Can Under Armour (NYSE: UA) Continue To Gain Market Share from Nike and Adidas?

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Abstract:

In this paper, I will value the sports apparel company, Under Armour (UA). Despite the fact that UA operates in one of the most competitive markets (including giant magnates such as Nike, Adidas, and Reebok), and despite its late start to the "game" (founded in 1996), UA has been able to successfully position itself as a market leader by signing endorsement deals with top athletes such as Stephen Curry and Tom Brady. However, this long growth met some resistance, when the company saw its stock price drop by 40% during 2017. In 2018 the stock price dropped even further, by 34% to $17.67 at end of December. Therefore a valuation on UA will be conducted where it will end up. In this paper, I first introduce UA and examine its business model. Then I will provide a detailed summary of the sports apparel industry in which UA operates as well as an analysis of its financial performance. Lastly, I will value the company as of December 31st, 2018, using two valuation methods: (1) the discounted cash flow method; and (2) the multiples method. Applying the DCF method, I will conclude that the company is undervalued and that the fair stock price for UA should be around $29.4. In comparison, target price calculated by multiples method ranges from $27.8 to $35.90, which further supports my fair stock price. To summarize, I believe that UA has the potential to keep growing as they have been through their darkest days and is focusing on expanding their business wisely, but moving forward, it will face tough competition. Thus, I recommend "moderate buy" for UA.

Executive Summary

UNDER ARMOUR	Company	Rating	Price at 7/18/2019
	Under Armour	Moderate Buy	$23.91
		Target Price	Share outstanding
	Industry	$29.4	$448,370
	Sports Apparel		Exchange Ticker
			NYSE

1 Introduction

1.1. Motivation

There are two main reasons for my motivation to study UA. The first reason is to evaluate where UA will end up. The second is because UA's growth has been directly linked to its endorsement deal with Stephen Curry. A question remains whether the popularity of Curry will remain and how this potential decline in popularity could affect UA.

Since the mid 1990s, the industry has been occupied by two industrial magnates, Nike and Adidas. These two companies have a strong worldwide brand recognition and a significantly larger amount of resources than any other company. Under this heavy competition environment, UA still managed to deliver an astonishing growth since it went public in 2005. When a company enters the market it is common that it has found something that the current industry lacks. However, companies entering the market and failing to be successful is still an ongoing thing. Ten years ago, there was a clothing brand called "No Fear". This company had a creative idea of implementing meaningful slogans or quotes on extreme sports. They were successful in the beginning, but not long after, Nike started introducing shirts with similar inspiring quotes. Because the company failed to stay innovative with their idea, people stopped buying their products, and in 2011, they declared bankruptcy. Another sporting company that went through a similar situation was Converse. In the 1990s, Converse was among the most popular shoe choice for the majority of people who played basketball. However, as Converse focused on producing the same type of shoes, Nike spent millions of dollars to research and develop better, lighter, and springier shoes. Eventually, Nike's basketball shoes became the most favorable among professionals, replacing converse. As a result, Converse declared bankruptcy in 2002. These two examples are about how two companies were successful in the beginning but failed to keep innovative in this highly competitive industry. With UA, even though they first introduced the innovative sweat-wicking shirt, competitors caught up developing similar products quickly. For the industrial magnates like Nike and Adidas, it is easier to create similar product and attract more consumers with their brand recognition and large celebrity endorsements. Therefore in this paper, I will investigate whether UA will be able to keep increasing market share and achieve turnaround after the stock price fell 40% since 2017, or will it experience the same ending as No Fear and Converse.

Another reason why I want to study this company is that UA has made a significant deal that affected the whole industry. In 2013, UA signed with the famous NBA shooter, Stephen Curry. Signing Stephen Curry has been a huge success for UA. According to Yahoo finance [(8)], "sales of his signature basketball shoe are up 350% since the start of the year, and are higher than sales of any Nike signature shoe except for Jordan." UA's basketball business has likely doubled (in terms of retail sales), and even its non-Curry footwear have grown at a high rate. However, with Stephen Curry getting old and not winning a championship this year, sales made from endorsement of Curry may start to decline due to his fading popularity. This gave me another reason to evaluate this company to see their current status and see where they will end up in the future.

1.2 Valuation Method

To help me answer the question on whether or not UA can still gain market share, I will evaluate the company from different perspectives. First with the business model analysis and then an accounting analysis. Then moving on to financial analysis, I will use two methods: the discounted cash flow method (DCF) and the multiples method. As with both methods, I will use the financial data from 10-k report to be compared with the stock price on December 31st and see what happens today, to determine if the stock price of UA is overvalued or undervalued. For the DCF approach, I will explain each step in detail and show the calculation process. With the multiples method, I will find peer companies in the industry and calculate the target value of UA by comparing the multiples with the peer group.

1.3 Result

The target price calculated from the multiple's method ranges from $27.8 to $35.90. As with the DCF analysis, I obtained a fair value of $29.4. In combination with my multiple method, the target price, $29.4, is reasonable as it lies in the range obtained from multiples approach. The result I got from the DCF method suggest that UA is undervalued when compared to the stock price of $17.76 on December 31st 2018. Furthermore, the stock price of UA for today has risen 48% since December 2018, getting closer to my target price and suggesting that UA still has room for growth.

2. The Company Under Armour

2.1 History of Under Armour

UA is currently among the leading sports apparel company globally. It was founded in 1996 in Washington D.C. by Kevin Plank. Plank was a student of University of Maryland who was also a football player. During his University days, Plank found that the jerseys they wore were too uncomfortable. He soon became frustrated with this clothing as the cotton material would absorb sweat, become more burdensome, and restrict Plank and his teammates.

When he graduated from Maryland, he developed a solution to the problem of the uncomfortable sports clothing. His initial ideas were simple: to create a t-shirt that would benefit athletes that would be lightweight, affordable, and moisture wicking, so athletes would not have to experience discomfort when playing [(3)]. He would make prototypes to give to his college teammates who then played in the NFL to test his clothing and continually improve his product based on the feedback and the help they gave. In the end, Plank created a t-shirt that used "moisture-wicking synthetic fabrics, instead of cotton, which stayed dry and light regardless of sweat" [(3)]. Plank worked in his grandmother's basement and he sold his products by driving through the east coast in his car with the help of his friends. By the end of 1996, UA made $19,600 in sales and outgrew his grandmother's basement. Plank decided to move to Baltimore which became the headquarter of UA to this day. The company expanded their business and signed contracts with teams like Georgia Tech and North Carolina State to help increase their brand recognition. In 2003 UA published their first national TV ad campaign, “Protect this House.” The ad established UA as the authentic voice for the next generation and introduced the concept of “WILL,” a theme that remains an undeniable part of the Brand [(2)]. In 2004, the company gained even more sales and made over 200 million dollars in revenue. On November 18, 2005, UA went to public on NASDAQ, and became the first US-based initial public offering (IPO) in five years seeing price doubled on the first day trading [(2)]. Then the company started to sign endorsement athletes. In 2010, the company signed Tom Brady — by giving him equity in the company. In 2014, UA signed Brady's wife, Gisele Bundchen, to expand its brand to women. UA continued to expand their endorsement deals by signing the NBA star Stephen Curry. In 2015 Curry’s shoes arrived in stores, which helped boost UA’s sales significantly. In 2015, UA became the “worlds’ largest digital fitness and wellness community” through their acquisition’s fitness app companies MapMyRun, Endomondo, and MyFitnessPal [(2)]. The company helped people change how they live, which was a huge success factor for UA.

