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Milan, 8 July 2019

Under Armour

Equity Research

Key points:

Business

The North American sportswear market has grown with a 6,6% 2013-2018 CAGR, but is expected to slow down to a 3,4% 2018-2023 rate. On the other hand, other foreign markets such as the Chinese one are expected to grow at much faster rates.

We see this as a great opportunity for the company, even though there is still much to do since major competitors Nike and Adidas have moved much earlier and already have strong brand recognition and impressive market shares.

Valuation

We approached the DCF asset-side method. We also applied a normalization process, which takes into account the presence of extraordinary items (such as restructuring charges). In this way, it has been possible to determine growth rates that are roughly stable for main accounting values.

In order to check the results deriving from the DCF method, we decided to develop a market multiples analysis. We assessed the appropriateness of the sample by simply analyzing the positioning of selected companies with respect to accounting variables. We observed the market tends to value the levels of ROE and CF/Sales.

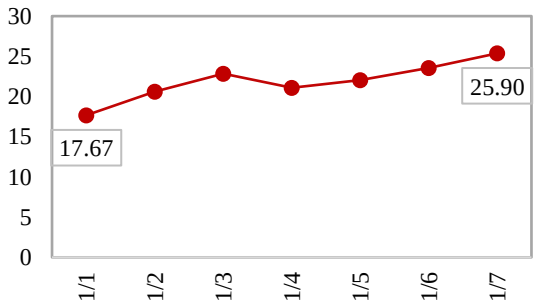
Investment risk

Under Armour shares are up more than 42.33% this year, which has been its best annual performance in five years, and represent the most active stocks based on recent trading volumes. The value in the stock is based on the future opportunity in the premium global athletic apparel and footwear sector.

Under Armour (UAA)
NYSE - P 25.90, Currency in USD

Price Target: $25.68

Historical Chart – Closing Price



Key Statistics

Sector	Consumer discretionary
Industry	Apparel & Textile Prod.
Full Time Employees	15,000
Volume (65 day avg)	2.4M
Market Cap	$10.745B

Earnings History

	Q3 2018	Q4 2018	Q1 2019	Q2 2019
EPS Est.	0,17	0,22	0,34	0,35
EPS Actual	0,00	0,00	0,00	0,10
Difference	0,17	0,22	0,34	0,25

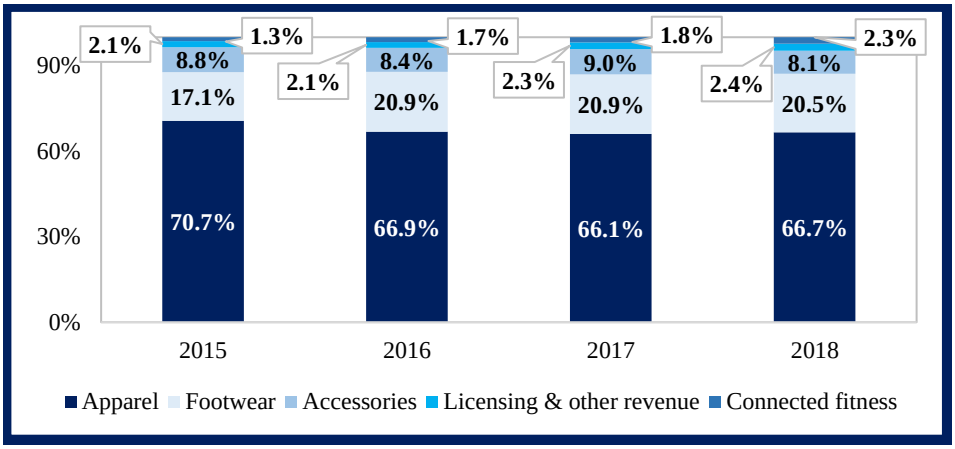
Recommendation: Neutral

We get a target price not far from the market price. Indeed, even assuming lower growth for the company, we do not fall into a too pessimistic scenario. For this reason, we believe that the market correctly prices the company and there would be no price fluctuations at least in the short term.

Business Description

Company Background

Products, revenues and market shares analysis. Under Armour, founded in 1996, develops markets and distributes performance apparel, footwear and accessories.
Most of the company's revenues comes from *apparel* (two thirds of sales in 2018, corresponding to $3,462 billions). Under Armour offers a wide variety of apparels, among which there are both tops (hoodies, jackets, polos etc.) and bottoms (shorts, trousers, leggings ecc.). The company's offering covers many sports and outdoor activities but it also includes everyday clothing targeted for active lifestyle consumers. Performance fabrics are used, in order to guarantee comfort, mobility and body temperature regulation (for example through the proprietary HEATGEAR® and COLDGEAR® technologies): the company wants to communicate the message that its products are technically superior.



Source: Under Armour.

According to Passport-Euromonitor data, UA's market share worldwide in the apparel segment is 0,4%. In the US, the company's main market, it is higher, reaching 1,4%. Close competitors Nike, Adidas and Lululemon's 2018 market shares were respectively 2,5%, 1% and 0,8%. The US market is extremely fragmented, with Nike being the single brand with the highest market share, and its size in 2018 was $284 billions.

Apparel market shares	2013	2014	2015	2016	2017	2018
USA	1%	1,2%	1,4%	1,5%	1,4%	1,4%
World	0,2%	0,3%	0,4%	0,4%	0,4%	0,4%

Source: Passport. Data referred to the Retail Selling Price.

As for *footwear*, the company's footwear offerings include running, basketball, cleated, slides and performance training and outdoor footwear. The performance attributes are stressed also in this case (light and breathable shoes). Some of UA's footwear technologies are HOVR, Clutch Fit® and Charged Cushioning®, which provide "*stabilization, directional cushioning and moisture management engineered to maximize the athlete's comfort and control*".

Similarly to Nike and Adidas, the company offers a collection of signature basketball shoes in partnership with NBA stars (in this case Steph Curry), even though UA's pricing power seems inferior (see the "Industry trends" section). Also in this segment, UA is stronger in the United States, as shown by market shares data. The US market is about $75 blns.

