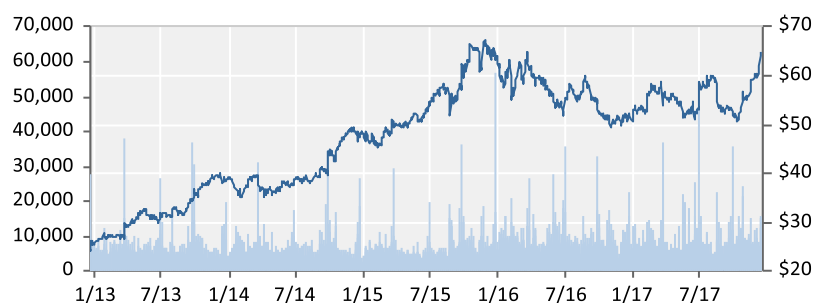


Recommendation	Neutral
Target (today's value)	\$68.00
Current Price	\$68.50
52 week range	\$50.35 - \$68.83

Apparel Retail

Nike Inc.

Share Data	
Ticker:	NKE
Market Cap. (Billion):	\$106.45
Inside Ownership	21.0%
Inst. Ownership	63.4%
Beta	0.95
Dividend Yield	1.23%
Payout Ratio	30.6%
Cons. Long-Term Growth Rate	8.6%



Source: FactSet Prices

	'15	'16	'17	'18E	'19E
Sales (billions)					
Sales	\$30.6	\$32.4	\$34.4	\$36.1	\$38.2
Gr %		5.8%	6.1%	5.1%	5.8%
Cons	-	-	-	\$35.7	\$38.2
EPS					
EPS	\$1.90	\$2.24	\$2.58	\$2.69	\$2.95
Gr %		17.7%	15.4%	4.2%	9.8%
Cons	-	-	-	\$2.32	\$2.66

Summary: I recommend a neutral rating with a target of \$68. Although NKE has a promising strategy to grow its e-commerce sales as well as develop its exposure in China and other emerging markets, I believe that slowing in sales growth in North America and Europe will lead to a lower price.

Key Drivers:

- International expansion: Approximately 54% of NKE's revenue comes from international sales. High growth potential in Asia, especially China, is key to the future sales growth.
- Same store sales and number of locations: Over the course of the past few years, Nike has been increasing its number of stores but failing to grow overall sales by the same rate. This is diluting its same-store-sales while also compressing margins.
- Direct-to-consumer sales: One of NKE's key growth drivers is its strategy to expand its e-commerce business. Online sales currently account for about \$2 billion of overall sales and is expected by management to be \$7 billion by 2020.
- Competition: NKE is under serious pressure from its competitors, especially Adidas. In the current fiscal year in North America, NKE lost about 4% of the athletic footwear market share.

Ratio	'15	'16	'17	'18E	'19E
ROE (%)	27.8%	30.1%	34.4%	34.0%	34.8%
Industry	15.0%	13.1%	13.8%	17.0%	17.3%
NPM (%)	10.7%	11.6%	12.4%	11.9%	12.0%
Industry	5.9%	5.0%	5.1%	6.7%	7.3%
A. T/O	1.50	1.50	1.53	1.51	1.53
ROA (%)	16.3%	17.5%	19.0%	18.0%	18.2%
Industry	16.0%	17.4%	19.0%	17.5%	18.5%
A/E	1.71	1.72	1.81	1.89	1.91

Valuation	'16	'17	'18E	'19E
P/E	26.4	21.6	24.3	20.7
Industry	34.5	39.8	29.6	23.0
P/S	3.10	2.58	2.79	2.60
P/B	7.8	6.7	8.5	5.4
P/CF	30.5	22.2	20.4	18.0
EV/EBITDA	21.1	23.2	20.2	19.1

Performance	Stock	Industry
1 Month	14.4%	13.3%
3 Month	20.3%	-0.2%
YTD	27.5%	-17.6%
52-week	26.3%	-24.7%
3-year	35.8%	-29.5%

Valuation: Using a relative valuation approach, Nike appears to be slightly overvalued in comparison to the retail apparel industry. Due to greater precision of inputs, DCF analysis provides the best way to value the stock. A combination of the approaches suggests that Nike is overvalued, as the stock's value is about \$68 and the shares trade at \$68.50.

Risks: Threats to the business include lack of innovation, foreign currency fluctuations, global economic conditions, seasonality, loss of brand identity, and competition.