In 2016 UA had around 13,500 employees and made around 4 billion dollars in revenue. However, it was not until 2017, when the growing success of UA came to an end and this could be seen from their immense stock price drop. In recent quarters UA’s stock has made a comeback but investors are still skeptical whether UA will ever grow as fast as they did before.

2.2 Company overview

UA operates within the sports apparel industry. They sell their products for fitness, training activities, and other athletic purposes. UA seeks to increase their products sold by building brand awareness – that their products can improve athletes’ performance.

UA offers products consisting of apparel, footwear, and accessories for all men, women, and youth. All these products are meant to improve costumer’s performance in sports. In 2018, sales of apparel, footwear, and accessories represented 67%, 20% and 8% of net revenues respectively. Revenues are generated from sale of their products globally. The remaining 5% net revenues are generated from a program called connected fitness and license. According to WedBush securities estimates, the company ranks third in the sports apparel market with a 5 % market share, which is approximately the same with PUMA. [(17)]

2.3 Business model and strategy:

UA operates in four geographic regions, including North America, (comprising the USA and Canada) Europe, Asia Pacific, and Latin America. The company generates revenue from the direct to customer channel, which includes sales from their e-commerce website, www.underarmour.com, UA's brand houses, and its factory houses. UA's brand houses are retail stores that are located globally, which offer a variety of their products.

Factory house is another way UA sells their products directly to consumers. Factory house also serves an essential role in their overall inventory management by allowing them to sell a large portion of excess and out of season apparel and shoes at discount prices. In addition, UA generates revenue from sales of digital fitness subscriptions and digital advertising through its Connected Fitness business [(1)]. In places where there are no direct operations, wholesale channels are used. Wholesale channels include national and regional sporting goods chains, independent and specialty retailers, department store chains, and institutional athletic departments [(1)].

The most critical factor to UA's success will be the identity of its brand, and the ability to expand the awareness of the brand. The company is known for advanced athletic wear using innovative technology designed for athletes for all conditions. Every UA product is stamped with its iconic logo to increase brand awareness. UA has done well to maintain its brand through strategic advertising, sports sponsorships, and most importantly, substantial investment in product innovation.

UA also has a range of licensing products with partners, such as college teams, Major League Baseball, National Football League, and National Basketball Association. UA promotes its sales through professional and collegiate sponsorships as well as individual athlete sponsorships. In addition, UA uses a variety of media channels to utilize paid advertisements to increase sales and market share in a competitive industry controlled by some prominent firms[(2)].

In recent years, UA has focused on product innovation. In 2015, they made a strategic acquisition of two fitness apps companies, Endomondo and My fitness pal [4]. UA then became the worlds' largest digital health and fitness community, stepping away from just creating clothing and footwear. In 2016, it released its first smart shoe, the Speedform Gemini 2 Record Equipped, that can be connected with user's smartphone to track their health fitness. These action shows how over the past few years, UA attempted to branch out to a more athletic lifestyle company that provides products to enhance consumers life. Compared to the beginning of the company's initial focus to only create products that would help improve athletes improvements, UA has made a lot of innovative changes.

Looking at the business, there are several opportunities and threats for this company.

- **Opportunities**
    - **Footwear:**

UA's share of the footwear market is fairly small, likely still in the low single-digits.

(in thousands)	2018	2017	Change $
Apparel	$3,462,372	$3,287,121	$175,251
Footwear	$1,063,175	$1,037,840	$25,335

From the company's selected financial statements, the sales of its footwear segment increased 2.4 % year-over-year in 2018, while its apparel segment increased 5.1%. With their new product line "HOVR" running shoes, they will have a good potential to raise the footwear sales. As shown in the company's Q1 2019 report, the footwear sales increased 8% compared to the same quarter last year, while apparel sales grew 1%.

- **Overseas Expansion**

UA has room for international growth. Over these years, the company is constantly seeking ways to expand its oversea market to ensure its future growth. Even though UA is rapidly expanding their business in North America, they should also focus on other continents. UA has already hired marketing consultants in different regions, and is building factory outlets around the world [2]. These efforts will likely to be payed off during the later stages of the decade, and ultimately add approximately another billion dollars to revenues which is an opportunity for UA to continue their business growth. In 2018, international sale accounts for about 26% for UA, while it contrast, it contributes 57% for NKE's annual sale. Moreover, in April of 2011, UA had just opened its first retail store in Shanghai, China. The international sales ratio has raised from 15.8% in 2016 to 21.7% and 25.8% in 2017 and 2018, respectively (Figure 1). UA estimated to open up to 800 stores in China by 2020.

Revenue Comparison between Nike and UA, 2018 fiscal year

(Dollars in Millions)	NKE	As of Revenue	UA	As of Revenue
North America	$14,855	43%	$3,735	72%
EMEA	$9,242	27%	$588	11%
Asia Pacific	$10,300	30%	$558	11%
Latin America	/	/	$191	4%

-Women/Children

Another opportunity for UA will be to widen its demographic reach to women and children. This will be another route for expansion for UA. The company has made expansions in the women's apparel, both improving the quality and styles of its collections and signing up with famous endorsers like model Gisele Bundchen. The company is also targeting kids- a small but important category. Such initiatives should further enhance the company's growth profile over time.

Threats:

- **Currency exchange rate fluctuations.**

UA generates about 26% of the net revenues internationally. As their international business grows, the result of international operations could impact changes in foreign currency exchange rates, since revenues are recognized in foreign currencies. The loss of those amounts into US dollars could post as a threat on the financial statement.

-Sponsorships and endorsements may become more expensive

A key element of UA's marketing strategy has been to "create a link in the consumer market between products and professional and collegiate athletes." [3] However, as competition in performance apparel and footwear industry has increased, the costs associated with athlete sponsorships and official supplier licensing agreements have likewise increased, including the costs on retaining these sponsorships and agreements. Consequently, UA's brand image, net revenues, expenses and profitability could be materially adversely affected.

-Sales of performance products may not continue to grow or may decline.

UA growth is based on their innovative apparel, footwear and accessories. Consumers want to buy their performance products for fitness. However, if consumers are not convinced that these products can enhance performance, then the growth in the business can be negatively affected. If sales of these products decline, then UA may fail to reach expected financial results and therefore hard to grow their business further.

-Fluctuations in the cost of goods could negatively affect operating results.

The fabrics used in UA's product are made of raw materials including petroleum based products and cotton. Extraordinary price fluctuations or shortages in petroleum or other raw materials can affect the COGS of the company. The fluctuations may increase the cost of products and have an adverse effect on our profit margins, results of operations and financial condition.