Footwear market shares	2013	2014	2015	2016	2017	2018
USA	0,6%	0,9%	1,3%	1,4%	1,3%	1,3%
World	0,1%	0,2%	0,3%	0,5%	0,4%	0,4%

Source: Passport. Data referred to the Retail Selling Price.

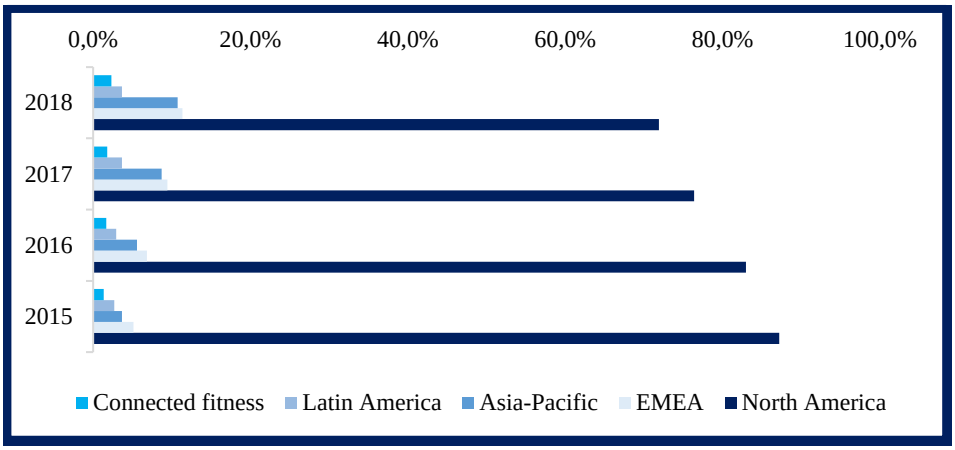
The Passport database also gives us some insight on the "crossover" *sportswear* market, which comprises sports garments that are already in the apparel/footwear categories. Given UA's main focus on products created for athletes, we deem such analysis useful.
In this market the company's share is much higher, both in the US and worldwide. UA is third in terms of market share in the US, a $117 blns market, preceded by the clear leader Nike (18,3%) and by Adidas (6%).

Sportswear market shares	2013	2014	2015	2016	2017	2018
USA	3,6%	4,2%	4,8%	5%	4,5%	4,1%
World	1,3%	1,7%	2,1%	2,4%	2,3%	2,2%

Source: Passport. Data referred to the Retail Selling Price.

The *accessories* category represents 8,1% of 2018 revenues and comprehends products such as backpacks, gym bags, socks, gloves and belts. The *connected fitness* segment, instead, represents about 2% of revenues and is made of digital fitness subscriptions and digital advertising through platforms such as MapMyFitness, MyFitnessPal and Endomondo. The *licensing* segment represents slightly more than 2% of revenues as well ($124,8 millions). Revenues come from licensees who pay to develop UA accessories such as socks, team uniforms and eyewear.

From a geographic standpoint, North America has historically been the company's main market, representing more than 83% of revenues in 2016. Nowadays, however, North American sales have decreased to about 72% of revenues, and have even reduced in absolute terms, from $4 billion to 3,735, while competitors such as Adidas have instead increased their revenues in the same area.
Foreign markets are gaining more and more importance in the revenue mix, also thanks to the constantly growing number of international D2C stores being opened.

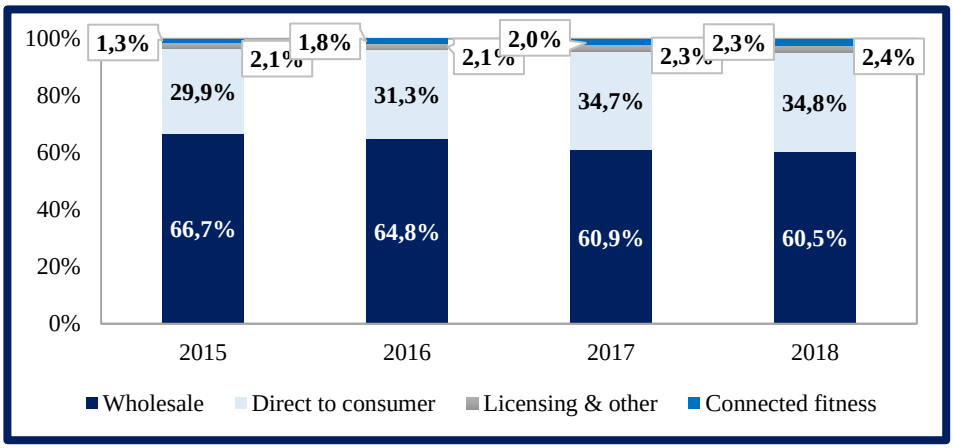


Source: Under Armour.

From product development to distribution. Under Armour's products are developed by ad-hoc **product development** teams using high-quality technical fabrications provided by external suppliers. Since these materials are technically advanced, suppliers are quite concentrated: in 2018, 49% of the fabric used in apparel products came from 5 suppliers, whose main locations were Taiwan, Malaysia, Mexico, Vietnam and Turkey.

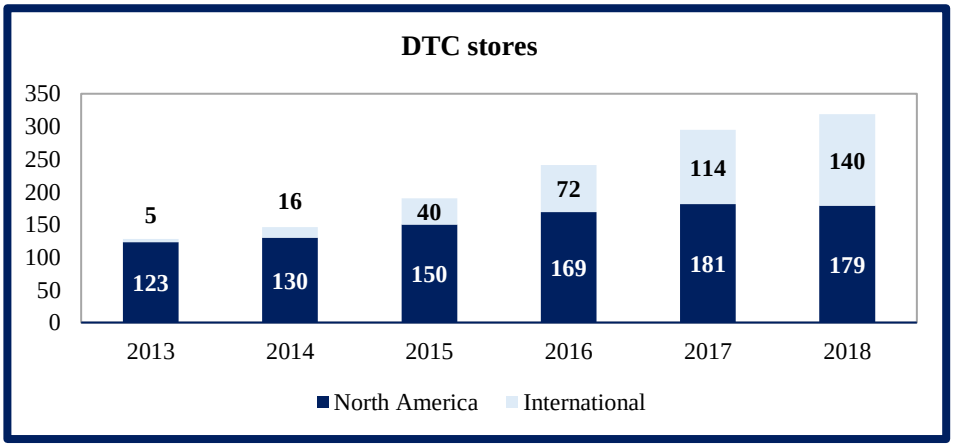
Product development teams work closely with marketing and sales divisions and with partners such as teams and athletes to better understand what consumer needs and trends are.
Production is externalized to unaffiliated manufacturers. The company in 2018 counted on 44 primary manufacturers for apparel and accessories products and on 5 for footwear.