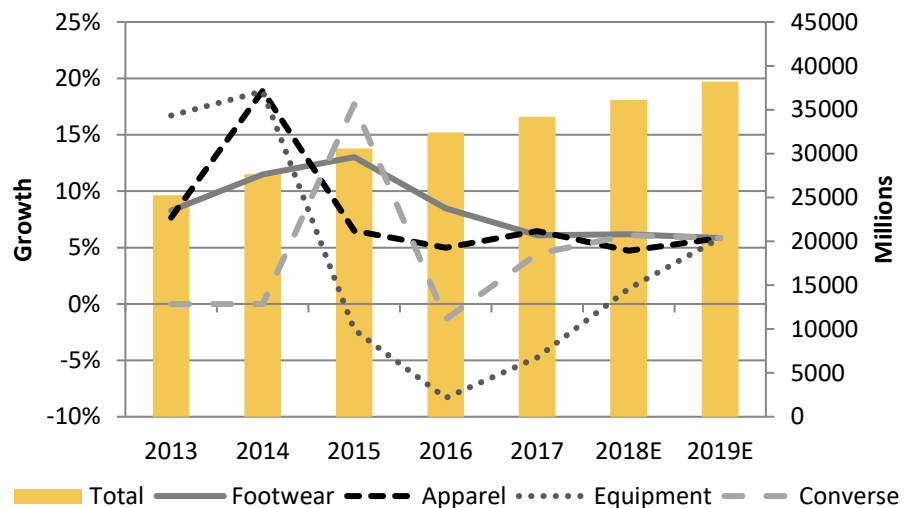
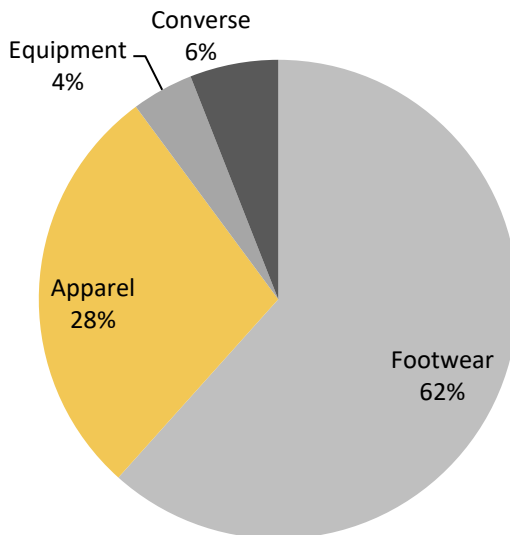
Company Overview

NKE, Inc. (NKE) engages in the design, development, marketing, and sale of sports and lifestyle footwear, apparel, equipment, accessories and services. Nike focuses on Nike Brand and Brand Jordan product offerings in categories such as running, basketball, football, men's training, women's training, Nike sportswear, and action sports. In addition to athletic equipment, its other segments include kids, casual footwear, and apparel. Nike was founded by William Jay Bowerman and Philip H. Knight in 1964 and is headquartered in Beaverton, OR.

Nike is a global company that is expected to generate double international digit revenue growth. It made \$35.4 billion in revenue in FY17 by selling about 75% of its products into wholesale and about 25% into its direct-to-consumer operations. In addition, it owns and operates Jordan Brand, Hurley, and Converse. NKE operates in the following four segments:

- **Footwear:** The firm manufactures a broad range of athletic footwear for running, soccer, football, basketball, baseball, lacrosse, and a mix of other outdoor activities. In addition, Nike also makes a limited amount of casual athletic footwear. Nike's footwear segment accounts for 61% of its revenues. I anticipate this segment to grow about 6% in FY18 after growing from \$14.5 billion in 2013 to \$21 billion in 2017.
- **Apparel:** This segment manufactures and sells a broad range of athletic apparel from socks to t-shirts to golf polos. Nike's apparel segment accounts for 28% of its revenues. I forecast that this segment will grow about 5% in FY18 after growing from \$6.8 billion in 2013 to \$9.6 billion in 2017.
- **Equipment:** Nike sells bags, eyewear, bats, gloves, and other equipment used with sports activities for 6% of its revenues. I expect that this segment will grow about 1.3% in FY18 after growing from \$1.40 billion in 2013 to \$1.43 billion in 2017.
- **Converse:** Designs, distributes, and licenses casual sneakers, apparel, and accessories under the Converse, Chuck Taylor, All Star, One Star, Star Chevron and Jack Purcell trademarks. Converse accounts for roughly 4% of Nike's revenues. I foresee this segment to grow about 5% in FY18 after growing from \$1.68 billion in 2014 to \$2.03 billion in 2017.