2.4 Financial performance& accounting analysis

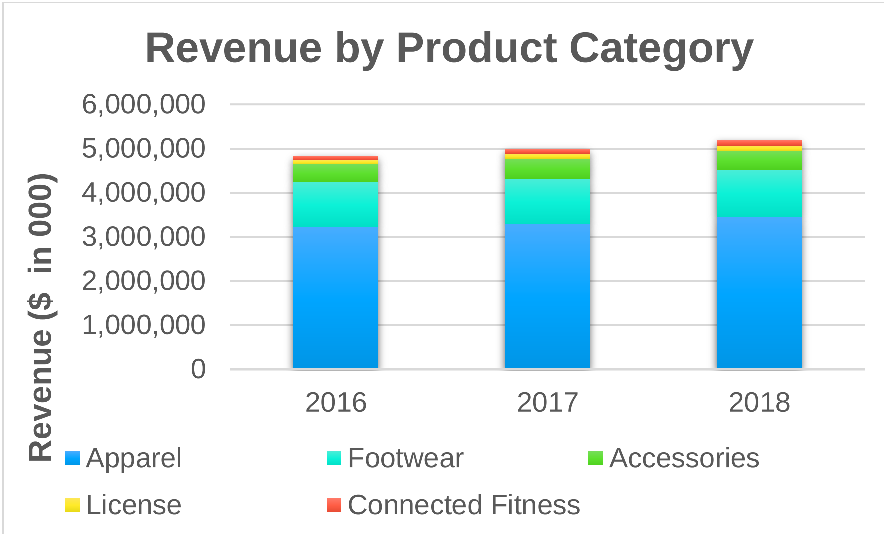
Since UA went public, the company was able to do extremely well. The company was able to continuously beat analysts' expectations. However, the company saw its stock price drop more than 40% in 2017. Despite the confidence that Kevin Plank has for future growth, the decreasing stock price made investor wonder about the future of the company. The main issue was that there sales in North America started to decline. For UA, 85% of their sales came from North America, and this was a serious problem. This decline in sale deteriorated the company's inventory problem too. UA did not reach the 7.5 billion dollars they expected for 2018, which resulted in significant price drop. In years 2017 and 2018, UA went through restructure plan, in which they focused on their core issues. From 2017 to 2018, the company restructured itself, aiming at fixing their core issues(inventory management, revenue). The restructure plan was expensed and caused an negative net income for UA, which also affected it's stock price. With this section, I will analyze the financial performance of the business for recent years to see if the company has changed and if the restructure plan brought any benefits.

-Revenue recognition

UA's revenue recognition can be divided into three parts. (net sales, license, connected fitness) Sales are based on accrual based system, when the product is delivered to the costumer and revenue is realized. License revenue is recognized upon shipment of licensed products sold by the company's licensee. Sales taxes imposed on the company's revenues from product sales are presented on a net basis on the consolidated statements of income.

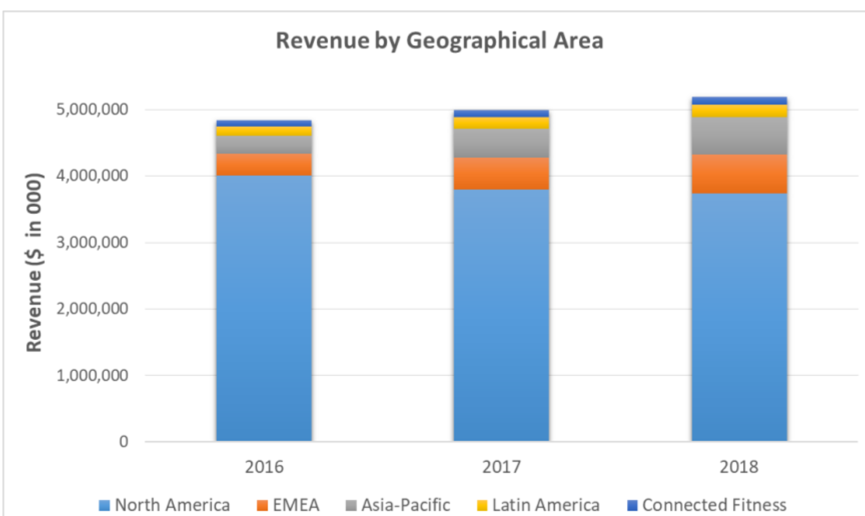
UA's product are divided into 5 segments. Although the apparel makes up the largest portion of their sales (Figure 1), something worth mentioning would be footwear. In 2018, the leading category of footwear sales was running shoes. Launching the new cushioning platform, HOVR, the company significantly boosted their footwear sales in 2018. Under Armour's COO, Patrick Frisk, told analysis that HOVR was "one of the new strong platforms for UA going forward" 3 months after the products launch. [6] Despite this opportunity, Investors think that the sales of Curry's signature shoes are going to drop since his team did not perform as expected. However, I believe that Curry's performance is not going to affect their sales. According to Q, a company that evaluates the strength of emotional connection consumer have with celebrities, Curry leads all NBA players. [7] Working with UA, Curry's frequent basketball tour to Asia and especially China – in where Curry has great popularity – also helps boost his connection with consumers.

Figure 1 Revenue change by geographical area of UA, 2016-2018



As shown in Figure 2, the revenue generated from North America decrease from 2016 - 2018. However, UA has shown that even though their revenue in North America has decreased, their revenue generated from international market expansion is going well for UA. UA has started to turn their focus to international expansion and there is a possibility that UA could expand further into this market to make up for its North America loses in 2017 and 2018.

Figure 2 Revenue by geographical area



-Inventory Management

UA’s inventory consists primarily of finished goods. They rely on a first in first out (FIFO) basis, in which goods are sold in the same chronological order in which they are bought [(1)]. UA has had an inventory issue since its sharp incline in 2014. An inventory that consists of mainly finished goods means that sales may not be going so well and it also brings in issues of finance or storage. This problem has been dragging down the company’s gross margin. However, UA has realized this issue and is finally addressing this problem. Over the past 2 years, UA has significantly improved their inventory management. UA’s average cash conversion cycle decreased from an average of 123 days in 2017 to 108 days in 2018. The improvement in inventory makes the turn around story for UA more promising. This shows that UA has been turning it’s business around by addressing their main problem.

	2016	2017	2018
Cash conversion cycle UA (Days)	119	124	108
Inventory (in thousands)	917, 000	$ 1,159,000	$1 ,019,000