As for **distribution**, the company's two main channels are wholesale and direct-to-consumer. A minor portion of revenues is generated through licensing and connected fitness.



Source: Under Armour.

Direct to consumers stores were 319 at the end of 2018 and are divided in *Factory house stores* and *brand house stores*. The first ones are outlets and are key in the inventory management process since they are used to sell excess, discontinued and out-of-season products. At the same time, in the other distribution channels the company limits discounting and maintains pricing integrity. *Brand house stores* (16 in North America as of Dec. 31st 2018) feature the broadest products choice and, as the same suggests, allow the customer to experience the brand in the best way.



Source: Annual Report 2017, BizJournals.com for 2018 data.

International stores represented only 21% of total DTC stores in 2015, while today they have almost reached North American stores (44% of the total). North American stores have even seen a decrease between 2017 and 2018, while international ones keep growing at a fast pace, another sign of how the company is lowering its dependence on the US market and is trying to expand in other countries (for example, the first Indian store was opened in March). According to the 2018 Annual Report (page 22), all the 319 stores are leased.

As for logistics, the company leases and operates 3 distribution facilities in the US, but mostly relies on third-party providers in other geographic areas.

Marketing and promotion. Under Armour is expanding more and more internationally, both in terms of stores and (as a partial consequence) in terms of revenues.

The marketing and promotion strategy is centered on sponsorships/partnerships/outfitting agreements with high-performing athletes and teams, starting from high-school/college and reaching professional levels. Under Armour wants it products to be seen live, used by the best athletes, in order to pass the message that its products deliver great performance. Some of the most notable partners include Tom Brady (American football), Stephen Curry (basketball), Michael Phelps (swimming), Andy Murray (tennis), Southampton FC, Lindsey Vonn and Marcel Hirscher (skiing). It is also an official supplier of footwear and gloves for the NFL.

The way the products are presented in the stores (also in sporting goods chains such as Dick Sporting Goods, one of UA's major wholesale customers) is peculiar, with a lot of floor space dedicated exclusively to UA and images, walls and lights designed to create an exciting and immersive customer experience. Other promotion channels such as print media and social media are also used.

In foreign countries, UA is pursuing a similar promotion strategy: sponsorships and supply agreements with teams or famous athletes should provide product exposure to broad audiences and accelerate consumers' awareness of the brand.

Industry trends & SWOT analysis

The North American sportswear market (in which Under Armour is strongest) has grown with a 6,6% 2013-2018 CAGR, but is expected to slow down to a 3,4% 2018-2023 rate[1]. On the other hand, other foreign markets such as the Chinese one are expected to grow at much faster rates (7,7% 2018-2023 CAGR). We see this as a great opportunity for the company, even though there is still much to do since, differently from Nike and Adidas, which have moved much earlier and already have impressive market shares, UA's share in China is still not material. By taking a look at UA's sponsorships, we notice how it particularly strong in American Football, but much less in other international sports in which Nike and Adidas have many more sponsorships with famous athletes. In particular, UA seems to be particularly weak in soccer, with the only notable sponsorship being Southampton FC. Just to name a few, Nike sponsors Neymar, Cristiano Ronaldo and Sergio Ramos; Adidas-backed athletes include Paul Pogba, Iker Casillas and Thomas Müller.

[1] Source: Minerva elaboration based on Euromonitor Passport's data. We focus on the sportswear category since it is the most relevant to what UA produces and includes the most similar competitors.

By analyzing prices of the NBA-stars sponsored shoes, the Steph Curry 6 is currently sold on the US website for $130 ($160 for the customizable ICON version), and it is the most expensive pair of shoes excluding the ones with the HOVR™ technology[2]. Nike's LeBron 16's base price is $185, with the Glow version reaching $200; Adidas' Harden Vol. 3 is slightly above Under Armour's pair ($140). Also when it comes to running shoes, no UA pair costs more than $150, while many Adidas pairs easily cost more than that (the Alphaedge 4D, for example, is priced at $300). Nike offers many models in the $170-180 range, with the Vaporfly 4% Flyknit being the most expensive ($250). We see this pricing gap as a weakness of Under Armour.

Strenghts	Weaknesses
Performance-oriented products Omni-channeling (wholesale, D2C, online)	Low pricing power in footwear (Nike and Adidas are much stronger) Weak turnover and liquidity ratios compared to competitors The Under Armour brand is relatively unknown in major markets such as Europe and Asia
Opportunities	**Threats**
Chinese market expected to grow	Weakness in U.S. physical retail

[2] Sources: www.underarmour.com, store.nike.com, www.adidas.com. Retrieved on June 29th 2019.

Financial Analysis

Reclassified Annual Statements

Cash Flow Statement	2013	2014	2015	2016	2017	2018
Earnings Before Interest and Taxes	$265,098	$353,955	$408,547	$417,471	$183,039	$225,860
Effective Tax Rate (%)	*38%*	*39%*	*40%*	*34%*	*0%*	*0%*
NOPAT	164,883	215,182	245,722	276,297	183,039	225,860
D&A	50,549	72,100	100,940	144,770	173,747	181,768
as % of Revenues	*2.2%*	*2.3%*	*2.5%*	*3.0%*	*3.5%*	*3.5%*
Monetary Income	$215,432	$287,282	$346,662	$421,067	$356,786	$407,628
Change in NOWC	113,729	78,663	364,838	98,473	-11,478	-139,526
as % of Revenues	*1.8%*	*-1.4%*	*5.9%*	*-1.7%*	*-0.8%*	*-3.4%*
Operating Cash Flow	**$101,703**	**$208,619**	**-$18,176**	**$322,594**	**$368,264**	**$547,154**
CAPEX	87,830	140,528	298,928	386,746	281,339	170,385
as % of Revenues	*3.8%*	*4.6%*	*7.5%*	*8.0%*	*5.6%*	*3.3%*
Free Cash Flow from Operations	**$13,873**	**$68,091**	**-$317,104**	**-$64,152**	**$86,925**	**$376,769**

