sales.

The data for the companies was also extracted directly from their respective 10k forms, all of which use the same calendar year to report their Statements, as well as obtained the Peer Group through SPSS and the Hierarchical Cluster Analysis.

The resulting peer group was achieved:

Table n°13: Under Armour Peer Group

Company	EV/EBITDA	EV/EBIT	EV/Sales
Adidas	17,5x	21,4x	2,0x
Puma	19,0x	24,4x	1,4x
Asics	12,2x	18,5x	0,9x
Columbia	15,0x	18,3x	2,0x
Skechers	13,2x	16,0x	1,5x
<b>Mean</b>	<b>15,3x</b>	<b>19,7x</b>	<b>1,6x</b>

Source: Own Calculations

The average of the multiple was then multiplied by the 2017 reported number for Under Armour. The following results were achieved:

Table n°14: Under Armour Multiple Valuation

MULTIPLES VALUATION	EV/EBITDA	EV/EBIT	EV/Sales
Enterprise Value	\$8 624	\$7 654	\$7 779
Equity Value	\$8 046	\$7 076	\$7 201
Share Price A	<b>\$17,76</b>	<b>\$15,62</b>	<b>\$15,90</b>
Share Price C	<b>\$15,45</b>	<b>\$13,58</b>	<b>\$13,82</b>
<b>Class B</b>	<b>\$38,62</b>	<b>\$33,96</b>	<b>\$34,56</b>

Source: Own Calculations

## 6.7 Conclusion

All three valuation methods used present similar results, especially DCF and APV. The average values are in line with the Market Prices on 23/03/2018, although the EV/Sales multiple is a little high.

Nevertheless, we can assume the current market price both Under Armour's shares are in line with the future projections made.

Adidas acquires Under Armour: a new era in Sporting Goods

Table n°15: Under Armour Valuation

	Share Price A	Share Price C	Class B	Equity Value
FCFF	\$13,22	\$11,49	\$28,73	\$5 986
APV	\$14,17	\$12,32	\$30,80	\$6 417
Multiples				
EV/EBITDA	\$17,76	\$15,45	\$38,62	\$8 046
EV/EBITDA	\$15,62	\$13,58	\$33,96	\$7 076
EV/Sales	\$15,90	\$13,82	\$34,56	\$7 201
<b>Average</b>	<b>\$15,33</b>	<b>\$13,33</b>	<b>\$33,33</b>	<b>\$6 945</b>
<b>Market Price</b>	<b>\$15,78</b>	<b>\$13,72</b>		

Source: Own calculations

## 7. Merged Entity Valuation

After computing both standalone valuations, we are now able to compute the valuation of the entity it will arise as a result of the merger. In this section we will estimate the valuation of both companies on a standalone basis, as well as the synergies resulting from the transaction. The estimation was done after careful consideration, bearing in mind not only similar deals but also relevant literature.

The synergies computed arise mainly from the operational aspect of the deal, along with the financial estimations. These computations were made based on Adidas as the buyer, with all the particularities it brings to the deal, especially in the future projections and estimations.

It is important to mention that from here on, given the fact that Adidas and Under Armour operate in different currencies, we will estimate Under Armour's Valuation in Euros, using the forward rates provided by Thomson Reuters for each year.

### 7.1 Merged Entity without synergies

In order to estimate the value of synergies, we must first estimate the value of the merged entity without them. For that, I computed the average valuation achieved in the three methods used to value both companies on a standalone basis.

I then assumed the value for the resulting company would be the sum of both averages, for a resulting valuation of €49.085 million. In the following table we can compare the valuation reached with the Market Capitalization of both companies as on 23/03/2018.

Table n°16: Merged Entity Valuation

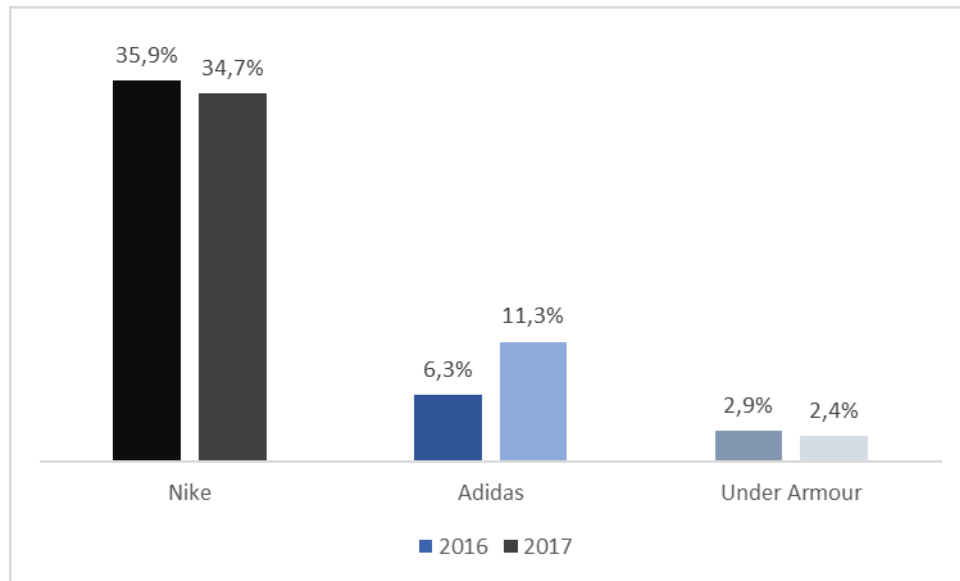
	Adidas	Under Armour
FCFF	43 683 €	5 130 €
APV	43 676 €	5 410 €
Multiples		
EV/EBITDA	41 423 €	6 836 €
EV/EBITDA	41 044 €	6 012 €
EV/Sales	46 092 €	6 118 €
<b>Average</b>	<b>43 184 €</b>	<b>5 901 €</b>
<b>Sum</b>	<b>49 085 €</b>	
Market Cap	40 423 €	6 072 €

Source: Own calculations

The Financial Statements of the Merged Entity can be found in Appendix 38 and 39.

If we analyze the North America Market Share for both companies as well as the biggest player and competitor Nike, we can clearly see that the gap will still be very large. However, Adidas was the only company to grow from 2016 to 2017 in Market Share, almost doubling it, and Although Under Armour lost a small percentage, together they would represent a bigger threat to Nike. Adidas has been able to grow consistently at high double digits in North America, with +25% in 2016 and +27% in 2017 and is expected to continue so for a couple more years.

Figure n°20: North America Market Share



Source: Statista

## 7.2 Merged Entity with synergies

The analysis on the synergies resulting from merging both companies will focus on the Operational Synergies. It is important to mention that the main focus of this deal would be the gain in market share in North America, as well as sponsorship for some of the main events in the sport's world.

### 7.2.1 Operational Synergies

In my estimation, I considered three key operational points: Gross Margin, Selling, General and Administrative Expenses and CAPEX.

It is important to mention the reason that let me leave out the estimation of the revenue synergies that could have appeared. In the first place, revenue synergies are very difficult to estimate and not always arise immediately or in the near future. The fact that two companies merged does not necessarily indicate an increase in sales, mainly because the price point will remain untouched and the volume will be the same as both companies predicted separately. Secondly,

if we analyze the purchase of Reebok by Adidas in 2006, we can clearly see that no revenue enhancements took place, but instead the company developed a new strategy and grew stronger.

I based my projections on the deal previously mentioned. Reebok was a similar company to Under Armour, as back then Reebok was growing fast in North America and competing directly with Nike and Adidas. The only difference noticeable was Adidas size back then, although the company is performing much better today and has room to grow.

### 7.2.2 Gross Margin / Cost of goods sold

Given the fact that both companies operate in the same industry and produce the same type of products, there is a high level of overlapping costs. By acquiring Under Armour, Adidas would be able to produce in a higher quantity while maintaining the fixed costs stable, as most of the labor costs, such as workers, materials and facilities are already in place.

The rationale behind the projection is based on the acquisition of Reebok by Adidas in 2006, as mentioned previously. Back then, the German company was able to increase its Gross Margin by 6,28% in the first year, with the second year showing a slow down to just 2,74%. Thus, I considered an average of 4,51% and multiplied that increase over a Gross Margin of 48,8%, a weighted average of both companies, as it would be too big an increase only in the Adidas' one.

Table n°17: Gross Margin calculation

Gross Margin	2007	2008
Increase	6,28%	2,74%
Average	4,51%	

Source: Company's websites

### 7.2.3 Selling General and administrative expenses

Regarding the biggest part of the operational expenses, both companies present a 41,9% in regard to revenues. In this account I considered mainly the Selling expenses, such as advertising, marketing or salaries, but also took into account more administrative expenses such as utilities or overhead expenses.

Adidas indicates a total of around 800 factories worldwide, while Under Armour uses suppliers mainly in cheap labor countries such as China, Vietnam and Taiwan. If we estimate that the merged entity would no longer require the outsource of suppliers, but would instead use its own facilities, the production capacity would need to increase by 23,6%. Furthermore, utilities, rent and supplies would increase substantially, even with economies of scale in place.



My estimation is in line with the one projected for the Gross Margin. Bearing in mind the acquisition of Reebok by Adidas, I analyzed the post-merger performance. In 2007 the Selling, General and Administrative Expenses of Adidas increase 6,81%, while in the following year the increase was 1,25%. Hence, I considered an average of 4% and multiplied this increase on the existing 41,9% for the merged entity with no synergies, for a final value of 43,6%, maintained until the terminal year.