-Date extracted from Y-charts

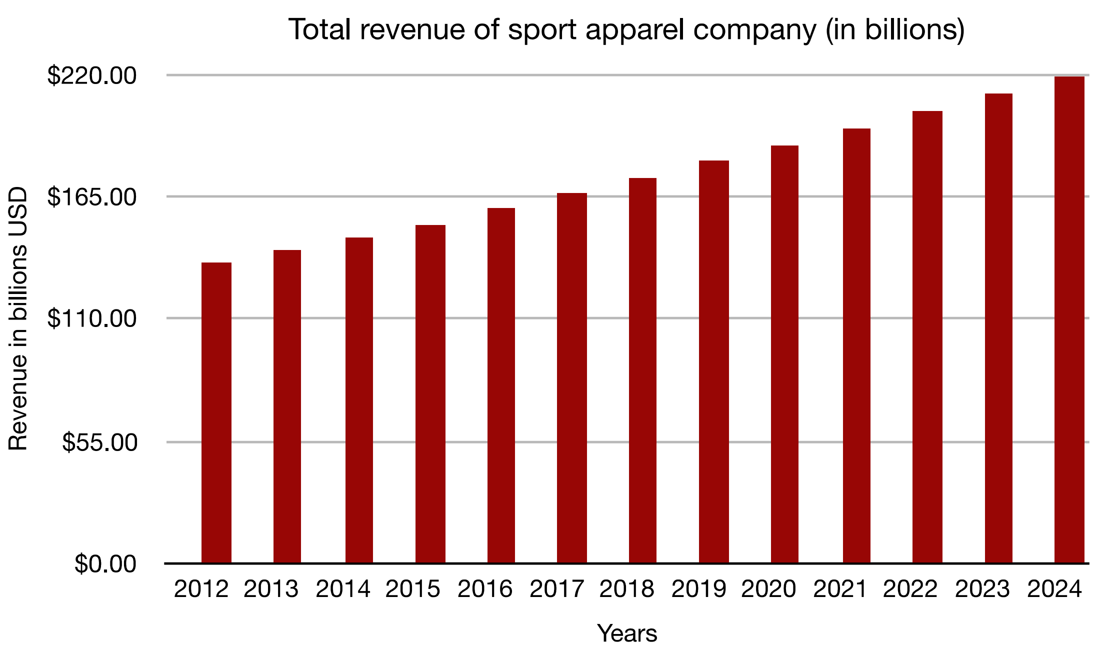
-Advertising cost

Advertising cost are charged to SG&A. First of all, advertising production costs are expensed when an advertisement related to the production costs is being displayed. In addition, Media placement costs are expensed in the month which the advertisement appears, and costs related to event sponsorships are expensed when the event occurs. Finally, there are sponsorship expenses in which the payments are expensed over the term of the contract after recording expenses related to the specific performance incentives.[(1)] Some believe the expense is actually hurting the company. Even though UA has high brand recognition through the promotion of those professional athletes and teams, it has not really helped the company maintain its high growth rate. The expectation for UA was to hit 7.5 billion in revenue but the company only managed to obtain 5.2 billion dollars. However, UA’s advertising cost has continued to grow, from $417.8 million in 2014 to $543.8 million in 2018. Despite this advertising expense increase, UA’s SG&A expense was not adversely affected and even had a 21.3 million decrease in 2018, which made investors less pessimistic about their current situation.

2.5 Industry Analysis

The sports apparel market is highly segmented and extremely competitive. Hundreds of companies are in this market but the two giants, Nike and Adidas, are in the lead. When put into perspective, Nike and Adidas holds approximately 33% and 23% of the total market share respectively. (17). Companies like these two are billion-dollar companies, who have ruled this sector for many years, makes this industry more competitive as they have a well-established relationship with retailers. Retail stores do not want to bet their inventories on company they cannot trust. In addition to industry competitiveness, consumers do not lose money for switching between brands; therefore, companies have to keep innovative and develop new products that are not offered by competitors.

Figure 3 Historical and projected total revenue of sports apparel industry



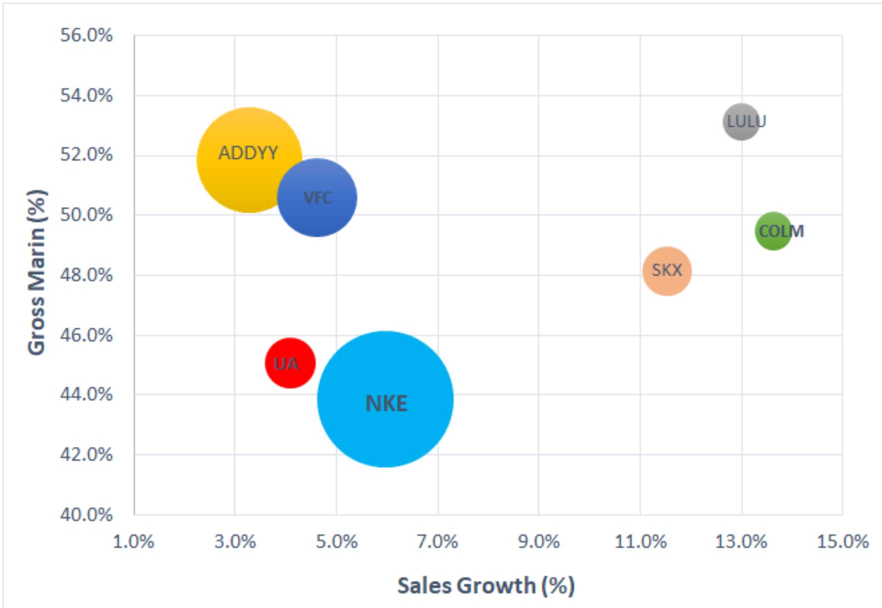
-Data from Statistics

Analysts believe the industry still has a considerable space for growth (Figure 3). Athletic brands are using an increased scale to get faster at releasing new styles to the marketplace due to the rising demand for lifestyle athletic wear [13]. Fashion trends come and go, but the growth in footwear and athletic apparel in recent years is consistent with the secular shift in everyday dress. Over the last century, clothing styles have been getting more and more casual. Apparel companies take advantage of this demand to make their products suitable for athleisure or lifestyle athletic wear. [13] On the other hand, UA is a performance brand that makes product to enhance performance. While their product can certainly appeal to consumers who regularly exercise, the fashion trend does suggest that people are less likely to wear sports clothing as part of their life. On an interview in 2018, CEO Kevin Plank said that “We are a performance brand. That is what we’re going to be and going to stand for, becoming the best in the world at that.” UA is unlikely to change and this will hurt the company from gaining market share against its competitors.

For instance, UA struggles in its North America section. Their sales made in North America decreased by 2.8 change from last year’s 1st quarter. The athletic apparel and footwear category in North America remain highly competitive, but it is worth noting that while UA continues to lag in its biggest market, its competitor, Nike, is not having the same problem. Nike Recently reported a 7% sales growth in North America and global sales growth of 7% as well [14]. Not analyzing too much on Nike, it can be inferred from their sale growth that their approach to producing clothing in response to the fast fashion style change is successful.

Comparing the sales growth with peers, UA is in the low range, similar as ADDY, VFC and NKE (Figure 4), while comparing the gross margin, its lagged behind its peers, but it has been improved in the most recent quarter, and the management are confident it will continue to improve in the coming quarters.

Figure 4. Competitive position of UA (Bubble size represent revenue)



- *Data compiled from Yahoo finance*

3. Financial Analysis

3.1. Relative valuation

Relative valuation, also known as multiples method, is a valuation method to value assets, based on how similar assets are priced in the market. It is a financial measurement tool that evaluates one financial metric as a ratio of another, in order to make different companies more comparable [(1)].

There are different types of measurement value called multiples. Multiples can be divided into two categories: enterprise multiples and equity multiples. Just the multiples is not enough and the value do not mean anything if it is not compared with other companies. Therefore, finding peer groups is the second part for completing this valuation. There are specific criteria to choose comparable companies to the company that is going to be evaluated

Most commonly used multiples are EV/EBITDA, EV/Revenue, P/E multiples. As UA experienced restructuring in 2017-2018, which significantly impacted operation income, and lead to negative P/E ratio in 2018 as well as abnormal low EBITDA.