Income Statement	2013	2014	2015	2016	2017	2018
Net Revenues	$2,332,051	$3,084,370	$3,963,313	$4,833,338	$4,989,244	$5,193,185
growth rate	27.1%	32.3%	28.5%	22.0%	3.2%	4.1%
Cost of Goods Sold	1,195,381	1,572,164	2,057,766	2,584,724	2,706,683	2,784,986
as % of Revenues	*51,3%*	*51,0%*	*51,9%*	*53,5%*	*54,3%*	*53,6%*
Gross Profit	1,136,670	1,512,206	1,905,547	2,248,614	2,282,561	2,408,199
as % of Revenues	*48.7%*	*49.0%*	*48.1%*	*46.5%*	*45.7%*	*46.4%*
growth rate	1,7%	0,6%	-1,9%	-3,2%	-1,7%	1,4%
SG&A	871,572	1,158,251	1,497,000	1,831,143	2,099,522	2,182,339
as % of Revenues	*37.4%*	*37.6%*	*37.8%*	*37.9%*	*42.1%*	*42.0%*
Earnings Before Interest and Taxes	**265,098**	**353,955**	**408,547**	**417,471**	**183,039**	**225,860**
as % of Revenues	*11.4%*	*11.5%*	*10.3%*	*8.6%*	*3.7%*	*4.3%*
Net Interest Expense	2,933	5,335	14,628	26,434	34,538	33,568
Earnings Bef. Int., Tax. & Un. It.	**262,165**	**348,620**	**393,919**	**391,037**	**148,501**	**192,292**
growth rate	28.8%	33.0%	13.0%	-0.7%	-62.0%	29.5%
Unusual P/L	-1,172	-6,410	-7,234	-2,755	-158,810	-259,145
EBT	**260,993**	**342,210**	**386,685**	**388,282**	**-10,309**	**-66,853**
Income Tax Expense	98,663	134,168	154,112	131,303	37,951	-20,552
Net Income	**$162,330**	**$208,042**	**$232,573**	**$256,979**	**-$48,260**	**-$46,301**

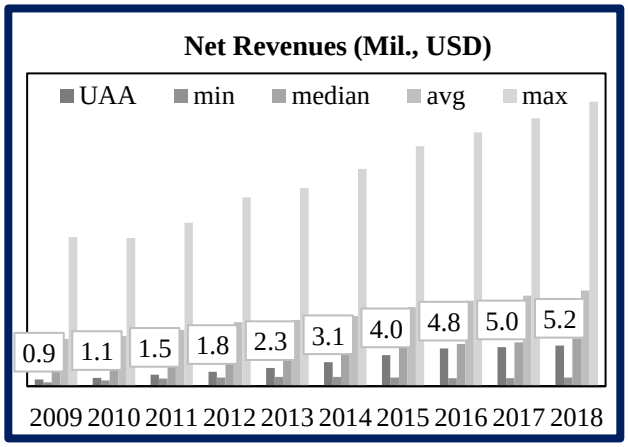
Balance Sheet	2013	2014	2015	2016	2017	2018
Current Operating Assets	**742,945**	**903,726**	**1,368,911**	**1,714,683**	**2,025,197**	**2,036,225**
Accounts Receivable	209,952	279,835	433,638	622,685	609,670	652,546
as % of Revenues	*9.0%*	*9.1%*	*10.9%*	*12.9%*	*12.2%*	*12.6%*
Inventories	469,006	536,714	783,031	917,491	1,158,548	1,019,496
as % of COGS	*39.2%*	*34.1%*	*38.1%*	*35.5%*	*42.8%*	*36.6%*
Other Current Assets	63,987	87,177	152,242	174,507	256,978	364,183
Current Operating Liabilities	**301,993**	**374,514**	**439,521**	**659,181**	**987,878**	**1,386,897**
Accounts Payable	165,456	210,432	200,460	409,679	561,108	560,884
as % of Revenues	*13.8%*	*13.4%*	*9.7%*	*15.9%*	*20.7%*	*20.1%*
Accrued Expenses	133,729	147,681	192,935	208,750	296,841	340,415
Other Operating Liabilities	2,808	16,401	46,126	40,752	129,929	485,598
(Long-term Operating Liabilities)	*49,806*	*67,906*	*94,868*	*137,227*	*162,304*	*208,340*
Net Operating Working Capital	**$379,773**	**$458,436**	**$823,274**	**$921,747**	**$910,269**	**$770,743**
as % of Revenues	*16,3%*	*14,9%*	*20,8%*	*19,1%*	*18,2%*	*14,8%*
Non Current Operating Assets	**370,293**	**455,050**	**1,199,398**	**1,432,112**	**1,488,443**	**1,415,155**
Property and Equipment	223,952	305,564	538,531	804,211	885,774	826,868
Intangible Assets	146,341	149,486	660,867	627,901	602,669	588,287
Net Operating Invested Capital	**$750,066**	**$913,486**	**$2,022,672**	**$2,353,859**	**$2,398,712**	**$2,185,898**
Other Long-term Assets	47,543	57,064	75,652	110,204	97,444	123,819
Net Financial Position	**-$194,566**	**-$308,974**	**$536,218**	**$566,918**	**$604,563**	**$171,431**
Revolving Credit Facility	100,000	0	0	0	125,000	0
Long-term Debt	52,923	284,201	666,070	817,388	792,046	728,834
(Current matuirities)	*4,972*	*28,951*	*42,000*	*27,000*	*27,000*	*25,000*
Cash and Cash Equivalents	347,489	593,175	129,852	250,470	312,483	557,403
Total Stockholders' Equity	**$1,053,354**	**$1,350,300**	**$1,668,222**	**$2,030,900**	**$2,018,642**	**$2,016,871**