Table n°18: SG&A calculation

SG&A	2007	2008
<b>Increase</b>	6,81%	1,25%
<b>Average</b>	4,03%	

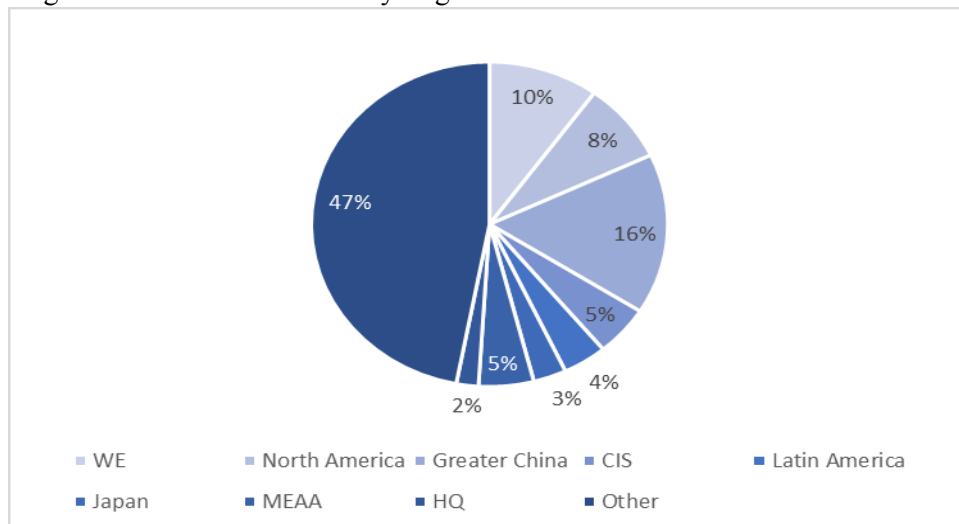
Source: Company's websites

### 7.2.4 CAPEX

Since both companies invest in the same regions, CAPEX is very similar. However, since Adidas' target is to be the number 1 sports company in North America, it is normal a higher investment in this region. In the next figure we can Adidas investment by Region, as a percentage of total CAPEX.

With the purchase of Under Armour, the position in North America becomes slightly more consolidated, as well as in key regions, such as Western Europe and Asia. As we can observe from the following picture, Adidas invests 34% of its total CAPEX in these three regions. Consequently, it is expected that the merged entity has less needs for new investment. Thus, I assumed a reduction of 10% of the total expected CAPEX investment (sum of both standalone companies), in regards to a reduction in the needs for new assets such as new Property, Plant and Equipment.

Figure n°21: Adidas CAPEX by Region



Source: Adidas website

### 7.2.5 Integration costs

It is very difficult to predict how much it would cost both companies to merge, as this requires very detailed information not available to the public. This type of information consists mainly of legal expenses, such as compensation plans, employee relocation expenses and relocation of inventory and other assets, but also lease or contract termination and several other contracts regarding closure of production facilities and maintenance costs.

Given the fact that Adidas and Under Armour would share, as a merged entity, several facilities, factories and employees, it is easy to estimate a high value in terms of Integration Costs. Therefore, I assumed a 20% cost in regards to UA 2017 revenue.

### 7.2.6 Transaction costs

The total transactions costs for the deal were estimated bearing into account the Double Lehman Scale, which determines the commission and broker services provided by the investment bank responsible for the process of merging both companies.

In this case, the total amount spent in transactions costs would be of €318 million, as shown in the next figure.

Table n°19: Transaction costs

Amount (Million EUR)	Fee	Cost
1 000 €	10%	100 €
1 000 €	8%	80 €
1 000 €	6%	60 €
1 000 €	4%	40 €
1 901 €	2%	38 €
<b>Total</b>		<b>318 €</b>

Source: Own calculations

### 7.3 Valuation Merged Entity with Synergies

After all the considerations, the Value of the Merged Entity accounting for both Financial and Operation Synergies is as follows. The value for synergies is shown deducted from all the integration and transaction costs.

Table n°20: Merged Entity Valuation

	Standalone	Merged Entity
Equity Value	49 085 €	53 343 €
<b>Costs</b>		<b>1 164 €</b>
<b>Synergies</b>		<b>3 094 €</b>

Source: Own calculations

## 8. Acquisition

The acquisition decision involves intense information, and due diligence plays a vital role in the success of the transaction.

A very important detail in the deal is the Class B shares, which basically given the owner the control over the company. Therefore, they are the vital piece in order for Adidas to acquire Under Armour. On 23/03/2018, UA shares were as follows:

Table n°21: Under Armour Share Price

	Under Armour	
<b>Class A</b>	\$15,78	13,41 €
<b>Class C</b>	\$13,72	11,66 €
<b>Class B</b>	\$34,32	29,16 €

Source: Reuters

### 8.1 Premium Offered

When Adidas acquired Reebok back in 2006, the premium paid was 34%. Therefore, a similar premium is expected by Under Armour Shareholders.

I decided to allocate the synergies in accordance to the respective weights each company has on the valuation. Thus, since Under Armour represents 12% of the merged entity without synergies, I allocated the €53.343 million accordingly, for a value of €6.413 million. If we compute the price for each share of common stock, we reach the following values, as compared to market prices:

Table n°22: Under Armour Premium

	No Synergies	Synergies
<b>Class A</b>	13,41 €	14,16 €
<b>Class C</b>	11,66 €	12,31 €
<b>Class B</b>	29,16 €	30,78 €

Source: Own calculation

This premium of 5,6% is very low when compared to what's anticipated from the market, and therefore not expected to be accepted by Under Armour Shareholders.

Therefore, I am assuming Adidas would pay a premium of 34% in order to buy Under Armour. Class A and C Shares are publicly traded and therefore easy to acquire through a tender offer. The more difficult part comes from Kevin Plank's shares, Class B, which would have to be

personally negotiated, with the given premium. Only then would Adidas be able to control Under Armour.

Table n°23: Premium Calculation

	No Synergies	Synergies
<b>Class A</b>	13,41 €	17,97 €
<b>Class C</b>	11,66 €	15,62 €
<b>Class B</b>	29,16 €	39,12 €

Source: Own calculations

We can also estimate how much is the Premium worth in terms of Market Capitalization. Given the fact that, in Euros, the company is worth €6.072 million, we would be paying €2.067 million as premium, for a total valuation of €8.139 million. It is, therefore, expected that not only CEO Kevin Plank but the other shareholders accept the deal.

Table n°24: Synergies Calculation

	No Synergies	Synergies
<b>Equity Value</b>	6 072 €	8 139 €
<b>Premium</b>	<b>2 067 €</b>	

Source: Own calculations

## 8.2 Acquisition Type

As mentioned in the literature review, cash deals are the ones who present better success rate, and the ones which companies should pursue if they truly believe in the due diligence they went through. However, in such transactions, it is necessary for the acquiring company to possess a very large cash balance in order to be able to acquire another firm.

In the case of Adidas, the company has a quite substantial amount of cash and equivalents, but considering the average valuation computed for Under Armour of €6.413 million, we clearly see that Adidas only holds 25% of the total value required. However, as stated in the company's standalone valuation, Adidas is currently underpriced in the market, and a deal that involves stock would clearly hurt the company's image and future.

In this case, the best solution would be for Adidas to contract debt in order to structure an all money deal. As mentioned in the company's Annual Report, there is a credit line of €3.3 billion that Adidas can use if it so requires. Therefore, I suggest that the remaining €4.815 million are acquired in the form of debt and used to buy Under Armour.

## 9. Conclusion

Over the past 3 years, Adidas was able to grow 25,4%, supported by its sales increase in North America (27%), Western Europe (13%) and Greater China (29%). Following that, the company has an ambitious 2020 target, expecting a 10% growth YoY.

In 2006, Adidas acquired Reebok, a company with many similarities to what Under Armour is nowadays. This deal could be profitable for the company, obtaining €1.032 million.

Table n°25: Gains Calculation

<b>Premium</b>	<b>2 067 €</b>
<b>Synergies</b>	<b>3 099 €</b>
<b>Gains</b>	<b>1 032 €</b>

Source: Own calculations

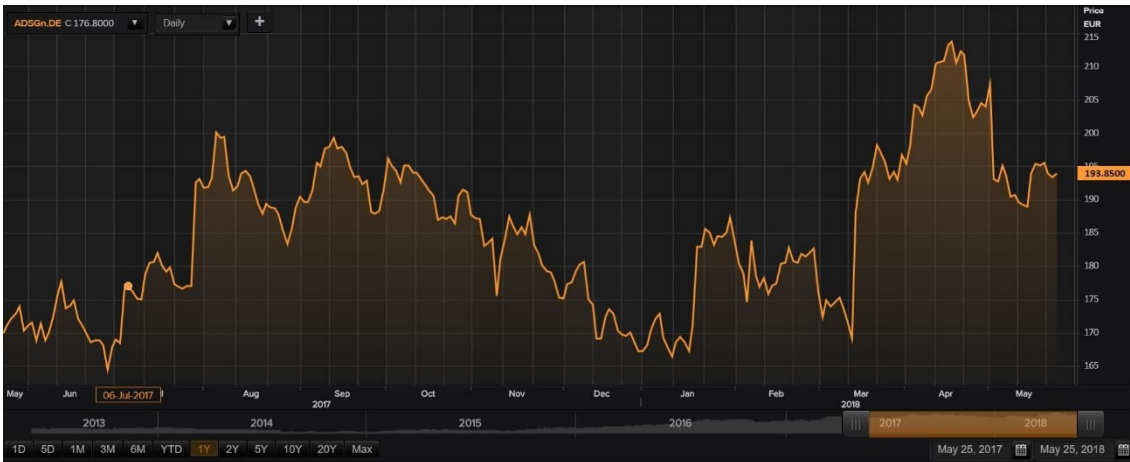
Although the premium paid is 34%, the gains as a merged entity are superior. Both companies would become much stronger and gain market share to Nike.