Figures 1 and 2: Revenue sources for NKE, (2017) (left) and revenue history since 2013



Source: Company reports

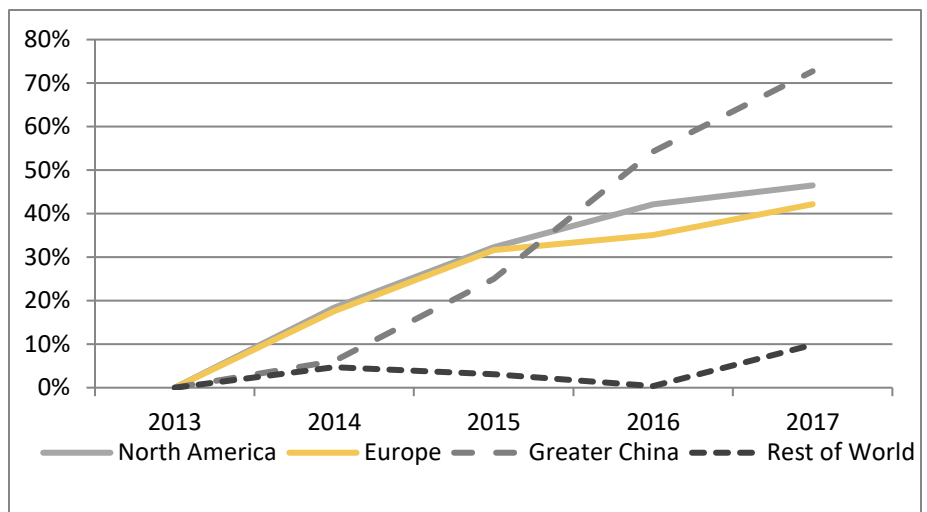
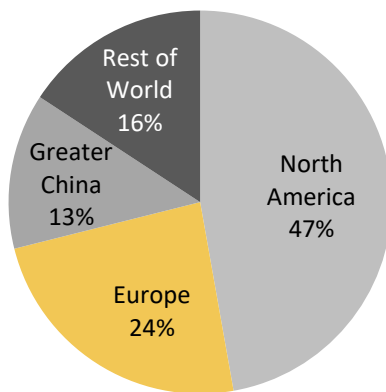
Business/Industry Drivers

Though several factors may contribute to Nike’s future success, the following are the most important business drivers:

- 1) International expansion
- 2) Number of locations and same store sales
- 3) Direct-to-Consumer and online sales growth
- 4) Competitor analysis
- 5) Macroeconomic trends