Forecasts

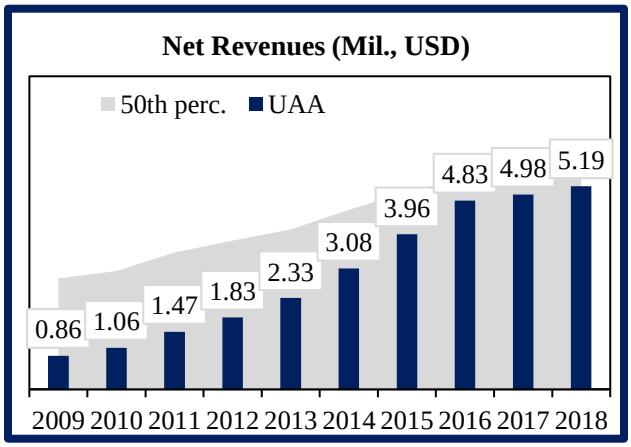
In terms of net revenues, Under Armour is a growing company (please, see the table below). The firm shows a quite high 10-year CAGR and **one of the highest in the industry (19.7%).** Of the selected competitors, Under Armour is not far from Lululemon (at the top of this short-list); in addition, it is growing much more than its much larger and more mature comparable.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	CAGR 10Y
NKE.N	19.083	18.963	20.892	24.123	25.313	27.799	30.696	32.464	34.254	36.397	6,7%
DECK.N	813	1.001	1.377	1.414	1.557	1.179	1.817	1.875	1.790	1.903	8,9%
ADSGn.DE	10.381	11.990	13.344	14.883	14.492	14.534	16.915	19.291	21.218	21.915	7,8%
CROX.OQ	646	790	1.001	1.123	1.193	1.198	1.091	1.036	1.024	1.088	5,4%
LULU.OQ	507	733	987	1.375	1.671	2.012	2.674	3.080	3.415	4.296	23,8%
FL.N	4.854	5.049	5.623	6.182	6.505	7.151	7.412	7.766	7.782	7.939	5,0%
UAA	**856**	**1.064**	**1.473**	**1.835**	**2.332**	**3.084**	**3.963**	**4.825**	**4.977**	**5.193**	**19,7%**

However, in absolute terms, the size of net sales is well below that of the giants in this industry, such as Nike. **The amount of sales was always below the industry average and median**, but Under Armour never represented the minimum in the short-list provided in this report (please, see the chart).



According to the guidance, we expected revenues to return to a low double-digit growth rate by 2023. Given the aforementioned positioning of the firm, we are **slightly less optimistic**. We forecast two scenarios: firstly, we assume 9.6 per cent revenue growth for the next 5 years; this is the average 10-year CAGR of the short-list of comparable companies, and seems a reasonable value given the aforementioned high growth rates in the Chinese market. Secondly, we suppose a prototype of worst-case scenario where revenues may grow by 5 per cent. This latter value is the minimum 10-year CAGR of our sample.



Scenario 1: Net Revenues Growth Rate 9.6%

Forecasts	FY 2018	2019E	2020E	2021E	2022E	2023E
Net Revenues	$5.193.185	$5.691.174	$6.236.916	$6.834.991	$7.490.417	$8.208.693
Cost of Goods Sold	2.784.986	2.965.623	3.250.005	3.561.656	3.903.193	4.277.481
Gross Profit	2.408.199	2.725.551	2.986.911	3.273.334	3.587.223	3.931.212
SG&A	2.182.339	2.197.694	2.408.437	2.639.388	2.892.487	3.169.855
EBIT	225.860	527.857	578.474	633.946	694.737	761.357
Net Interest Expense	33.568	20.389	22.344	24.487	26.835	29.408
EBT	-66.853	507.468	556.130	609.459	667.902	731.949
Income Tax Expense	-20.552	155.264	170.153	186.469	204.350	223.946
Net Income	-46.301	352.204	385.977	422.990	463.551	508.003
Accounts Receivable	652.546	593.073	649.944	712.269	780.571	855.422
Inventories	1.019.496	1.115.964	1.222.976	1.340.251	1.468.771	1.609.616
Accounts Payable	560.884	872.600	956.277	1.047.976	1.148.470	1.258.600
Accrued Expenses	340.415	293.163	321.275	352.083	385.845	422.844
Non Current Operating Assets	1.415.155	1.621.672	1.847.993	2.096.016	2.367.823	2.665.695

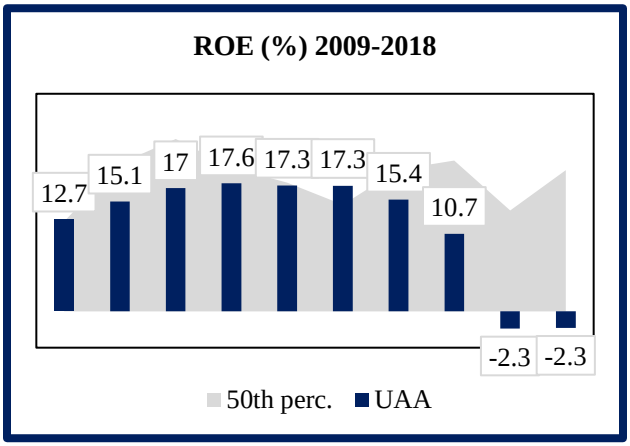
Scenario 2: Net Revenues Growth Rate 5.0%