The key aspect of this deal is the share composition of Under Armour. The publicly traded Class A and Class C are easy to purchase to the different shareholders. However, Class B shares are the ones who give Adidas full control over UA, as they provide the owner 65% of total voting rights. Therefore, CEO Kevin Plank must be convinced with the premium provided, as well as offered a position in the merged entity Management Board.

There is no better way to lead the industry growth than with a merger.

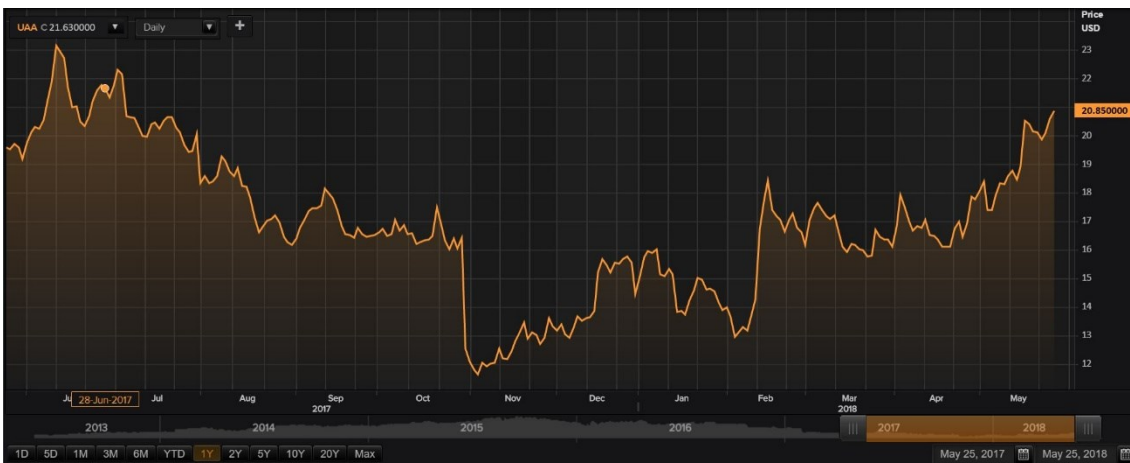
## Appendix

### Appendix n°1: Adidas Share Price



Source: Thomson Reuters

### Appendix n°2: Under Armour Share Price Class A



Source: Thomson Reuters

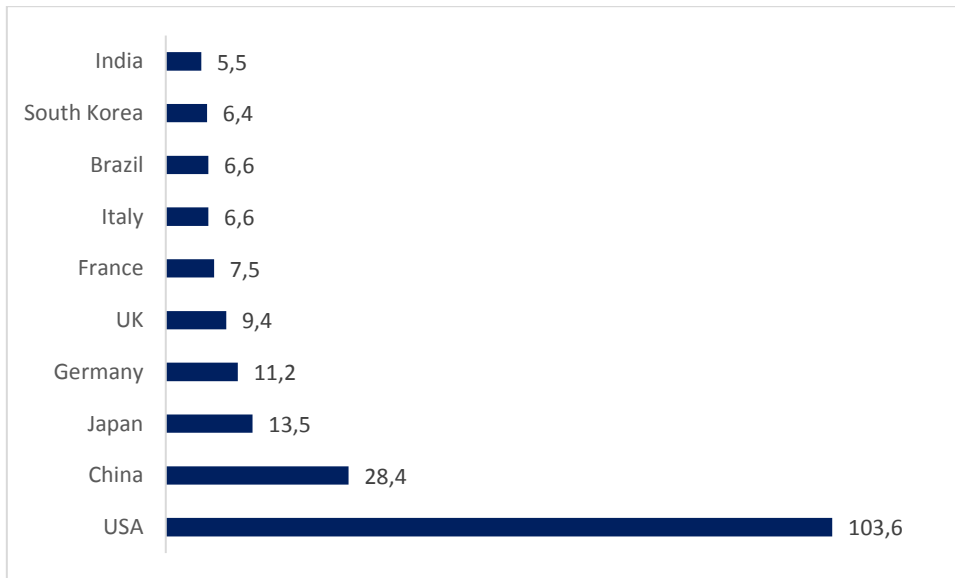
### Appendix n°3: Under Armour Share Price Class C



Source: Thomson Reuters

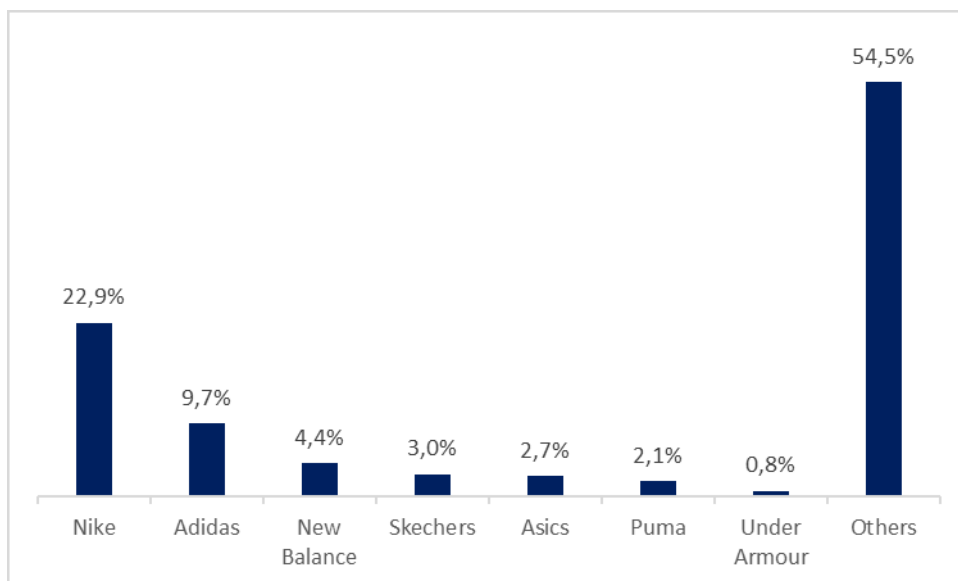
## Adidas acquires Under Armour: a new era in Sporting Goods

Appendix n°4: Retail Value of Sportswear market



Source: Statista

Appendix n°5: Footwear Market Share by company



Source: Adidas website and own calculations





## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°8: Adidas WACC and Cost of Equity

WACC & COST OF EQUITY	
Cost of debt	1,74%
Beta	0,82
Market risk premium	5,08%
Risk-free rate	1,20%
<b>Cost of equity</b>	<b>5,37%</b>
Growth rate	3,10%
Corporate tax rate	31,90%
<b>WACC</b>	<b>5,25%</b>

Source: Thomson Reuters, Adidas website and own calculations

### Appendix n°9: Adidas Working Capital

Working Capital	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
<b>Current Assets</b>															
Cash	1 587	1 683	1 365	1 510	1 598	2 171	2 388	2 626	2 810	3 007	3 217	3 443	3 684	3 942	4 217
Short-term financial assets	41	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Accounts receivable	1 809	1 946	2 049	2 200	2 315	2 545	2 799	3 079	3 295	3 526	3 772	4 037	4 319	4 621	4 945
Other current financial assets	183	398	367	729	393	393	393	393	393	393	393	393	393	393	393
Inventories	2 634	2 526	3 113	3 763	3 692	4 060	4 467	4 913	5 257	5 625	6 019	6 440	6 891	7 373	7 890
Income tax receivables	86	92	97	98	71	71	71	71	71	71	71	71	71	71	71
Other current assets	506	425	489	580	498	498	498	498	498	498	498	498	498	498	498
Assets classified as held for sale	11	272	12	0	72	72	72	72	72	72	72	72	72	72	72
<b>Total</b>	<b>6 857</b>	<b>7 347</b>	<b>7 497</b>	<b>8 885</b>	<b>8 644</b>	<b>9 815</b>	<b>10 693</b>	<b>11 658</b>	<b>12 401</b>	<b>13 197</b>	<b>14 048</b>	<b>14 958</b>	<b>15 933</b>	<b>16 975</b>	<b>18 091</b>
<b>Current Liabilities</b>															
Short-term borrowings	681	288	366	636	137	228	319	410	501	592	683	774	866	957	1 048
Accounts payable	1 825	1 652	2 024	2 496	1 975	2 174	2 392	2 631	2 815	3 012	3 223	3 448	3 690	3 948	4 224
Other current financial liabilities	113	91	143	201	362	362	362	362	362	362	362	362	362	362	362
Income taxes	240	294	359	402	424	424	424	424	424	424	424	424	424	424	424
Other current provisions	450	470	456	573	741	741	741	741	741	741	741	741	741	741	741
Current accrued liabilities	1 147	1 249	1 684	2 023	2 180	2 350	2 533	2 731	2 944	3 174	3 421	3 688	3 976	4 286	4 620
Other current liabilities	276	287	331	434	473	516	562	613	668	728	793	865	942	1 027	1 120
<b>Total</b>	<b>4 051</b>	<b>4 043</b>	<b>4 997</b>	<b>6 129</b>	<b>6 155</b>	<b>6 567</b>	<b>7 014</b>	<b>7 501</b>	<b>7 953</b>	<b>8 440</b>	<b>8 964</b>	<b>9 528</b>	<b>10 135</b>	<b>10 788</b>	<b>11 491</b>
<b>Working Capital</b>	<b>2 806</b>	<b>3 304</b>	<b>2 500</b>	<b>2 756</b>	<b>2 489</b>	<b>3 248</b>	<b>3 679</b>	<b>4 157</b>	<b>4 448</b>	<b>4 757</b>	<b>5 084</b>	<b>5 430</b>	<b>5 798</b>	<b>6 187</b>	<b>6 600</b>
<b>Change in Working Capital</b>		498	-804	256	-267	759	430	478	291	309	327	347	367	389	412
<b>CAPEX</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018 P</b>	<b>2019 P</b>	<b>2020 P</b>	<b>2021 P</b>	<b>2022 P</b>	<b>2023 P</b>	<b>2024 P</b>	<b>2025 P</b>	<b>2026 P</b>	<b>2027 P</b>
Capital expenditure	479	554	513	651	752	910	1 001	1 101	1 179	1 261	1 349	1 444	1 545	1 653	1 769