International Expansion

Figures 3 and 4: 2017 revenue by region (left) and growth since 2013



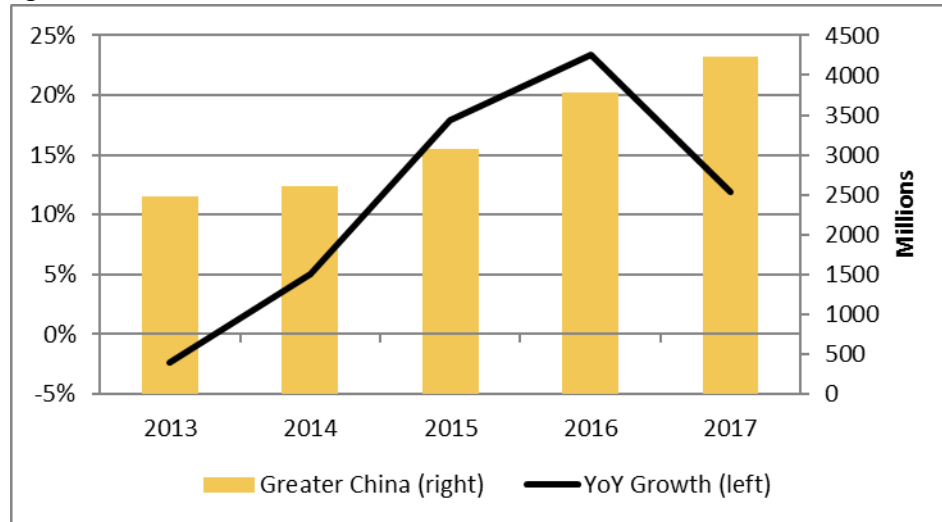
Source: Company reports

China is a key market for NKE. It makes up 13% of revenue and grew 12% last year

NKE has been growing across most regions since 2013, especially China. International sales as a whole accounted for about 54% of NKE’s total revenue in fiscal year 2017, up 1% from 53% the previous year. This is largely due to a rise in Chinese sales. Furthermore, NKE has created future ordering programs for retailers in countries and regions such as Canada, Asia, and some of Latin American and European countries. This allows retailers to order five to six months in advance of delivery with the commitment that their orders will be delivered within a set time period at a fixed price. This program gives foreign distributors and retailers an incentive to work with Nike rather than its competitors. In regard to Nike’s product segment growth, Figure 2 on page two shows that there was sporadic growth in 2013 and 2014. Additionally, Nike’s equipment segment has seen negative growth since 2014, most likely due to its recent discontinuance of gold equipment. However, Nike’s footwear, apparel, and converse achieved about 5% growth in 2017.

China is not only a key market for Nike, but is also a key market for many companies across many industries. In regard to sportswear companies, China offers the perfect mix of growth factors: government investment in sports, 415 million millennials, a growing middle class that is becoming more interested in health and fitness, and a fast-growing demand for sportswear—especially foreign brands. The 415 million millennials are an extremely important factor. This 415 million people is far larger than the entire work force of the United States, and is the prime target market demographic for Nike products. These people are not only interested in health and fitness, but are also part of the largest middle class in the world. In addition, China is said to be in a race to become a global soccer superpower. According to statista.com, China’s sports industry market is currently valued at \$113 billion USD, \$43 billion larger than North America, and is expected to reach \$231 billion by 2021.

Figure 5: NKE revenue in China



Source: Company reports

China's sportswear market is expected to grow 15% per year until 2021, with great opportunities for NKE

Figure 5 shows that Chinese sales have been steadily rising, with a five-year CAGR of about 11%. Footwear sales have a CAGR of 14%, apparel 5.80%, and equipment 0.6%. China's sportswear market is currently valued at about \$28.5 billion, meaning that Nike currently has about 18% of the sportswear market share within China. According to Euromonitor International, China's sportswear market is expected to grow at a CAGR of 8%, resulting in a total market value of \$41.7 billion by the end of 2021. However, based on the future growth projections of China's overall sports market that were previously discussed, I foresee a CAGR of about 15% until 2021. Being the leader in China, Nike plans to take full advantage of this opportunity by releasing product series that are directed to attract Chinese customers. If Nike grows market share, it is conceivable that its Chinese sales could grow at approximately a 12.5% CAGR until 2022 to reach revenue of \$7.7 billion.

This number was calculated by taking Nike's current revenue from shoes and working backward to calculate how often a pair of Nike shoes at an average price of \$80 is purchased (9.6 years). Additionally, I took an average of Nike's current market share in North America (44%) and Nike's current market share in China (23%) to calculate what Nike's potential market share in China could be in five years (34%). Furthermore, I assumed that in five years people would buy Nike shoes every 8 years instead of 9.6. With these assumptions as well as population growth, I was able to forecast Nike's revenue from shoes sales in China in five years to be about \$4.7 billion with a five-year CAGR of about 12.5%. Using this CAGR, I took Nike's overall sales in China currently, \$4.2 billion, and compounded it annually for five years to reach \$7.7 billion by 2022.

Figure 6: Values to calculate sales growth in China over next 5 years

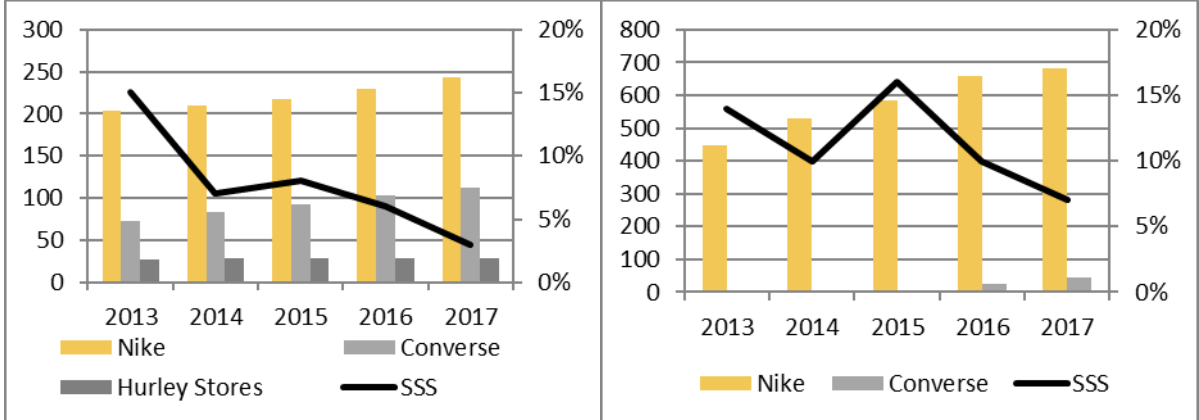
	Current Shoe Sales in N.A.	Current Shoe Sales in China	Potential Sales in China in 5 Years
Population	350,000,000	1,379,000,000	1,421,000,000
Years Avg. Person Buys Shoes	1.47	9.66	8.00
Market Size	238,230,303	142,768,478	177,625,000
Nike's Market Share	44%	23%	34%
Nike's Potential Sales	104,821,333	32,836,750	59,504,375
Avg. Shoes Price	\$90	\$80	\$80
NKE Shoe Sales	9,433,920,000	2,626,940,000	4,760,350,000