Realizing competitors:

Competitors of the company are required in order to complete this evaluation. Usually firms with similar standard industry classification and other similarities like client segments, financing structures are used. After researching in companies, I choose specific sportswear companies that also have some involvement with technology market. These are Nike(NKE), Adidas(ADDYY), Lululemon(LULU), VF corps (VF), Colombia(COLM), and Skechers (SKX).

Company Name	EV/Revenue	Price/ Book
Under Armour	2.25	5.99
Nike	3.45	15.40
Adidas	2.43	7.98
VF Corp	2.67	8.14
Lululemon athletics	7.20	18.12
Colombia	2.41	4.14
Skechers	1.41	2.85
Median	2.43	7.98
Average	3.12	8.95
Revenue 2018	$5, 193, 185	$ 2,017, 000

-*Data extracted from Guru focus*

EV/ Revenue Multiple

The EV/Revenue of the peer group ranges from 1.41 to 7.2, with a mean of 3.12 median of 2.43. Here, I use the median 2.43 in the value calculation, as this number represents the most like case, and mean value maybe skewed if there are outliers.

Calculation of EV

Exhibit 1 Revenue * $(\text{EV/Revenue})_{\text{median}}$

The UA revenue in 2018 is $5,193.2 million, so:

Exhibit 2 EV

$5,193.2 million * 2.43 = $12,619.4 million

The next step is to calculate the Equity value.

Exhibit 3 Equity Value = EV – total Debt + Cash & Cash Equivalent

$12,619.4 million - $729 million + $577 million = $12,467.4 million

Exhibit 4 Share Price = Equity Value / outstanding shares

$12,467.4 million / $448.37 million = $27.8

P/B

The EV/Revenue of the peer group ranges from 2.85 to 15.40. Here, I use the median 7.98 again for the same reasons.

Equation to calculate the share price from PB multiple would be:

Exhibit 5 Share price= Book * $(PB)_{median}$ / Total outstanding shares

$2,017,000 * 7.98/ $448,370= $ 35.90

The results gives an estimated stock price for range from $27.8 to $35.90. This result will be referred to again after the DCF analysis, to validate the accuracy of this data.

3.2 DCF evaluation method

The Discounted Cash Flow method (DCF) is a valuation technique where the company's value is determined by the present value of its projected free cash flow (FCF).[10] In other words, DCF analysis calculates the company value today based on how much money it is going to make in the future. According to Fernandez, "It is the most suitable method for valuing a company, as the value of a company's equity - assuming it continues to operate - arises from the company's capacity to generate cash (flows) for the equity's owners." [10] It is the principle that the net present value of the projected FCF can be used to calculate the true value of the company.

The data will be collected as of December 31st, 2018. With the target price calculated from 2018, it is possible to see the intrinsic value of the company which can be used to determine if it is overvalued or undervalued when compared to the stock price today. After all, the DCF analysis is to see an approximate value of what the company is worth and how much the true value differs from the stock market.

The DCF approach normally involves 6 steps [9]:

Step1: Forecasting unlevered free cash flows;
Step2: Discounting the cash flows to the present at the weighted average cost of capital (WACC);
Step3: Calculating terminal value;
Step4: Add the value of non-operating assets to the present value of free cash flow;
Step5: Subtract debt and other non-equality claims to get the implied equity value
Step6: Divide the implied equity value by number of outstanding shares

In the following section, I will follow these steps to perform the DCF analysis.

Calculation of free cash flow

In the first step, scenarios are developed to predict future free cash flows (FCF) for the next five years. The free cash flow can be calculated as:

Exhibit 6 $FCF = EBIT + D\&A - Capex - Increase\ in\ NW$ [9]

Table 1 Sales Projection

($in thousands)	Historical Period			Projection Period					
	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023 E	2024E

Revenue	4,833,338	4,989,244	5,193,185	5,400,912	5,616,949	5,841,627	6,133,708	6,501,731	6,891,835
%growth	21.74%	3.23%	4.09%	4.00%	4.00%	4.00%	5.00%	6.00%	6.00%

I assume the sales' growth will be on average around 4% in the next 5 years. Several factors are taken into consideration when projecting the revenue growth rate. First of all, UA can be positive about their international sales of how it is steadily growing each year. Unlike companies like Nike who have long penetrated regions like Asia Pacific or China, UA still has the advantage in these regions (according to regional managers) since it has just started targeting these areas in 2016. Secondly, UA could use its footwear business to get a slight increase. Since the development of HOVR running shoes in 2018, it has helped UA develop a consistent platform to compete with Air Max by Nike or Boost by Adidas. The product has increased its revenue and I believe it will continue to help the company grow. Finally, UA is an investing company. UA is spending money to install SAP, reconstructing its new headquarter, adding more retail stores around the world, building out its merchandising teams, and improving its business in different ways. Since the payoff from these investments takes time, I believe that an 4-6% increase in sales growth will happen in the near future. The main factors that might affect UA growth will be its competitors. Under sports apparel industry, it is highly competitive for UA as they share the same market with Nike and Adidas. As mentioned in the Industry analysis, Nike and Adidas have established itself to become a known lifestyle and fashion brand as this is what attracts consumers nowadays. UA on the other hand, is still focused on developing performance product and this may remain a problem for them unless fashion trend starts to change.

According to the company's 2018 press release for investors, managers expect to maintain a 3 to 4 percent growth rate for full year 2019 as it matches what I project in the report. UA managers also estimate that their growth rate will return back to a low double digit by 2023 but with the reasons above, I think that UA will only increase to a high single digit growth rate.

Table 2 - Projection of COGS and SG&A

($ in thousands)	**Historical Period**			**Projection Period**					
	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E

COGS	2,584,724	2,737,830	2,852,714	2,970,502	3,033,152	3,096,062	3,159,152	3,222,335	3,285,518
as of revenue (%)	53.5%	54.9%	54.9%	55.0%	54.0%	53.0%	52.0%	51.0%	50.0%
SG&A Expense	1,831,143	2,099,522	2,182,339	2,268,383	2,359,119	2,453,483	2,551,623	2,653,688	2,759,835
as of revenue (%)	37.9%	42.1%	42.0%	42.0%	41.0%	41.0%	41.0%	40.0%	40.0%

I expect the ratio of COGS will decrease for two reasons. The first reason for a decrease in COGS will be that the oil cost will likely stay the same. UA uses fabric as the main material for mostly apparels. The fabrics used are made of raw materials including petroleum based products and cotton. However, fluctuations in oil price will be unlikely to happen because the oil supply and demand will be roughly balanced in the next 5 years.[(12)] Secondly, since UA had restructured itself in 2017 and 2018 to better align their financial resources with critical priorities of their business, it will be reasonably to assume a decrease in COGS.

I predict the ratio for SG&A will likely to decrease as well. Implementation of the restructure plan also had a direct effect on SG&A. For instance, a $21.3 million decrease, from $565.1 million dollars in 2017 to $543.8 million in 2018 was a direct effect of the restructure plan. As analyzed in section 2.4, here is no sign that UA’s advertising cost has affected their SG&A expense. As managers mentioned in the letter to shareholders, SG&A as a percentage of revenue is going to decrease further. One factor that may affect SG&A will be that due to further expansion on international growth and retail stores, an increase in employee expense and rent expense may add upon SG&A. Thus, I project a lower decrease in SG&A than COGS and suggest that they should maintain around the same.