Source: Adidas website and own calculations

## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°10: Adidas FCFF

FCFF (in '000 EUR)	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
EBT	1 113	835	1 038	1 168	1 571	1 644	1 576	1 553	1 461	1 814	1 914	2 027	2 421	2 597	2 438
(+) Interest Expense	73	62	65	70	62	35	40	44	49	53	58	63	67	72	77
EBIT	1 186	897	1 103	1 238	1 633	1 679	1 616	1 597	1 510	1 868	1 972	2 090	2 489	2 669	2 515
(-) Tax on EBIT	340	271	353	454	668	536	515	510	482	596	629	667	794	851	802
(+) Depreciation & Amortization	281	309	338	368	452	658	884	1 133	1 399	1 232	1 331	1 431	1 265	1 334	1 754
(-) Change in Net Working Capital		498	-804	256	-267	759	430	478	291	309	327	347	367	389	412
(-) CAPEX	479	554	513	651	752	910	1 001	1 101	1 179	1 261	1 349	1 444	1 545	1 653	1 769
Free Cash Flow to Firm	648	-117	1 379	245	932	131	553	641	958	934	998	1 064	1 048	1 109	1 285
Discounted Cash Flow						125	499	550	780	723	734	744	696	700	770

Source: Adidas website and own calculations

### Appendix n°11: Adidas Beta Sensitivity

	Beta Sensitivity						
	-3%	-2%	-1%	±0	1%	2%	3%
Beta	0,80	0,80	0,81	0,82	0,83	0,84	0,84
Cost of Equity	5,24%	5,28%	5,32%	5,37%	5,41%	5,45%	5,49%
WACC	5,13%	5,17%	5,21%	5,25%	5,29%	5,33%	5,37%
WACC+1	105,13%	105,17%	105,21%	105,25%	105,29%	105,33%	105,37%
Enterprise Value (no TV, FCFF)	6 366	6 351	6 336	6 321	6 306	6 291	6 276
Discounted TV	39 547	38 624	37 737	36 884	36 064	35 273	34 512
Enterprise Value (with TV, FCFF)	45 913	44 975	44 073	43 205	42 369	41 564	40 788
Equity value (with TV, FCFF)	46 391	45 453	44 551	43 683	42 847	42 042	41 266
Δ% Equity Value	6,20%	4,05%	1,99%	0,00%	-1,91%	-3,76%	-5,53%
share price	€ 227,40	€ 222,81	€ 218,39	€ 214,13	€ 210,04	€ 206,09	€ 202,28

Source: Own calculations

### Appendix n°12: Adidas Cost of Debt Sensitivity

	Cost of Debt						
	-3%	-2%	-1%	±0	1%	2%	3%
Cost of Debt	-1,26%	-0,26%	0,74%	1,74%	2,74%	3,74%	4,74%
WACC	5,20%	5,22%	5,23%	5,25%	5,27%	5,29%	5,31%
WACC + 1	105,20%	105,22%	105,23%	105,25%	105,27%	105,29%	105,31%
Enterprise Value (no TV, FCFF)	6 341	6 334	6 328	6 321	6 314	6 307	6 301
Discounted Terminal Value	38 051	37 655	37 266	36 884	36 509	36 139	35 776
Enterprise Value (with TV, FCFF)	44 392	43 990	43 594	43 205	42 823	42 447	42 077
Equity value (with TV, FCFF)	44 870	44 468	44 072	43 683	43 301	42 925	42 555
Δ% Equity Value	2,72%	1,80%	0,89%	0,00%	-0,88%	-1,74%	-2,58%
share price	€ 219,95	€ 217,98	€ 216,04	€ 214,13	€ 212,26	€ 210,42	€ 208,60

Source: Own calculations

## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°13: Adidas Cost of Equity Sensitivity

	Cost of Equity						
	-1,5%	-1%	-0,5%	±0	0,5%	1%	1,5%
Cost of Equity	3,87%	4,37%	4,87%	5,37%	5,87%	6,37%	6,87%
WACC	3,79%	4,28%	4,77%	5,25%	5,74%	6,23%	6,71%
WACC + 1	103,79%	104,28%	104,77%	105,25%	105,74%	106,23%	106,71%
Enterprise Value (no TV, FCFE)	6 889	6 692	6 503	6 321	6 145	5 976	5 814
Discounted Terminal Value	131 695	73 854	49 913	36 884	28 729	23 170	19 154
Enterprise Value (with TV, FCFE)	138 584	80 546	56 416	43 205	34 875	29 146	24 967
Equity value (with TV, FCFE)	139 062	81 024	56 894	43 683	35 353	29 624	25 445
Δ% Equity Value	218,34%	85,48%	30,24%	0,00%	-19,07%	-32,18%	-41,75%
share price	€ 681,68	€ 397,18	€ 278,89	€ 214,13	€ 173,30	€ 145,22	€ 124,73

Source: Own calculations

### Appendix n°14: Adidas growth rate Sensitivity

	Growth rate sensitivity						
	-3%	-2%	-1%	±0	1%	2%	3%
Growth rate	0,10%	1,10%	2,10%	3,10%	4,10%	5,10%	6,10%
WACC	7,69%	5,25%	5,25%	5,25%	5,25%	5,25%	5,25%
WACC + 1	107,69%	105,25%	105,25%	105,25%	105,25%	105,25%	105,25%
Enterprise Value (no TV, FCFE)	6 321	6 321	6 321	6 321	6 321	6 321	6 321
Discounted Terminal Value	13 360	36 169	36 527	36 884	37 242	37 600	37 958
Equity value (with TV, FCFE)	20 159	42 968	43 325	43 683	44 041	44 399	44 756
Δ% Equity Value	-53,85%	-1,64%	-0,82%	0,00%	0,82%	1,64%	2,46%
share price	€ 98,82	€ 210,63	€ 212,38	€ 214,13	€ 215,89	€ 217,64	€ 219,39

Source: Own calculations

### Appendix n°15: Adidas APV input

INPUT	
Tax rate	31,90%
Risk-free rate	1,20%
Market Risk Premium	5,08%
Unlevered Beta	0,80
Levered Beta	0,82
Unlevered CoC	5,29%
Cost of Equity	5,37%
Cost of Debt	1,74%
WACC	5,25%
Nominal Growth Rate	3,10%
Direct Bankruptcy Cost	20%
Indirect Bankruptcy Cost	5%
Probability of Default	0,57%

Source: Own calculations

### Appendix n°16: Adidas APV FCF

	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
Free Cash Flow to Firm	648	-117	1379	245	932	131	553	641	958	934	998	1064	1048	1109	1285
PV FCFE	648	-117	1379	245	932	125	498	549	779	722	733	742	694	697	768
Interest Expenses	73	62	65	70	62	35	40	44	49	53	58	63	67	72	77
Tax Shield	23	20	21	22	20	11	13	14	16	17	19	20	21	23	24
PV Tax Shield	23	20	21	22	20	11	11	12	13	13	14	14	14	14	15

Source: Own calculations

## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°17: Adidas Unlevered Beta Sensitivity

	Unlevered Beta						
	-3%	-2%	-1%	±0	1%	2%	3%
Unlevered Beta	0,77	0,78	0,79	0,80	0,81	0,82	0,83
Unlevered CoC	5,14%	5,19%	5,24%	5,29%	5,34%	5,39%	5,44%
PV Unlevered Firm (no TV, FCFF)	6 308	6 308	6 308	6 308	6 308	6 308	6 308
PV TV Unlevered Firm	39 436	38 291	37 201	36 162	35 172	34 226	33 323
PV Tax Shield	169	169	169	169	169	169	169
PV TV Tax shield	15	15	15	15	15	15	15
(-) PV Bankruptcy Cost	61	61	61	61	61	61	61
Total Firm Value	45 868	44 723	43 632	42 594	41 603	40 657	39 753
(-) Net Debt	-478	-478	-478	-478	-478	-478	-478
Equity Value	46 346	45 201	44 110	43 072	42 081	41 135	40 231
share price	€ 227,19	€ 221,57	€ 216,23	€ 211,14	€ 206,28	€ 201,64	€ 197,21