Source: Company reports

Number of Locations and Same Store Sales

In the competitive market of sports footwear and apparel, it is important to stay competitive in every way possible. Nike currently makes 73% of its revenue from wholesale customers and 26% of revenue from its direct to consumer business, which has recently been gaining share. Nike has been adding stores at a steady rate of about 10% per year; although same store sales is slowing which could mean the market is becoming saturated. As evidence, international stores have been increasing at a much higher rate than domestic store additions. In FY 2017, NKE added 75 international stores and only 22 domestic stores.

Figures 7 and 8: Number of NKE locations by brand, USA (left) and international and SSS



Source: Company reports

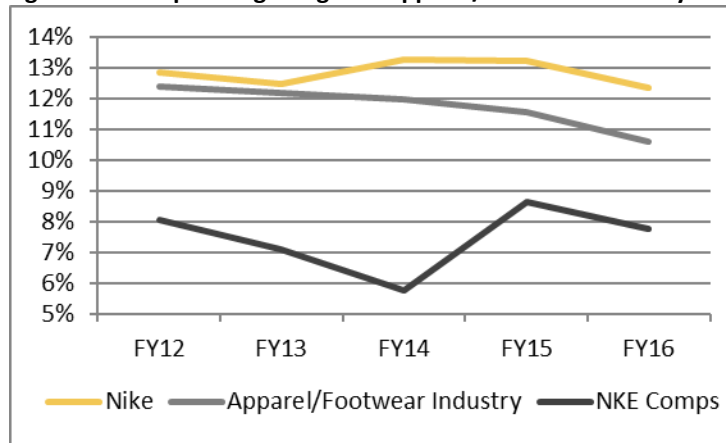
NKE's same store sales has been slowing due to the large increase in the number of Nike stores

Nike's growth rate for same store sales has been on a steady decline since it peaked in 2013 at a 14% growth rate. This 2013 peak may have occurred due to the 9% decrease in number of overall stores in 2013, meaning that Nike's in-store sales became more concentrated during that period in its best performing stores. However, since 2013 Nike has been adding brick-and-mortar stores at an average rate of about 7.5%. The addition of more marginal stores might be a reason as to why SSS is slowing. To counteract this decline in same store sales, I believe it is important for Nike to slow its new store additions and put more focus on driving sales up in its current stores, as well as putting additional effort into its ecommerce operations.

Even though SSS is slowing, Nike has maintained high net and operating margins, which is something that makes the firm stand out from its competitors. In regard to gross margin, Nike's 43.5% is slightly lower (2-3%) than its competitors. Despite Nike's relatively low gross margin, its overall net margin and operating margin are about double of any of its competitors coming in at roughly 12%. This higher net margin provides Nike with greater ability to repurchase shares as well as increase dividends.

Nike is an industry leader in regards to operating margin, higher than its closest competitor by 5%