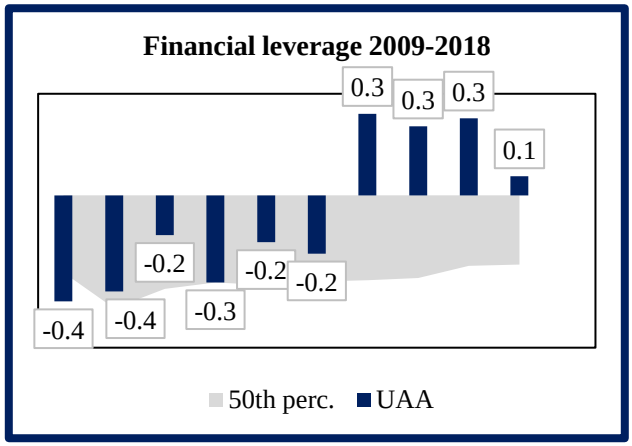
Forecasts	FY 2018	2019E	2020E	2021E	2022E	2023E
Net Revenues	$5.193.185	$5.455.071	$5.730.163	$6.019.128	$6.322.665	$6.641.510
Cost of Goods Sold	2.784.986	2.842.592	2.985.940	3.136.517	3.294.688	3.460.835
Gross Profit	2.408.199	2.612.479	2.744.223	2.882.611	3.027.978	3.180.675
SG&A	2.182.339	2.106.521	2.212.750	2.324.336	2.441.550	2.564.674
EBIT	225.860	505.958	531.473	558.275	586.428	616.000
Net Interest Expense	33.568	19.543	20.529	21.564	22.651	23.794
EBT	-66.853	486.415	510.944	536.711	563.776	592.207
Income Tax Expense	-20.552	148.823	156.328	164.211	172.492	181.191
Net Income	-46.301	337.592	354.617	372.499	391.284	411.016
Accounts Receivable	652.546	568.469	597.136	627.249	658.880	692.107
Inventories	1.019.496	1.069.667	1.123.609	1.180.271	1.239.791	1.302.312
Accounts Payable	560.884	836.400	878.579	922.884	969.424	1.018.311
Accrued Expenses	340.415	281.000	295.171	310.056	325.692	342.116
Non Current Operating Assets	1.415.155	1.613.105	1.821.037	2.039.455	2.268.887	2.509.890

Financial Ratios

Financial Ratios	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Return On Invested Capital (%)	43,3	43,6	35,9	46,2	35,3	38,7	20,2	17,7	7,6	10,3
ROS (%)	5,5%	6,4%	6,6%	7,0%	7,0%	6,7%	5,9%	5,3%	-1,0%	-0,9%
Profit Margin (%)	10,0%	10,6%	11,1%	11,4%	11,4%	11,5%	10,3%	8,6%	3,7%	4,3%
Gross Margin (%)	48,2%	49,9%	48,4%	47,9%	48,7%	49,0%	48,1%	46,5%	45,7%	46,4%
Return On Assets (%)	25,7	25,8	22,9	27,1	22,8	25,0	15,5	12,8	5,1	6,3
Days In Inventory	121	145	154	120	141	123	137	128	154	132
Days Sales Outstanding	33	35	33	34	32	33	39	46	44	45
Days Payable Outstanding	56	57	48	54	50	48	35	57	75	73
CAPEX/D&A	0,70	0,96	1,55	1,18	1,74	1,95	2,96	2,67	1,62	0,94
Cash Cycle (days)	98	123	139	101	124	107	141	117	123	105
Liquidity Ratio (x)	2,4	2,2	1,8	2,3	1,9	2,4	1,4	1,4	1,1	1,3
Financial Leverage (%)	-41,8	-37,8	-15,3	-34,3	-18,5	-22,9	32,1	27,9	29,9	8,5
Equity Ratio (x)	2,0	1,9	1,4	1,8	1,4	1,5	0,8	0,9	0,8	0,9

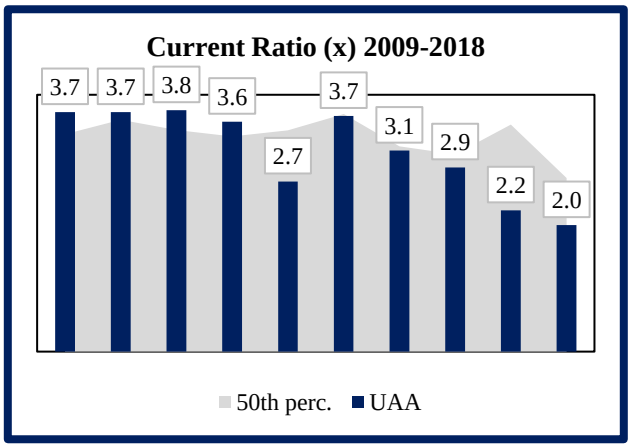
Profitability. The ROIC follows a decreasing trend. We find a slight recovery only in the last fiscal year from 7.6 to 10.3 per cent. The sharp fall of ROIC in the last two years is due to sustained **restructuring charges**, which depressed the operating income. In order to neutralize the effect of these extraordinary items, we purified EBIT **to account only for recurring items**. For the same reason, we find a negative ROS in the last two years, but we computed this considering only the raw EBIT, as reported in the Income Statement. The same considerations also apply to other profitability ratios such as ROE.





Efficiency. On the other hand, **the cash cycle increased over the years** due to more favorable payment terms from suppliers. This effect prevailed over the more extended collection times and stock inventory times. In addition, the capital expenditure clearly slowed down relative to D&A in the last year. This ratio may signal a **slowdown in long-term investments**, which are needed to drive product innovation and strengthen the brand another reason to be cautious about Under Armour. Flip side is that the leverage returned to much more sustainable levels. Indeed, the main comparable companies show a **negative net financial position** (please, see the chart above).

Liquidity. In terms of liquidity, the situation looks good. The liquidity ratio has always been **greater than one over the last 10 years**. However, looking at the current ratio, Under Armour has not outperformed the median of the comparable companies for the last three years. This fact surprises us, since cash and cash equivalents accounted for **10 percent of net revenues** in the last year compared to 7 percent for 2017.



Valuation

Free Cash Flow from Operations Approach

In order to perform an appropriate company valuation, we approached the DCF asset-side method. However, for seek of completeness, in the following section we also performed the company valuation through the analysis of market multiples.

The **operating cash flows** were determined starting from a **normalized operating income** calculated for the last ten years. The normalization process has taken into account the presence of **extraordinary items** (mainly restructuring charges and impairment process) in order to neutralize earnings management policies. In this way, it has been possible to determine growth rates that are **roughly stable** for main accounting values (please, see the following table). We considered historical **10-year growth rates** to be appropriate to provide a forecast for the next 5 years.