Source: Own calculations

### Appendix n°18: Under Armour Consolidated Income Statement

Historical Data and Management Projections	Historical Data					Own Projections										
	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P	
Income statement (in '000 USD)																
<b>Total revenue</b>	<b>2.332</b>	<b>3.084</b>	<b>3.953</b>	<b>4.825</b>	<b>4.977</b>	5.226	5.487	5.761	6.050	6.352	6.670	7.003	7.353	7.721	8.107	
<b>Costs of goods sold</b>	<b>1.195</b>	<b>1.572</b>	<b>2.058</b>	<b>2.505</b>	<b>2.738</b>	2.848	2.936	3.054	3.206	3.367	3.535	3.642	3.824	4.015	4.216	
<b>Gross Profit</b>	<b>1.137</b>	<b>1.512</b>	<b>1.895</b>	<b>2.240</b>	<b>2.239</b>	2.378	2.552	2.708	2.843	2.985	3.135	3.362	3.530	3.706	3.891	
<b>Depreciation and Amortization</b>	<b>51</b>	<b>72</b>	<b>101</b>	<b>145</b>	<b>174</b>	218	264	313	364	423	486	553	624	700	781	
<b>Selling, general and administrative expenses</b>	<b>872</b>	<b>1.158</b>	<b>1.497</b>	<b>1.823</b>	<b>2.087</b>	2.221	2.299	2.414	2.535	2.662	2.795	2.934	3.081	3.235	3.397	
<b>Restructuring and impairment charges</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>124</b>	130	0	0	0	0	0	0	0	0	0	
<b>Operating Profit</b>	<b>265</b>	<b>391</b>	<b>488</b>	<b>407</b>	<b>28</b>	27	252	294	309	324	340	427	449	471	495	
<b>Net Interest Expense</b>	<b>3</b>	<b>5</b>	<b>15</b>	<b>26</b>	<b>35</b>	45	42	44	46	49	51	50	49	48	47	
<b>Other net expense</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>3</b>	<b>4</b>	4	4	4	4	4	4	4	4	4	4	
<b>Income before taxes</b>	<b>261</b>	<b>349</b>	<b>366</b>	<b>378</b>	<b>-11</b>	-22	206	245	258	271	285	373	396	419	443	
<b>Income taxes</b>	<b>99</b>	<b>134</b>	<b>154</b>	<b>131</b>	<b>38</b>	-5	43	52	54	57	60	78	83	88	93	
<b>Income (Loss) from continuing operations</b>	<b>162</b>	<b>215</b>	<b>212</b>	<b>247</b>	<b>-49</b>	-18	163	194	204	214	225	295	312	331	350	
<b>Adjustment Payment to Class C Capital stockholders</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>59</b>	<b>0</b>	0	0	0	0	0	0	0	0	0	0	
<b>Net Income</b>	<b>162</b>	<b>215</b>	<b>212</b>	<b>198</b>	<b>-49</b>	-18	163	194	204	214	225	295	312	331	350	
<b>Net income attributable to non-controlling interests</b>																
<b>Net income attributable to shareholders</b>	<b>162</b>	<b>215</b>	<b>212</b>	<b>198</b>	<b>-49</b>	-18	163	194	204	214	225	295	312	331	350	

Source: Under Armour's Website and own calculations

## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°19: Under Armour Consolidated Balance Sheet

Historical Data and Management Projections															
Balance Sheet (in USD '000; years)	Historical Data					Own Projections									
	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
<b>ASSETS</b>															
Cash and cash equivalents	348	593	130	250	312	256	269	282	296	311	327	343	360	378	397
Accounts receivable	210	280	434	623	610	567	595	625	656	689	724	760	798	838	880
Inventories	469	537	783	917	1159	1078	1112	1156	1214	1275	1338	1379	1448	1520	1596
Prepaid expenses and other curre	102	140	152	175	257	225	236	248	260	273	287	301	316	332	349
Overdraft						289	485	716	1015	1145	1343	1489	1589	1756	1936
<b>Total current assets</b>	<b>1 129</b>	<b>1 550</b>	<b>1 499</b>	<b>1 965</b>	<b>2 338</b>	<b>2 416</b>	<b>2 697</b>	<b>3 027</b>	<b>3 442</b>	<b>3 694</b>	<b>4 018</b>	<b>4 272</b>	<b>4 511</b>	<b>4 824</b>	<b>5 157</b>
Total Net property, plant and equ	224	306	539	804	886	893	865	799	696	725	757	789	877	914	952
Goodwill	122	123	585	564	556	556	556	556	556	556	556	556	556	556	556
Intangible Assets	24	26	76	64	47	47	47	47	47	47	47	47	47	47	47
Deferred income taxes	31	34	92	137	83	83	83	83	83	83	83	83	83	83	83
Other long term assets	48	57	79	110	97	97	97	97	97	97	97	97	97	97	97
<b>Total non-current assets</b>	<b>449</b>	<b>546</b>	<b>1 371</b>	<b>1 679</b>	<b>1 669</b>	<b>1 676</b>	<b>1 648</b>	<b>1 582</b>	<b>1 479</b>	<b>1 508</b>	<b>1 540</b>	<b>1 572</b>	<b>1 660</b>	<b>1 697</b>	<b>1 735</b>
<b>Total assets</b>	<b>1 578</b>	<b>2 096</b>	<b>2 870</b>	<b>3 644</b>	<b>4 007</b>	<b>4 091</b>	<b>4 344</b>	<b>4 609</b>	<b>4 921</b>	<b>5 202</b>	<b>5 558</b>	<b>5 844</b>	<b>6 172</b>	<b>6 520</b>	<b>6 892</b>
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>															
<b>Liabilities:</b>															
Revolving credit facility	100	0	275	0	125	225	325	425	525	625	725	825	925	1 025	1 125
Accounts payable	165	210	200	410	561	584	602	626	657	690	724	746	784	823	864
Accrued expenses	134	148	193	209	297	308	317	330	346	364	382	393	413	434	455
Current maturities of long term d	5	29	42	27	27	27	63	25	86	-	120	120	120	120	120
Other current liabilities	22	35	44	40	50	52	55	58	60	64	67	70	74	77	81
<b>Total current liabilities</b>	<b>426</b>	<b>422</b>	<b>754</b>	<b>686</b>	<b>1 060</b>	<b>1 196</b>	<b>1 362</b>	<b>1 463</b>	<b>1 675</b>	<b>1 742</b>	<b>2 018</b>	<b>2 155</b>	<b>2 315</b>	<b>2 479</b>	<b>2 645</b>
Long-term debt	48	255	352	790	765	738	675	650	564	564	444	324	204	84	(36)
Other long term liabilities	50	68	95	137	162	156	143	138	120	120	94	69	43	18	(8)
<b>Total non-current liabilities</b>	<b>98</b>	<b>323</b>	<b>447</b>	<b>927</b>	<b>927</b>	<b>894</b>	<b>818</b>	<b>788</b>	<b>684</b>	<b>684</b>	<b>538</b>	<b>393</b>	<b>247</b>	<b>102</b>	<b>-44</b>
<b>Total liabilities</b>	<b>524</b>	<b>745</b>	<b>1 201</b>	<b>1 613</b>	<b>1 987</b>	<b>2 090</b>	<b>2 180</b>	<b>2 251</b>	<b>2 358</b>	<b>2 426</b>	<b>2 556</b>	<b>2 547</b>	<b>2 562</b>	<b>2 580</b>	<b>2 602</b>
Additional paid-in capital	397	508	637	824	872	872	872	872	872	872	872	872	872	872	872
Retained Earnings	654	857	1077	1259	1 185	1167	1331	1524	1728	1942	2168	2463	2775	3106	3456
Accumulated other comprehensiv	2	-15	-45	-52	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
<b>Shareholders' Equity</b>	<b>1 053</b>	<b>1 350</b>	<b>1 671</b>	<b>2 033</b>	<b>2 021</b>	<b>2 001</b>	<b>2 165</b>	<b>2 358</b>	<b>2 562</b>	<b>2 776</b>	<b>3 002</b>	<b>3 297</b>	<b>3 609</b>	<b>3 940</b>	<b>4 290</b>
Non-controlling interests															
<b>Total Equity</b>	<b>1 053</b>	<b>1 350</b>	<b>1 671</b>	<b>2 033</b>	<b>2 021</b>	<b>2 001</b>	<b>2 165</b>	<b>2 358</b>	<b>2 562</b>	<b>2 776</b>	<b>3 002</b>	<b>3 297</b>	<b>3 609</b>	<b>3 940</b>	<b>4 290</b>
<b>Total Liabilities and Equity</b>	<b>1 577</b>	<b>2 095</b>	<b>2 872</b>	<b>3 646</b>	<b>4 008</b>	<b>4 091</b>	<b>4 344</b>	<b>4 609</b>	<b>4 921</b>	<b>5 202</b>	<b>5 558</b>	<b>5 844</b>	<b>6 172</b>	<b>6 520</b>	<b>6 892</b>

Source: Under Armour's Website and own calculations

### Appendix n°20: Under Armour WACC and Cost of Equity

WACC & COST OF EQUITY	
Cost of debt	3,64%
Beta	0,67
Market risk premium	5,08%
Risk-free rate	3,10%
<b>Cost of equity</b>	<b>6,50%</b>
Growth rate	3,10%
Corporate tax rate	21,00%
<b>WACC</b>	<b>6,10%</b>

Source: Under Armour's Website and own calculations

## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°21: Under Armour Working Capital

Working Capital	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
<b>Current Assets</b>															
Cash	348	593	130	250	312	256	269	282	296	311	327	343	360	378	397
Accounts receivable	210	280	434	623	610	567	595	625	656	689	724	760	798	838	880
Inventories	469	537	783	917	1.159	1.078	1.112	1.156	1.214	1.275	1.338	1.379	1.448	1.520	1.596
Prepaid expenses and other current assets	102	140	152	175	257	225	236	248	260	273	287	301	316	332	349
<b>Total</b>	<b>1.129</b>	<b>1.550</b>	<b>1.499</b>	<b>1.965</b>	<b>2.338</b>	<b>2.126</b>	<b>2.212</b>	<b>2.311</b>	<b>2.427</b>	<b>2.548</b>	<b>2.676</b>	<b>2.783</b>	<b>2.922</b>	<b>3.068</b>	<b>3.222</b>
<b>Current Liabilities</b>															
Accounts payable	165	210	200	410	561	584	602	626	657	690	724	746	784	823	864
Accrued expenses	134	148	193	209	297	308	317	330	346	364	382	393	413	434	455
Current maturities of long term debt	5	29	42	27	27	27	63	25	86	0	120	120	120	120	120
<b>Total</b>	<b>304</b>	<b>387</b>	<b>435</b>	<b>646</b>	<b>885</b>	<b>918</b>	<b>982</b>	<b>981</b>	<b>1.089</b>	<b>1.054</b>	<b>1.226</b>	<b>1.260</b>	<b>1.317</b>	<b>1.376</b>	<b>1.439</b>
<b>Working Capital</b>	<b>825</b>	<b>1.163</b>	<b>1.064</b>	<b>1.319</b>	<b>1.453</b>	<b>1.208</b>	<b>1.230</b>	<b>1.331</b>	<b>1.338</b>	<b>1.495</b>	<b>1.449</b>	<b>1.523</b>	<b>1.605</b>	<b>1.692</b>	<b>1.782</b>
<b>Change in Working Capital</b>		338	-99	255	134	-245	22	101	7	157	-45	74	82	86	91
<b>CAPEX</b>															
Capital expenditure	92	145	326	406	275	225	236	248	260	273	287	301	316	332	349