Table 3 Projection of Gross profit and Income from operation

(In thousands$)	Historical Period			Projection period					
	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E
Gross profit	2,248,614	2,251,414	2,340,471	2,430,411	2,583,796	2,745,565	2,916,140	3,095,969	3,285,518
Gross margin	46.5%	45.1%	45.1%	45%	46%	47%	48%	49%	50%
Operating income	417,471	27,843	-25017	162,027	280,847	350,498	429,360	579,635	682,682
Operating margin	8.6%	0.6%	-0.5%	3.0%	5.0%	6.0%	7.0%	9.0%	10.0%

Gross profit is calculated by subtracting COGS from revenue

Operating income is calculated by subtracting SG&A from gross profit

The current gross margin of UA is 45%, compared with 45-55% of competitors. The projected gross margin by 2024 will be improved to 50%, which will fall into the middle of the peers' range. The operating margin dropped to 0.6% in 2017 and -0.5% in 2018, from 8.6% in 2016, which is the main impact restructuring in 2017 and 2018 caused as UA included restructuring expense. However, as the restructuring is completed, the operating margin is expected to recover as I project the gross margin to reach around 10 percent by 2024.

Figure 5 Projected operating margin of UA

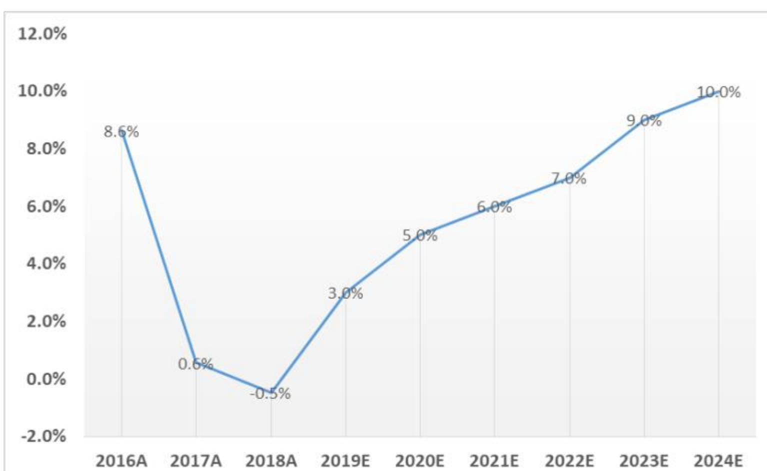


Table 4 Projection of D&A

($in thousands)	Historical Period			Projection Period					
	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E
D&A	144,770	173,747	181,768	189,032	196,593	204,457	212,635	221,141	229,986
%of revenue	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%

In 2018, the company's net PP&E decreased to 826.87 million dollars from 885.7 million dollars in 2017. However even though UA sold many of its PP&E in 2018, they are still planning to expand their business and capital expenditure is expected to increase to 210 million by the end 2019. The company's direct-to-consumer (DTC) operations remain a key aspect of its growth strategy. As a result, the company will expand its retail store base as a means to strengthen its relationship with its consumers for the next five years. They are an investing company so with more PP&E, the D&A will also increase. Assuming that the company will keep expanding, I expect a gradual increase in D&A and the same % of revenue.

Table 5 Projection of EBITA

EBITDA	562,241	201,590	156,751	351,059	477,441	554,955	644,039	805,049	921,620
% margin	8.6%	0.6%	-0.5%	3.0%	5.0%	6.0%	7.0%	9.0%	11.0%

EBITA is calculated by adding D&A to operating income

Table 6 Projection of interest, other expense, and income before tax

($ in thousands)	Historical Period			Projection Period					
	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E

Interest expense	26,434	34,538	33,568	31,000	31,000	31,000	31,000	31,000	31,000
Other expense	2,755	3,614	9,203	5,000	5,000	5,000	5,000	5,000	5,000
Income before Tax	388,282	-10,309	-67,788	126,027	188,678	256,081	328,518	406,281	489,683

The average interest expense of the past three years is around 31 million dollars, and the average other expense is around 5 million dollars. In the Q1 2019 report, the management forecasted the total interest and other expense for the year 2019 to be approximately $35 million versus the previous expectation of $40 million. Without further information, I will assume the two expenses will remain the same in the next 5 years.

Table 7 Projection of tax rate and net income

($ in thousands)	**Historical Period**			**Projection Period**					
	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E
Tax rate	33.8%	N/A	30.3%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Net income	256,979	-48,260	-46,302	152,493	228,300	309,858	397,506	491,600	592,516

The effective tax rate projection will be based on the managers' expectation, 19 to 22 percent in 2019. Other than a major change to the new tax law implemented in 2017 by president Trump that decreased tax rate, it will be unlikely that other political factors will affect tax rate. Based on the management's expectation and US corporate tax rate, I will use a 21 percent tax rate to maintain the same for the next five years as long as UA is profitable.

Table 8 Capex projection

($ in thousands)	**Historical Period**			**Projection Period**					
	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E
- Capex	387,621	282,987	174,982	210,095	219,061	227,823	239,215	253,567	268,782

% of revenue	8.0%	5.7%	3.4%	3.89%	3.90%	3.90%	3.90%	3.90%	3.90%

I expect the Capex for UA will have an increase. First of all, reasons for why Capex will increase is similar for D&A. In the most recent report by UA, managers predict that capital expenditure to increase to $210 million, comprised primarily of investments in their retail stores, global wholesale fixtures, corporate offices and other digital initiatives including the FMS implementation in China and South Korea (1). Frisk, one of UA's management sales director, said UA has put a renewed focus on its Consumers and getting sales to beat expectations as their main strategy by increasing direct sales to consumer. As of right now not much other information was given on UA's strategy so I assume that UA's capital expenditure will increase to 210 million dollars by 2019 and maintain around the same 3.9% of revenue each year.

Table 9 Projection of change in net working capital (NWC)

(in thousands)	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E
Change of NWC	259,384	-2,033	347	300	300	300	300	300	300

- *NWC are calculated by current asset – current liabilities.*
- *Change between NWC is the difference between NWC for one year and the previous year*

Based on the historical trend, the change in NWC of current asset and liabilities decreases each year. The most recent year has a change in NWC for 347 dollars. With no further information, I project that the change in NWC will be around the same for the next five years.

Table 10 Projection of Unleveled Free cash flow

(in thousands)	2016A	2017A	2018A	**2019E**	**2020E**	**2021E**	**2022E**	**2023E**	**2024E**
FCF	-245,256	-155,467	-39,863	131,430	273,798	357,176	451,430	638,472	846,176

Calculation of WACC

After unlevered cash flow is calculated, there now needs to be discounted since money will be worth different in the future. An appropriate method to discount future FCF will be using the weighted average cost of capital (WAAC). WACC is basically the average rate a company pays to finance for its capital, debt and equity. The free cash flows that are calculated from step 1 are discounted using WACC to arrive at the net present value.

Equation for WACC [10]

Exhibit 7 [10] WACC= $\frac{E\ KE+D\ KD\ (1-T)}{E+D}$

D = market value of the debt.