Income Statement	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
Cost of Goods Sold	51,8%	50,1%	51,6%	52,1%	51,3%	51,0%	51,9%	53,5%	54,3%	53,6%	52,1%
SG&A	38,3%	39,3%	37,4%	36,5%	37,4%	37,6%	37,8%	37,9%	42,1%	42,0%	38,6%
D&A	3,3%	2,9%	2,5%	2,3%	2,2%	2,3%	2,5%	3,0%	3,5%	3,5%	2,8%
Net Interest Expense	0,3%	0,2%	0,3%	0,3%	0,1%	0,2%	0,4%	0,5%	0,7%	0,6%	0,4%

Balance Sheet	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
Accounts Receivable	9,3%	9,6%	9,1%	9,6%	9,0%	9,1%	10,9%	12,9%	12,2%	12,6%	10,4%
Inventories	33,5%	40,4%	42,7%	33,4%	39,2%	34,1%	38,1%	35,5%	42,8%	36,6%	37,6%
Accounts Payable	15,5%	15,9%	13,2%	15,0%	13,8%	13,4%	9,7%	15,9%	20,7%	20,1%	15,3%
Accrued Expenses	4,8%	5,2%	4,7%	4,6%	5,7%	4,8%	4,9%	4,3%	5,9%	6,6%	5,2%
CAPEX	2,3%	2,8%	3,8%	2,8%	3,8%	4,6%	7,5%	8,0%	5,6%	3,3%	4,5%

We calculated the Free Cash Flow from Operations taking as discount factor the weighted average cost of capital; the terminal value (TV) has been computed using the traditional formula (i.e. the PV of a growing perpetuity). The equity value is the sum of PV of FCFO and PV of TV. We show our results in line with the forecasts outlined above (please, see our forecast section).

Scenario 1: Net Revenues Growth Rate 9.6%

Forecasts	FY 2018	2019E	2020E	2021E	2022E	2023E
NOPAT	225.860	366.355	401.485	439.985	482.176	528.413
D&A	181.768	159.837	175.164	191.961	210.369	230.542
Monetary Income	407.628	526.192	576.650	631.946	692.545	758.955
Change in NOWC	-139.526	-227.469	52.096	57.092	62.566	68.566
Operating Cash Flow	547.154	753.661	524.554	574.855	629.979	690.389
CAPEX	170.385	253.364	277.659	304.285	333.463	365.440
Free Cash Flow from Operations	$376.769	$500.298	$246.895	$270.570	$296.516	$324.949

Scenario 2: Net Revenues Growth Rate 5.0%

Forecasts	FY 2018	2019E	2020E	2021E	2022E	2023E
NOPAT	225,860	351,156	368,864	387,466	407,005	427,530
D&A	181,768	153,206	160,932	169,048	177,573	186,528
Monetary Income	407,628	504,362	529,797	556,514	584,578	614,057
Change in NOWC	-139,526	-250,008	26,260	27,584	28,975	30,437
Operating Cash Flow	547,154	754,370	503,537	528,929	555,603	583,621
CAPEX	170,385	242,853	255,099	267,964	281,477	295,671
Free Cash Flow from Operations	$376,769	$511,517	$248,437	$260,966	$274,126	$287,950

We computed the weighted average cost of capital using the traditional approach. The cost of debt takes into account a spread adjustment based on the interest coverage ratio presented by the firm (by using Damodaran approach). Then, in order to compute the cost of equity, the CAPM formula requires in addition to the risk-free rate (that we chose as the average of Treasury 10 Year Government Bond) also a Re-levered Beta and a market risk premium (MRP).

WACC calculations	
Risk Free Rate (T-bill 10y - avg 2019)	2.70%
Spread on debt	1.00%
Cost of Debt	3.70%
Risk Free Rate (T-bill 10y - avg 2019)	2.70%
Unlevered Beta (Industry average)	0.97
Leverage	8.50%
Re-Levered Beta	1.03
Market Risk Premium	5.60%
Cost of Equity (Levered)	8.46%
Tax Rate	27.50%
WACC	8.00%

We summarized our results in the following tables. You noticed a target price not far from the market price. Indeed, even assuming lower growth for the company, we do not fall into a too pessimistic scenario. For this reason, we believe that the market is correctly pricing the company and there are no fluctuations at least in the short term, neither downward nor upward. Our recommendation is to **stay neutral** on Under Armour.

Valuation Scenario 1	2019E	2020E	2021E	20211E	2023E	TV
FCFO	$500,298	$246,895	$270,570	$296,516	$324,949	$9,880,209
Discounted CFs	463,225	245,323	270,431	296,503	324,948	

Valuation Scenario 2	2019E	2020E	2021E	20211E	2023E	TV
FCFO	$511,517	$248,437	$260,966	$274,126	$287,950	$8,531,887
Discounted CFs	473,613	246,856	260,832	274,115	287,949	

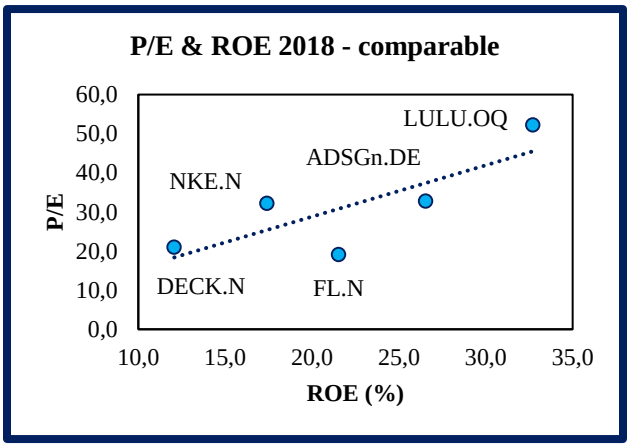
Summary Scenario 1	DCF asset-side
Enterprise value	11,480,640
(Net debt)	151,900
Surplus assets	123,819
(Minorities)	0
Equity value	11,452,559
Number of shares (NOSH)	445,810
Equity value per share ($)	25.7
Current stock price	25.9