Source: Under Armour's Website and own calculations

### Appendix n°22: Under Armour Working Capital

FCFF (in '000 EUR)	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
<b>EBT</b>	<b>261</b>	<b>343</b>	<b>386</b>	<b>388</b>	<b>-11</b>	<b>-22</b>	<b>206</b>	<b>245</b>	<b>258</b>	<b>271</b>	<b>285</b>	<b>373</b>	<b>386</b>	<b>419</b>	<b>443</b>
(+) Interest Expense	3	5	15	26	35	45	42	44	46	49	51	50	49	48	47
<b>EBIT</b>	<b>264</b>	<b>348</b>	<b>401</b>	<b>414</b>	<b>24</b>	<b>23</b>	<b>248</b>	<b>290</b>	<b>305</b>	<b>320</b>	<b>336</b>	<b>423</b>	<b>445</b>	<b>467</b>	<b>491</b>
(-) Tax on EBIT	99	134	154	131	38	5	52	61	64	67	71	89	93	98	103
(+) Depreciation & Amortization	51	72	101	145	174	218	264	313	364	243	256	268	228	236	311
(-) Change in Net Working Capital		338	-99	255	134	-245	22	101	7	157	-45	74	82	86	91
(-) CAPEX	92	145	326	406	275	225	236	248	260	273	287	301	316	332	349
<b>Free Cash Flow to Firm</b>	<b>124</b>	<b>-197</b>	<b>121</b>	<b>-233</b>	<b>-249</b>	<b>256</b>	<b>203</b>	<b>193</b>	<b>338</b>	<b>66</b>	<b>280</b>	<b>228</b>	<b>181</b>	<b>246</b>	<b>259</b>
<b>Discounted Cash Flow</b>						<b>241</b>	<b>180</b>	<b>162</b>	<b>266</b>	<b>49</b>	<b>196</b>	<b>150</b>	<b>113</b>	<b>145</b>	<b>143</b>

Source: Under Armour's Website and own calculations

### Appendix n°23: Under Armour Beta Sensitivity

	Beta Sensitivity						
	-3%	-2%	-1%	±0	1%	2%	3%
Beta	0,65	0,66	0,66	0,67	0,68	0,68	0,69
Cost of Equity	6,40%	6,44%	6,47%	6,50%	6,54%	6,57%	6,61%
WACC	6,01%	6,04%	6,07%	6,10%	6,13%	6,16%	6,19%
WACC+1	106,01%	106,04%	106,07%	106,10%	106,13%	106,16%	106,19%
Enterprise Value (no TV, FCFF)	1.250	1.361	1.504	1.645	1.640	1.220	1.056
Discounted TV	5.115	5.048	4.983	4.918	4.855	4.794	4.733
Enterprise Value (with TV, FCFF)	6.365	6.409	6.487	6.564	6.496	6.014	5.789
Equity value (with TV, FCFF)	5.787	5.831	5.909	5.986	5.918	5.436	5.211
Δ% Equity Value	-3,32%	-2,58%	-1,29%	0,00%	-1,14%	-9,19%	-12,94%
Share Price A	\$ 12,78	\$ 12,87	\$ 13,05	\$ 13,22	\$ 13,07	\$ 12,00	\$ 11,51
Share Price C	\$ 11,11	\$ 11,19	\$ 11,34	\$ 11,49	\$ 11,36	\$ 10,44	\$ 10,01
Share Price B	\$ 27,78	\$ 27,99	\$ 28,36	\$ 28,73	\$ 28,40	\$ 26,09	\$ 25,01

Source: Own calculations

## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°24: Under Armour Cost of Debt Sensitivity

	Cost of Debt						
	-3%	-2%	-1%	±0	1%	2%	3%
Cost of Debt	0,64%	1,64%	2,64%	3,64%	4,64%	5,64%	6,64%
WACC	5,84%	5,93%	6,01%	6,10%	6,19%	6,28%	6,36%
WACC + 1	105,84%	105,93%	106,01%	106,10%	106,19%	106,28%	106,36%
Enterprise Value (no TV, FCFE)	1 687	1 673	1 659	1 645	1 632	1 619	1 696
Discounted Terminal Value	5 525	5 310	5 108	4 918	4 740	4 572	4 413
Enterprise Value (with TV, FCFE)	7 212	6 983	6 767	6 564	6 372	6 191	6 108
Equity value (with TV, FCFE)	6 634	6 405	6 189	5 986	5 794	5 613	5 530
Δ% Equity Value	10,83%	7,00%	3,40%	0,00%	-3,20%	-6,23%	-7,61%
Share Price A	\$ 14,65	\$ 14,14	\$ 13,66	\$ 13,22	\$ 12,79	\$ 12,39	\$ 12,21
Share Price C	\$ 12,74	\$ 12,30	\$ 11,88	\$ 11,49	\$ 11,12	\$ 10,78	\$ 10,62
Share Price B	\$ 31,84	\$ 30,74	\$ 29,71	\$ 28,73	\$ 27,81	\$ 26,94	\$ 26,54

Source: Own calculations

### Appendix n°25: Under Armour Cost of Equity Sensitivity

	Cost of Equity						
	-1,5%	-1%	-0,5%	±0	0,5%	1%	1,5%
Cost of Equity	5,00%	5,50%	6,00%	6,50%	7,00%	7,50%	8,00%
WACC	4,77%	5,21%	5,66%	6,10%	6,55%	6,99%	7,44%
WACC + 1	104,77%	105,21%	105,66%	106,10%	106,55%	106,99%	107,44%
Enterprise Value (no TV, FCFE)	1 755	1 717	1 681	1 645	1 611	1 578	1 546
Discounted Terminal Value	10 046	7 602	6 021	4 918	4 108	3 491	3 005
Enterprise Value (with TV, FCFE)	11 800	9 319	7 702	6 564	5 720	5 069	4 552
Equity value (with TV, FCFE)	11 222	8 741	7 124	5 986	5 142	4 491	3 974
Δ% Equity Value	87,48%	46,03%	19,01%	0,00%	-14,10%	-24,97%	-33,61%
Share Price A	\$ 24,78	\$ 19,30	\$ 15,73	\$ 13,22	\$ 11,35	\$ 9,92	\$ 8,77
Share Price C	\$ 21,54	\$ 16,78	\$ 13,68	\$ 11,49	\$ 9,87	\$ 8,62	\$ 7,63
Share Price B	\$ 53,86	\$ 41,96	\$ 34,19	\$ 28,73	\$ 24,68	\$ 21,55	\$ 19,07

Source: Own calculations

### Appendix n°26: Under Armour growth rate sensitivity

	Growth rate sensitivity						
	-3%	-2%	-1%	±0	1%	2%	3%
Growth rate	0,10%	1,10%	2,10%	3,10%	4,10%	5,10%	6,10%
WACC	6,10%	6,10%	6,10%	6,10%	6,10%	6,10%	6,10%
WACC + 1	106,10%	106,10%	106,10%	106,10%	106,10%	106,10%	106,10%
Enterprise Value (no TV, FCFE)	1 645	1 645	1 645	1 645	1 645	1 645	1 645
Discounted Terminal Value	4 775	4 823	4 871	4 918	4 966	5 014	5 062
Equity value (with TV, FCFE)	5 843	5 890	5 938	5 986	6 034	6 081	6 129
Δ% Equity Value	-2,39%	-1,59%	-0,80%	0,00%	0,80%	1,59%	2,39%
Share Price A	\$ 12,90	\$ 13,01	\$ 13,11	\$ 13,22	\$ 13,32	\$ 13,43	\$ 13,53
Share Price C	\$ 11,22	\$ 11,31	\$ 11,40	\$ 11,49	\$ 11,58	\$ 11,68	\$ 11,77
Share Price B	\$ 28,04	\$ 28,27	\$ 28,50	\$ 28,73	\$ 28,96	\$ 29,19	\$ 29,42

Source: Own calculations

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Appendix n°27: Under Armour APV input

INPUT	
Tax rate	21,00%
Risk-free rate	3,10%
Market Risk Premium	5,08%
Unlevered Beta	0,61
Levered Beta	0,67
Unlevered CoC	6,20%
Cost of Equity	6,50%
Cost of Debt	3,64%
WACC	6,10%
Nominal Growth Rate	3,10%
Direct Bankruptcy Cost	20%
Indirect Bankruptcy Cost	5%
Probability of Default	10,59%

Source: Own calculations

Appendix n°28: Under Armour APV FCF

	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
Free Cash Flow to Firm	124	-197	121	-233	-249	256	203	193	338	66	280	228	181	246	259
PV FCFF						256	203	193	338	66	263	202	151	194	192
Interest Expenses	3,0	5,0	15,0	26,0	35,0	45,0	41,9	44,4	46,4	49,0	50,8	49,9	49,0	48,1	47,2
Tax Shield	0,6	1,1	3,2	5,5	7,4	9,5	8,8	9,3	9,8	10,3	10,7	10,5	10,3	10,1	9,9
PV Tax Shield	0,6	1,1	3,2	5,5	7,4	8,9	7,8	7,8	7,7	7,6	7,4	6,9	6,4	5,9	5,4