E = market value of the equity.

Kd = required return to debt.

T = tax rate.

Ke = required return to equity, which reflects the equity's risk.

Calculation of E - Market Value of Equity:

The closing value of UA on December 2018 was 17.67 dollars /share. The number of shares outstanding as of 2018 is 448, 370 thousand dollars.

Exhibit 8 Market Value of Equity:

Total shares Outstanding * Share Price

448,370 * 17.67= 7,922,698

Exhibit 9 The Total Debt:

Short term debt & Current portion of long term debt + Long term debt

$25,000 +$703,834 = $728,834.

Equity+ Debt = $728,834+ $7,922,698= $8,651,698

Exhibit 10 Weight of Equity:

$7,922,698 / $8,651,698 =0.916

Exhibit 11 Weight of Debt:

729,000 / 8,651,698 = 0.084

KE - required return to equity (%)

The cost of equity is calculated with the help of capital asset pricing model (CAPM). CAPM reveals the return that investors require for bearing the risk of holding a company's share. [9] This required return is the return on equity (ROE) that investors demand to withstand the risk of holding the company's share.

Exhibit 12 Under CAPM method, the equation for cost of equity is:

Risk free rate + Beta * (expected market return - risk free rate)

For risk free rate, I take a ten year maturity bond at a free risk rate of 2.13%. The beta would be 0.98 for average in the last 3 years according to Yahoo finance. Expected market return for S&P 500 would be 8.18% long term average. Analysts usually use a range from 8% to 10% and thus, I will use the long term average expected market return for SP 500.

Exhibit 13 Calculation of KE

0.0213+0.98 (0.0818-0.0213)= 8.059%

KD - required return to debt (%)

The cost of debt is simply the interest rate a company pays on its debt obligations. (9)

Exhibit 14 Calculation of effective interest rate

$$\frac{\textit{Annual interest}}{\textit{Total debt obligation}}$$

The annual interest for UA 2018 would be $33,568. The total debt obligation calculated in exhibit 5 would be $ 728,834.

Exhibit 15 calculation of after tax KD

Effective interest rate * (1-tax rate)

Effective tax rate = 30.7% (as of 2018)

Exhibit 16 Calculation of Cost of Debt

Cost of Debt = 4.605% (1-0.307) = 3.19%

Final Calculation of WACC

8.059% * 0.91+ 4.605% * (1-0.307) * 0.08= 7.58%

Calculation of terminal value:

After discounting the projected free cash flow, the terminal value (TV) needs to be calculated.

The TV is the net present value of all future cash flows that are generated after the time period that is covered.[9] The forecast period is typically 3-5 years for a business because this is a reasonable amount of time to make detailed assumptions based on historical trends, market conditions and managers expectations. After this period, it would be difficult to estimate the precise figures showing how a company will develop. Therefore the terminal value, which is based on average growth expectations, makes it easier to predict.

There are two commonly used methods to calculate terminal value: "exit multiple" and "perpetual growth". Both method has its advantages and disadvantages so I will takes the average of the terminal value calculated by the two methods. Exit multiples estimate a fair price by multiplying financial statistics, such as sales, profits, or EBITDA by a factor that is common for similar firms that were recently acquired.

Exhibit 17 Terminal Value = EBITDA * exit multiple

The average EV/EBITDA (TTM) value of competitors is around 17.56, therefore, as the forecasted EBITDA at 2024 is $921.62 million, so the terminal value = $921.62 million * 17.56 = $16,184 million.

Perpetuity Growth Method

The perpetuity growth method assumes that the company will continue its historic business and generate FCFs at a steady state forever. The formula to calculate for future cash flow is:

Exhibit 18 Terminal Value = Final year projected cash flow * (1+ perpetuity growth rate)/ (WACC- perpetuity growth rate)

The perpetuity growth rate is typically between the historic inflation rate of 2-3% and the historical GDP growth rate of 4-5%. In this study, I use the perpetuity growth rate of 2.5%.

Exhibit 19 Terminal value

$782 million * (1+2.5%)/(7.58% - 2.5) = $15,782 million

The terminal value from the two methods are close. The average of the two would be calculated.

$15,782+ $16,184 / 2= $ 15,983

Calculate present value and determine valuation

The present value of a firm comprise of two parts: the discounted cash flows for the explicit period, and the discounted terminal value.

The formula for the discounted cash flows in the explicit period is expressed:

Exhibit 20 *Present value of FCFs =*

$$FCF_1/(1+WACC)^1+FCF_2/(1+WACC)^2+\ldots+FCF_n/(1+WACC)^n$$

where n is the year in the projection period.

While, $1/(1+WACC)^n$ is the so called discount factor.

As FCF is usually received throughout the year rather than at the year end, it is typically discounted in accordance with a mid-year convention, which assumes that a company's FCF is distributed evenly throughout the year. The discount factor applying mid-year convention can be expressed as:

Exhibit 21 discount factor = $1/(1+WACC)^{(n-0.5)}$

For the year 2019, the FCF is not discounted as the value of money is equal to the current value. The discount period of 0.5, 1.5, 2.5, …4.5 are used for the year from 2020E to 2024E.

The discounted terminal value can be calculated:

Exhibit 22 Discounted terminal value = terminal value/$(1+WACC)^5$

So, the total enterprise value equals to the sum of discounted cash flow and the discounted terminal value:

Exhibit 23 Enterprise value =

$FCF_1/(1+WACC)^{0.5}+FCF_2/(1+WACC)^{1.5}+\ldots+FCF_n/(1+WACC)^{n-0.5}$ + terminal value/$(1+WACC)^5$ =$ 13,338 million (terminal multiple method)

The implied equity value is then calculated by subtracting total debt by adding cash and cash equivalents to the enterprise value:

Exhibit 24 Implied equity value

enterprise value – debt + cash = $13,186 million

Then, the implied share price can be calculated by dividing the company's outstanding shares:

Exhibit 25 Implied share price

implied equity / outstanding shares = $13,325.7 million/ 448 .4 million = $29.4

Table 11

Income Statement （$'000)	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E	2024E
Revenue	4,833,338	4,989,244	5,193,185	5,400,912	5,616,949	5,841,627	6,133,708	6,440,394	6,826,817
growth rate(%)	21.74%	3.23%	4.09%	4.00%	4.00%	4.00%	5.00%	5.00%	6.00%
COGS	(2,584,724)	(2,737,830)	(2,852,714)	(2,970,502)	(3,033,152)	(3,096,062)	(3,189,528)	(3,284,601)	(3,413,409)
-as of revenue(%)	53.5%	54.9%	54.9%	55.0%	54.0%	53.0%	52.0%	51.0%	50.0%
Gross Profit	2,248,614	2,251,414	2,340,471	2,430,411	2,583,796	2,745,565	2,944,180	3,155,793	3,413,409
Gross Margin (%)	46.5%	45.1%	45.1%	45.0%	46.0%	47.0%	48.0%	49.0%	50.0%
Unusual expense		(124,049)	(183,149)						
SG&A Expense	(1,831,143)	(2,099,522)	(2,182,339)	(2,268,383)	(2,302,949)	(2,395,067)	(2,514,820)	(2,576,157)	(2,730,727)
- as of revenue (%)	37.9%	42.1%	42.0%	42.0%	41.0%	41.0%	41.0%	40.0%	40.0%
Income from Operation	417,471	27,843	(25,017)	162,027	280,847	350,498	429,360	579,635	682,682
Operating Margin(%)	8.6%	0.6%	-0.5%	3.0%	5.0%	6.0%	7.0%	9.0%	10.0%
EBITDA	562,241	201,590	156,751	351,059	477,441	554,955	644,039	805,049	921,620
Interest Expense	(26,434)	(34,538)	(33,568)	(31,000)	(31,000)	(31,000)	(31,000)	(31,000)	(31,000)
Other Expense	(2,755)	(3,614)	(9,203)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)
Income before Tax	388,282	(10,309)	(67,788)	126,027	244,847	314,498	393,360	543,635	646,682
Income tax expense (benefit)	(131,303)	(37,951)	20,552	26,466	51,418	66,044	82,606	114,163	135,803
Tax rate,%	33.8%	N/A	30.3%	21.0%	21.0%	21.0%	21.0%	21.0%	21.0%
Net Income	256,979	(48,260)	(46,302)	152,493	296,265	380,542	475,965	657,799	782,485
+ D&A	144,770	173,747	181,768	189,032	196,593	204,457	214,680	225,414	238,939
- Capex	387,621	282,987	174,982	189,032	196,593	204,457	214,680	225,414	238,939
- as of revenue (%)	8.02%	5.67%	3.37%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
- Change in NWC	259,384	(2,033)	347	300	300	300	300	300	300
Unleveled FCF	(245,256)	(155,467)	(39,863)	152,193	295,965	380,242	475,665	657,499	782,185
discounted period					0.5	1.5	2.5	3.5	4.5
discounted factor					0.96	0.90	0.83	0.77	0.72
discounted cash flow				152,193	285,348	340,771	396,253	509,137	563,012
WACC	7.58%								
Exit multiple of EV/EBITDA	17.56								
Terminal Value	15,983,000								
Discounted Cash Flow	**13,338,478**								
- STD+LTD @12/31/2018	729,000								
+ cash & cash equivalent @12/31/2018	577,000								
implied equity value	**13,186,478**								
shares outstanding @12/31/2018	448,370								
implied share price	**$29.4**								
close price @ 07/18/2019	**$23.91**								
perpetuity growth rate	**2.50%**								

The calculated target price from the DCF analysis is $29.94 per share. The valuation obtained from the multiples method approach suggests that UA’s price/share range from $27.8 to $35.90. This justifies that my result I obtained from DCF analysis is reasonable and validates my target price.

Since I used data from the 10-k report, I can compare what I calculated as the fair value with UA’s stock price on the market. When compared to the stock price of December 31st, my target price suggest that UA’s stock is undervalued by $12.27. Since the end of 2018, the stock price for UA has increased by 60% which further justifies my fair value. Therefore with my fair value of $29. 4, I believe that the company is undervalued and still has opportunity to grow.

Can UA continue to Gain Market Share from Nike and Adidas?

The purpose of the financial analysis was to see if UA has potential to grow its market share. The stock of UA was beat hard in 2017-2018, as share price fell 34% from $27 to $17.67 by the end of 2018. Since the beginning of 2019, the share price has raised 48% to $23.9 (07/18/2019), significantly outperforming S&P500 and competitor Nike, which increased 18.7% and 16.7% respectively. It looks like investors started to realize the share price maybe under-valued and became more optimistic about the company's turnaround story. Although the stock has raised 48% so far this year, I think there is still about 20% -30% room to rise, as indicated by the fair price I calculated.

Figure 5. Year-to-date stock price of UA, comparing with S&P500 and Nike

- *From Yahoo finance*

After a thorough investigation of the industry and analysis of the company's business, accounting, and financials, I believe that UA will continue to grow and expand its market share.

UA is a company that continually focuses on innovation. Acquiring the fitness companies in 2015 shows that they are stepping away from becoming just a clothing company, implementing technology in shoes shows that they want to bring something new to consumers. The biggest opportunity for UA would be international sales as their North America sales stagnant. The strategy expanding international markets looks being paid off as the increase of international sales fill the gap caused by the drop of domestic sales in recent years, and the international markets has become the main engine driving the revenue growth. The business analysis suggests that the footwear business for UA is going to grow even more, despite doubts on sales of Curry. UA realized its core issue, inventory problem, which has negatively impacted the company's performance since 2016. In the past two years, the company has spent huge efforts to solve this problem, and significant progress has been made, which makes the future of turn around looks more encouraging. Finally, even though there has not been a decrease to UA's advertising cost, its restructure plan effort lead to a overall decrease in SG&A. To conclude, UA has been through its hardest times in the past two years and is starting to make a comeback.

The financial analysis suggest that as long as UA keeps on growing and expanding their business, it will be successful. With a target share price of $29.4, I believe that UA is undervalued and has opportunity to grow. For this reason I believe that UA still has potential to grow and gain market share.

The industry analysis suggests that UA operates under an extremely competitive industry and it will have a hard time to gain market share. As UA established itself as a performance brand, it will struggle to compete with big competitors. This may be right, but the company has shown the capability to develop new innovative products to compete with competitors. One example is the HOVR shoes, the company delivered more than 12 styles of HOVR across run, sports style, basketball and golf [(15)]. HOVR Infinite running shoe was featured as the top pick by both Outside and Women's Running magazines and Runner's World featured the shoe on the cover of its spring 2019 shoe guide with the coveted Recommended Award [(15)].

Another growing sector of the company is its digital business, which has seen significant growth over the past quarters. As mentioned in the 1Q 2019 report " We're also continuing to build momentum in our digital business as we move to more aggressively integrate our Connected Fitness community at the intersection of train, compete and recover to connect even more deeply with our consumers".

By operating more effectively across innovation, design, supply chain, marketing and sales, this cohesive effort further empowers the company's ability to reinvest back into its largest long-term growth opportunities, including footwear, women's, direct-to-consumer and its international businesses [(15)]

4.1 Conclusion

Many investors feel pessimistic about the future of UA as they significantly underperformed the market in the past three years. People are skeptical about their turn around story and fears that they will end up like No fear or Converse. The purpose of this paper was to investigate whether UA will continue to gain market share in the sports apparel industry and successfully turn around their business. In attempt to answer this question, I first introduced a basic business analysis of UA. I went to research their main products, business model and strategy of the company. Then I provided an accounting analysis using business metrics and graphs to fully analyze UA in recent years. A research on the sports apparel industry was used and comparison between UA and other competitors have been analyzed. Next, I performed financial valuation of the company. The first method used was the multiples method, in which 6 different comparable companies were chosen. Using the median of EV/Revenue and PB ratio, the result yields a target price ranged from $27.80 to $35.90. The second method was the DCF method, in which I showed the details of determining FCF, WACC, TV, and the implied target price. The result from the DCF method was $29.4, which is within the range calculated from the multiples method. My valuation is verified by the stock's performance since the beginning of the year. In conclusion, UA is undervalued and has the potential to grow as it has been turning around their business starting from Q1, 2019. In the long term, I believe that UA will gain market share if they could continue to expand internationally and successfully compete in the industry.

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