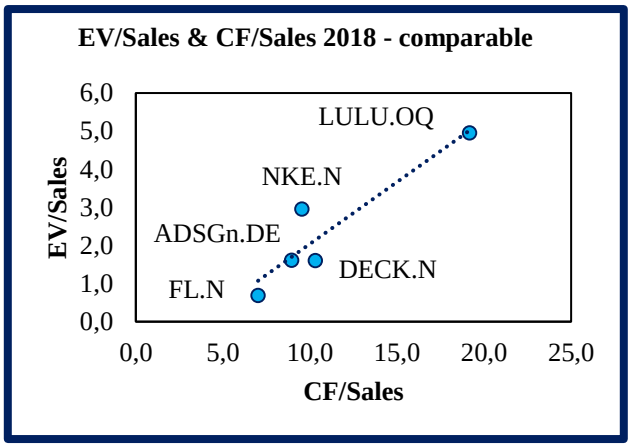
Summary Scenario 2	DCF asset-side
Enterprise value	10,075,252
(Net debt)	151,900
Surplus assets	123,819
(Minorities)	0
Equity value	10,047,171
Number of shares (NOSH)	445,810
Equity value per share ($)	22.5
Current stock price	25.9

Market Multiples Approach

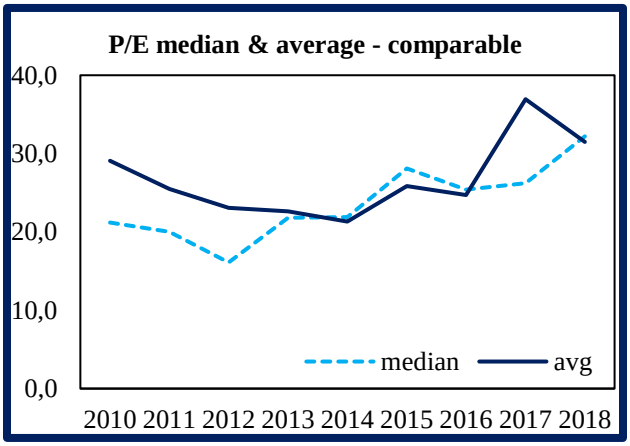
In order to check the results deriving from the DCF method, we decided to develop a market multiples analysis. In accordance with previous sections of this report, we considered *Nike, Deckers Outdoor Corporation, Adidas, Crocs, Lululemon Athletica* and *Foot Locker Inc.*

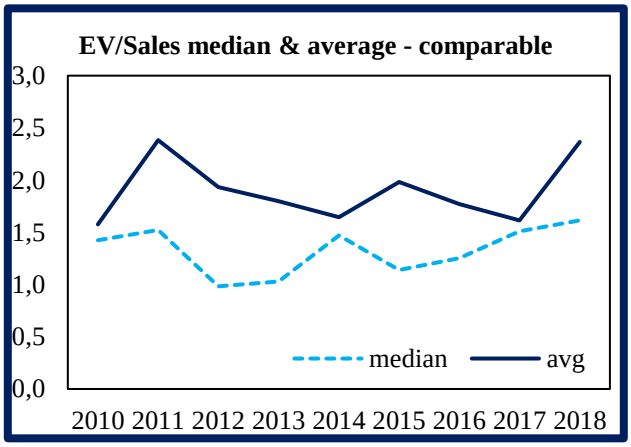
We assessed the appropriateness of the sample by analyzing the positioning of selected companies with respect to accounting variables. We noticed a very high correlation between reported ROE and last values of PE. In addition, we obtain the same result by considering Operating Cash Flow/Sales and last values of EV/Sales. This allows us to give a two-fold conclusion: the comparable companies chosen from the sector are homogeneous, and the market tends to value the levels of ROE and CF/Sales for the said companies.





By analyzing the historical series of the multiples PE and EV/Sales average and median, we do not notice a clear trend for the industry. Let us consider, for example, last two fiscal years where PE increased but EV/Sales simultaneously decreased. On the other hand, we should also remember that EPS has been negative-zero for Under Armour in recent times given the sustaining of massive restructuring costs.





We conducted several analyses to choose the most suitable multiple: for each multiple, we calculated the standard deviation and then, dividing it by the median value, we got the coefficient of variation. This coefficient is a statistical measure of dispersion of values, which gives us a measure of the effectiveness of the multiple for the valuation.

	NKE.N	DECK.N	ADSGn.DE	LULU.OQ	FL.N
P/E	31.5	20.0	32.1	51.1	17.9
P/BV	11.8	3.2	5.8	11.3	2.4
EV/SALES (FWD)	3.0	1.5	1.6	5.0	0.7

Mean	Standard deviation	Deviation coefficient
30.5	13.2	0.43
6.9	4.4	0.64
2.3	1.7	0.71

We remember that Under Armor reported negative earnings in the last two years and then we decided to exclude the price earnings as most suitable multiple; also including EV/Sales forward values, we chose P/BV that has lower deviation coefficient than EV/Sales and we get a fair price of 31. However, EV/Sales signals a fair price of 27 and closer to the current market price, therefore a result more similar to that obtained with DCF.

	P/BV	EV/SALES
Multiple	6.9	2.3
Target Value	4.5	5,193,185
Fair price	31	27

Investment Risk

Under Armour shares are up more than 42.33% this year (from $17.67 to 25.37$), which has been its **best annual performance in five years**, and represent the **most active stocks based on recent trading volumes**.

The value in the stock is based on the future opportunity in the premium global athletic apparel and footwear sector. Under Armour continues to make progress in innovating new products that will return the company to the premium market. The company has drastically improved footwear development. In Q1, footwear's growth posted a remarkable 8%.

In 2010, Under Armour was the Lululemon Athletic before the latter hit the market. Going back to 2015, Under Armour had similar gross margins as Lululemon. However, the two companies have gone in the opposite direction in the last three years. Under Armour has seen their gross margin dip to the 45% range of Nike.

The company has a basic goal of pushing the gross margin up 300 basis points to 48% in 2023. If that happened, Under Armour would close the value gap with Nike and the stock would see a multiple expansion in the range of 150% in order to match Lululemon. However, let us consider this scenario unrealistic; indeed, we are not certain that a hit product from its new lines may provide the juice needed to achieve much higher margins representative of premium brands.