Source: Own calculations

Appendix n°29: Under Armour APV FCF

	Unlevered Beta						
	-0,3	-0,2	-0,1	±0	0,1	0,2	0,3
unlevered Beta	0,310	0,410	0,510	0,610	0,710	0,810	0,910
levered Beta	0,340	0,450	0,560	0,670	0,780	0,890	1,000
unlevered CoC	4,67%	5,18%	5,69%	6,20%	6,71%	7,21%	7,72%
Cost of (levered) Equity	4,83%	5,39%	5,95%	6,50%	7,06%	7,62%	8,18%
WACC	4,61%	5,11%	5,61%	6,10%	6,60%	7,09%	7,59%
PV Unlevered Firm (no TV, FCFF)	1 763	1 720	1 678	1 638	1 599	1 562	1 526
PV TV Unlevered Firm	13 833	10 070	7 808	6 303	5 231	4 431	3 813
PV Tax Shield	183	183	183	183	183	183	183
PV TV Tax Shield	253	184	143	115	96	81	70
(-) PV Bankruptcy Cost	413	312	251	210	181	159	141
Total Firm Value	15 619	11 845	9 561	8 029	6 928	6 099	5 451
(-) Net Debt	14	14	14	14	14	14	14
Equity Value	15 605	11 831	9 547	8 015	6 914	6 085	5 437
Share Price A	\$ 34,45	\$ 26,12	\$ 21,08	\$ 17,70	\$ 15,27	\$ 13,43	\$ 12,00
Share Price C	\$ 29,96	\$ 22,71	\$ 18,33	\$ 15,39	\$ 13,27	\$ 11,68	\$ 10,44
Share Price B	\$ 74,90	\$ 56,78	\$ 45,82	\$ 38,47	\$ 33,19	\$ 29,21	\$ 26,10

Source: Own calculations



## Adidas acquires Under Armour: a new era in Sporting Goods

### Appendix n°30: Under Armour – Euros Consolidated Income Statement

Historical Data and Management Projections															
Income statement (in '000 EUR)	Historical Data					Own Projections									
	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
Total revenue	1 981	2 620	3 367	4 099	4 229	4 402	4 397	4 484	4 588	4 708	4 841	4 987	5 142	5 312	5 501
Costs of goods sold	1 015	1 336	1 749	2 196	2 326	2 399	2 353	2 376	2 432	2 495	2 566	2 593	2 674	2 762	2 861
<b>Gross Profit</b>	<b>966</b>	<b>1 285</b>	<b>1 619</b>	<b>1 903</b>	<b>1 902</b>	<b>2 003</b>	<b>2 045</b>	<b>2 107</b>	<b>2 156</b>	<b>2 213</b>	<b>2 275</b>	<b>2 394</b>	<b>2 468</b>	<b>2 550</b>	<b>2 641</b>
Depreciation and Amortization	43	61	86	123	148	184	212	244	276	180	185	191	160	204	211
Selling, general and administrative expenses	741	984	1 272	1 549	1 773	1 871	1 843	1 879	1 922	1 973	2 028	2 090	2 155	2 226	2 305
Restructuring and impairment charges	0	0	0	0	105	110	0	0	0	0	0	0	0	0	0
<b>Operating Profit</b>	<b>225</b>	<b>301</b>	<b>347</b>	<b>354</b>	<b>24</b>	<b>23</b>	<b>202</b>	<b>229</b>	<b>234</b>	<b>240</b>	<b>247</b>	<b>304</b>	<b>314</b>	<b>324</b>	<b>336</b>
Net Interest Expense	3	4	13	22	30	38	34	35	35	36	37	36	34	33	32
Other net expense	1	5	6	3	3	3	3	3	3	3	3	3	3	3	3
<b>Income before taxes</b>	<b>222</b>	<b>291</b>	<b>328</b>	<b>330</b>	<b>-9</b>	<b>-19</b>	<b>165</b>	<b>191</b>	<b>196</b>	<b>201</b>	<b>207</b>	<b>266</b>	<b>277</b>	<b>288</b>	<b>301</b>
Income taxes	84	114	131	111	32	-4	35	40	41	42	43	56	58	61	63
<b>Income (loss) from continuing operations</b>	<b>138</b>	<b>178</b>	<b>197</b>	<b>218</b>	<b>-42</b>	<b>-15</b>	<b>131</b>	<b>151</b>	<b>155</b>	<b>159</b>	<b>164</b>	<b>210</b>	<b>219</b>	<b>228</b>	<b>238</b>
Adjustment Payment to Class C Capital stockholders	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0
<b>Net Income</b>	<b>138</b>	<b>178</b>	<b>197</b>	<b>168</b>	<b>-42</b>	<b>-15</b>	<b>131</b>	<b>151</b>	<b>155</b>	<b>159</b>	<b>164</b>	<b>210</b>	<b>219</b>	<b>228</b>	<b>238</b>
Net income attributable to non-controlling interests															
<b>Net Income attributable to shareholders</b>	<b>138</b>	<b>178</b>	<b>197</b>	<b>168</b>	<b>-42</b>	<b>-15</b>	<b>131</b>	<b>151</b>	<b>155</b>	<b>159</b>	<b>164</b>	<b>210</b>	<b>219</b>	<b>228</b>	<b>238</b>

Source: Own calculations

### Appendix n°31: Under Armour – Euros Consolidated Balance Sheet

Historical Data and Management Projections															
Income statement (in '000 EUR)	Historical Data					Own Projections									
	2013	2014	2015	2016	2017	2018 P	2019 P	2020 P	2021 P	2022 P	2023 P	2024 P	2025 P	2026 P	2027 P
<b>ASSETS</b>															
Cash and cash equivalents	296	504	110	212	265	216	215	220	225	231	237	244	252	260	270
Accounts receivable	178	238	369	529	518	478	477	486	498	511	525	541	558	576	597
Inventories	398	456	665	779	985	908	891	900	921	945	971	982	1 012	1 046	1 083
Prepaid expenses and other curre	87	119	129	149	218	189	189	193	197	202	208	214	221	228	237
Overdraft						244	389	557	770	849	975	1 060	1 111	1 208	1 314
<b>Total current assets</b>	<b>959</b>	<b>1 317</b>	<b>1 274</b>	<b>1 669</b>	<b>1 986</b>	<b>2 035</b>	<b>2 161</b>	<b>2 356</b>	<b>2 610</b>	<b>2 738</b>	<b>2 917</b>	<b>3 042</b>	<b>3 155</b>	<b>3 319</b>	<b>3 500</b>
Total Net property, plant and eq.	190	260	458	683	753	752	693	622	528	538	549	562	614	628	646
Goodwill	104	105	497	479	472	468	446	433	422	412	404	396	389	383	377
Intangible Assets	20	22	65	54	40	40	38	37	36	35	34	33	33	32	32
Deferred income taxes	26	29	78	116	71	70	67	65	63	62	60	59	58	57	56
Other long term assets	41	48	67	93	82	82	78	75	74	72	70	69	68	67	66
<b>Total non-current assets</b>	<b>381</b>	<b>464</b>	<b>1 165</b>	<b>1 427</b>	<b>1 418</b>	<b>1 412</b>	<b>1 320</b>	<b>1 231</b>	<b>1 121</b>	<b>1 118</b>	<b>1 120</b>	<b>1 120</b>	<b>1 161</b>	<b>1 167</b>	<b>1 177</b>
<b>Total assets</b>	<b>1 341</b>	<b>1 781</b>	<b>2 438</b>	<b>3 096</b>	<b>3 404</b>	<b>3 446</b>	<b>3 481</b>	<b>3 587</b>	<b>3 732</b>	<b>3 856</b>	<b>4 034</b>	<b>4 162</b>	<b>4 316</b>	<b>4 486</b>	<b>4 677</b>
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>															
<b>Liabilities:</b>															
Revolving credit facility	85	0	234	0	106	190	260	331	398	463	526	588	647	705	763
Accounts payable	140	178	170	348	477	492	482	487	498	511	526	531	548	566	586
Accrued expenses	114	126	164	178	252	259	254	257	263	270	277	280	289	298	309
Current maturities of long term d	4	25	36	23	23	23	50	19	65	-	87	85	84	83	81
Other current liabilities	19	30	37	34	42	44	44	45	46	47	48	50	51	53	55
<b>Total current liabilities</b>	<b>362</b>	<b>359</b>	<b>641</b>	<b>583</b>	<b>901</b>	<b>1 007</b>	<b>1 091</b>	<b>1 139</b>	<b>1 270</b>	<b>1 291</b>	<b>1 465</b>	<b>1 534</b>	<b>1 619</b>	<b>1 705</b>	<b>1 795</b>
Long-term debt	41	217	299	671	650	622	541	506	428	418	322	231	143	58	(24)
Other long term liabilities	42	58	81	116	138	132	115	107	91	89	68	49	30	12	(5)
<b>Total non-current liabilities</b>	<b>83</b>	<b>274</b>	<b>380</b>	<b>788</b>	<b>788</b>	<b>753</b>	<b>656</b>	<b>613</b>	<b>518</b>	<b>507</b>	<b>391</b>	<b>280</b>	<b>173</b>	<b>70</b>	<b>-30</b>
<b>Total liabilities</b>	<b>445</b>	<b>633</b>	<b>1 020</b>	<b>1 370</b>	<b>1 688</b>	<b>1 760</b>	<b>1 747</b>	<b>1 752</b>	<b>1 789</b>	<b>1 798</b>	<b>1 855</b>	<b>1 814</b>	<b>1 792</b>	<b>1 775</b>	<b>1 766</b>
Additional paid-in capital	337	432	541	700	741	735	699	679	661	646	633	621	610	600	592
Retained Earnings	556	728	915	1 070	1 007	983	1 066	1 186	1 311	1 440	1 573	1 754	1 941	2 137	2 345
Accumulated other comprehensiv	2	-13	-38	-44	-32	-32	-30	-30	-29	-28	-28	-27	-27	-26	-26
<b>Shareholders' Equity</b>	<b>895</b>	<b>1 147</b>	<b>1 419</b>	<b>1 727</b>	<b>1 717</b>	<b>1 686</b>	<b>1 735</b>	<b>1 835</b>	<b>1 943</b>	<b>2 058</b>	<b>2 179</b>	<b>2 348</b>	<b>2 524</b>	<b>2 711</b>	<b>2 911</b>
Non-controlling interests															
<b>Total Equity</b>	<b>895</b>	<b>1 147</b>	<b>1 419</b>	<b>1 727</b>	<b>1 717</b>	<b>1 686</b>	<b>1 735</b>	<b>1 835</b>	<b>1 943</b>	<b>2 058</b>	<b>2 179</b>	<b>2 348</b>	<b>2 524</b>	<b>2 711</b>	<b>2 911</b>
<b>Total Liabilities and Equity</b>	<b>1 340</b>	<b>1 780</b>	<b>2 440</b>	<b>3 098</b>	<b>3 405</b>	<b>3 446</b>	<b>3 481</b>	<b>3 587</b>	<b>3 732</b>	<b>3 856</b>	<b>4 034</b>	<b>4 162</b>	<b>4 316</b>	<b>4 486</b>	<b>4 677</b>

Source: Own calculations

Adidas acquires Under Armour: a new era in Sporting Goods

Appendix n°32: Under Armour – Euros WACC and Cost of Equity

WACC & COST OF EQUITY	
Cost of debt	1,74%
Beta	0,67
Market risk premium	5,08%
Risk-free rate	1,20%
<b>Cost of equity</b>	<b>4,60%</b>
Growth rate	1,14%
Corporate tax rate	21,00%
<b>WACC</b>	<b>4,25%</b>

Source: Own calculations

Appendix n°33: Under Armour – Euros Beta Sensitivity

	Beta Sensitivity						
	-3%	-2%	-1%	±0	1%	2%	3%
Beta	0,65	0,66	0,66	0,67	0,68	0,68	0,69
Cost of Equity	4,50%	4,54%	4,57%	4,60%	4,64%	4,67%	4,71%
WACC	4,16%	4,19%	4,22%	4,25%	4,28%	4,31%	4,34%
WACC+1	104,16%	104,19%	104,22%	104,25%	104,28%	104,31%	104,34%
Enterprise Value (no TV, FCFF)	1 150	1 253	1 381	1 506	1 501	1 124	964
Discounted TV	4 276	4 221	4 168	4 115	4 064	4 013	3 964
Enterprise Value (with TV, FCFF)	5 426	5 475	5 549	5 621	5 565	5 137	4 928
Equity value (with TV, FCFF)	4 935	4 984	5 058	5 130	5 074	4 646	4 437
Δ% Equity Value	-3,80%	-2,85%	-1,40%	0,00%	-1,09%	-9,44%	-13,51%
Share Price A	\$ 10,90	\$ 11,00	\$ 11,17	\$ 11,33	\$ 11,20	\$ 10,26	\$ 9,80
Share Price C	\$ 9,47	\$ 9,57	\$ 9,71	\$ 9,85	\$ 9,74	\$ 8,92	\$ 8,52
Share Price B	\$ 23,69	\$ 23,92	\$ 24,28	\$ 24,62	\$ 24,35	\$ 22,30	\$ 21,29

Source: Own calculations

Appendix n°34: Under Armour – Euros Cost of Debt Sensitivity

	Cost of Debt						
	-3%	-2%	-1%	±0	1%	2%	3%
Cost of Debt	-1,26%	-0,26%	0,74%	1,74%	2,74%	3,74%	4,74%
WACC	3,98%	4,07%	4,16%	4,25%	4,33%	4,42%	4,51%
WACC + 1	103,98%	104,07%	104,16%	104,25%	104,33%	104,42%	104,51%
Enterprise Value (no TV, FCFF)	1 538	1 527	1 517	1 506	1 495	1 485	1 530
Discounted Terminal Value	4 610	4 435	4 270	4 115	3 969	3 831	3 700
Enterprise Value (with TV, FCFF)	6 148	5 962	5 787	5 621	5 464	5 316	5 231
Equity value (with TV, FCFF)	5 657	5 471	5 296	5 130	4 973	4 824	4 740
Δ% Equity Value	10,27%	6,65%	3,23%	0,00%	-3,06%	-5,95%	-7,61%
Share Price A	\$ 12,49	\$ 12,08	\$ 11,69	\$ 11,33	\$ 10,98	\$ 10,65	\$ 10,46
Share Price C	\$ 10,86	\$ 10,50	\$ 10,17	\$ 9,85	\$ 9,55	\$ 9,26	\$ 9,10
Share Price B	\$ 27,15	\$ 26,26	\$ 25,42	\$ 24,62	\$ 23,87	\$ 23,16	\$ 22,75

Source: Own calculations

Adidas acquires Under Armour: a new era in Sporting Goods

Appendix n°35: Under Armour – Euros Cost of Equity Sensitivity

	Cost of Equity						
	-1,5%	-1%	-0,5%	±0	0,5%	1%	1,5%
Cost of Equity	3,10%	3,60%	4,10%	4,60%	5,10%	5,60%	6,10%
WACC	2,91%	3,36%	3,80%	4,25%	4,69%	5,14%	5,58%
WACC + 1	102,91%	103,36%	103,80%	104,25%	104,69%	105,14%	105,58%
Enterprise Value (no TV, FCFE)	1 608	1 573	1 539	1 506	1 474	1 443	1 414
Discounted Terminal Value	8 202	6 281	5 012	4 115	3 450	2 939	2 535
Enterprise Value (with TV, FCFE)	9 810	7 854	6 551	5 621	4 924	4 382	3 949
Equity value (with TV, FCFE)	9 319	7 363	6 060	5 130	4 433	3 891	3 458
Δ% Equity Value	81,66%	43,52%	18,13%	0,00%	-13,59%	-24,15%	-32,60%
Share Price A	\$ 20,57	\$ 16,26	\$ 13,38	\$ 11,33	\$ 9,79	\$ 8,59	\$ 7,63
Share Price C	\$ 17,89	\$ 14,13	\$ 11,63	\$ 9,85	\$ 8,51	\$ 7,47	\$ 6,64
Share Price B	\$ 44,73	\$ 35,34	\$ 29,08	\$ 24,62	\$ 21,28	\$ 18,68	\$ 16,60

Source: Own calculations

Appendix n°36: Under Armour – Euros growth rate Sensitivity

	Growth rate sensitivity						
	-3%	-2%	-1%	±0	1%	2%	3%
Growth rate	-1,86%	-0,86%	0,14%	1,14%	2,14%	3,14%	4,14%
WACC	4,25%	4,25%	4,25%	4,25%	4,25%	4,25%	4,25%
WACC + 1	104,25%	104,25%	104,25%	104,25%	104,25%	104,25%	104,25%
Enterprise Value (no TV, FCFE)	1 506	1 506	1 506	1 506	1 506	1 506	1 506
Discounted Terminal Value	3 993	4 034	4 074	4 115	4 156	4 197	4 237
Enterprise Value (with TV, FCFE)	5 008	5 048	5 089	5 130	5 171	5 211	5 252
Δ% Equity Value	-2,38%	-1,59%	-0,79%	0,00%	0,79%	1,59%	2,38%
Share Price A	\$ 11,06	\$ 11,15	\$ 11,24	\$ 11,33	\$ 11,42	\$ 11,51	\$ 11,60
Share Price C	\$ 9,61	\$ 9,69	\$ 9,77	\$ 9,85	\$ 9,93	\$ 10,00	\$ 10,08
Share Price B	\$ 24,04	\$ 24,23	\$ 24,43	\$ 24,62	\$ 24,82	\$ 25,01	\$ 25,21

Source: Own calculations

Appendix n°37: Under Armour – Euros Unlevered Beta Sensitivity

	Unlevered Beta						
	-0,3	-0,2	-0,1	±0	0,1	0,2	0,3
unlevered Beta	0,310	0,410	0,510	0,610	0,710	0,810	0,910
levered Beta	0,340	0,450	0,560	0,670	0,780	0,890	1,000
unlevered CoC	2,77%	3,28%	3,79%	4,30%	4,81%	5,31%	5,82%
Cost of (levered) Equity	2,93%	3,49%	4,05%	4,60%	5,16%	5,72%	6,28%
WACC	2,76%	3,25%	3,75%	4,25%	4,74%	5,24%	5,73%
PV Unlevered Firm (no TV, FCFE)	1 619	1 578	1 539	1 502	1 466	1 431	1 398
PV TV Unlevered Firm	11 658	8 620	6 746	5 478	4 566	3 879	3 346
PV Tax Shield	155	155	155	155	155	155	155
PV TV Tax Shield	223	165	129	105	87	74	64
(-) PV Bankruptcy Cost	352	270	219	185	160	141	126
Total Firm Value	13 303	10 248	8 350	7 055	6 114	5 399	4 837
(-) Net Debt	12	12	12	12	12	12	12
Equity Value	13 291	10 236	8 338	7 043	6 102	5 387	4 825
Share Price A	\$ 29,34	\$ 22,60	\$ 18,41	\$ 15,55	\$ 13,47	\$ 11,89	\$ 10,65
Share Price C	\$ 25,52	\$ 19,65	\$ 16,01	\$ 13,52	\$ 11,72	\$ 10,34	\$ 9,26
Share Price B	\$ 63,79	\$ 49,13	\$ 40,02	\$ 33,80	\$ 29,29	\$ 25,86	\$ 23,16

Source: Own calculations



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