Figure 9: NKE operating margin vs Apparel/Footwear industry vs NKE Comps



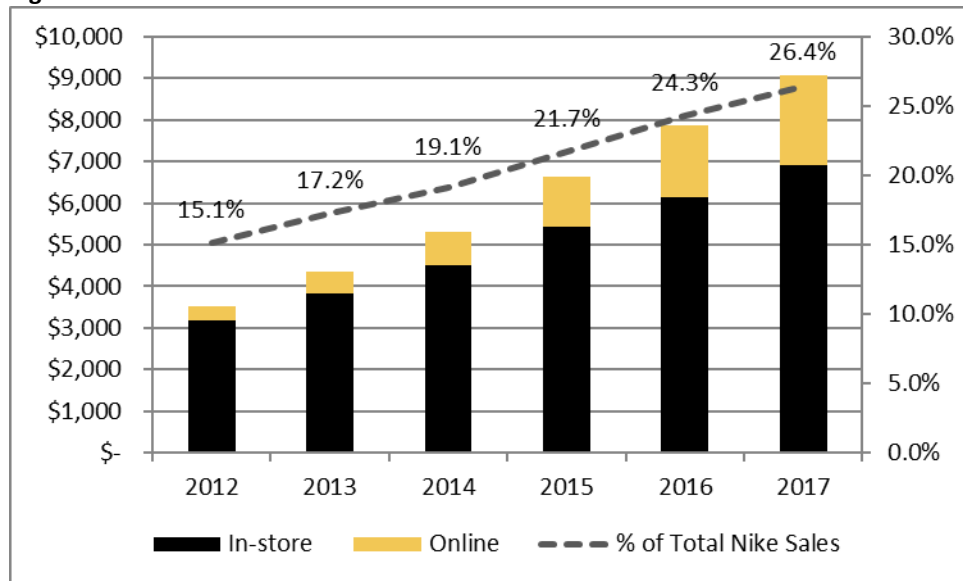
Source: FactSet

Direct-to-Consumer and Online Sales growth

Nike’s direct-to-consumer business including retail stores, which includes Nike-owned in-line stores, factory stores, as well as Nike-owned websites, is a key driver for future success. Nike operates websites in over 45 countries through desktop and mobile applications. In fiscal year 2017, Nike’s in-store and online sales (DTC) accounted for 26.4% of its total revenue, up 2% in total share of revenue since last fiscal year. As a revenue growth number, Nike’s direct-to-consumer segment grew 15.6%, or \$1.2 billion. Moving forward, I see Nike’s direct-to-consumer segment growth to be driven by its online sales growth as retail store sales plateau. Nike has significantly more retail stores than its competitors which, in general, primarily sell their products to wholesalers.

As depicted in Figure 10, Nike’s direct-to-consumer business has been growing consistently since 2012, especially its online segment. Similar to every company, Nike’s ability to grow its online revenues as a percent of its total revenues is a key factor to driving up its margins. Selling products online has substantially lower overhead costs; therefore, Nike’s ability to grow its online sales at a higher rate will allow it to maintain and grow its currently above average net margin.

Figure 10: Direct-to-Consumer sales and total % of sales



Source: Company reports

Figure 10 demonstrates that Nike has been growing its online sales at an increasingly higher rate every year. In fiscal year 2017, Nike grew its online revenues by 21.1%, which appears sustainable. Nike’s online sales CAGR from 2012 to 2017 is an astonishing 43.93%. Additionally, a key growth driver for Nike’s online sales is its new agreement with Amazon.com. This agreement will allow Nike to sell directly on Amazon.com, as opposed to Nike’s products being sold through third-party sellers on Amazon.com. This will give NKE the opportunity to portray its products however it sees will be beneficial to the selling of its products on Amazon. Additionally, selling its products on Amazon will likely drive up NKE’s margins. This gives Nike a better opportunity to reach its online sales goal of \$7 billion by 2020.

Competitor Analysis

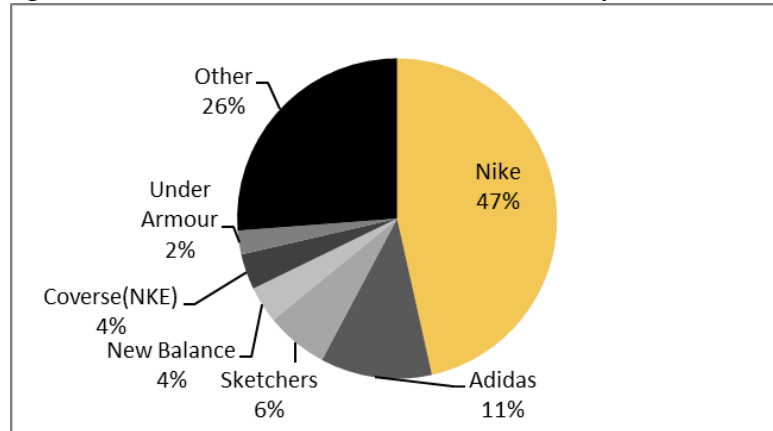
Consumer athletic apparel is a highly competitive industry. There are many competitors that sell similar products to Nike and many options for consumers to choose. Because consumers have so much control in this industry, Nike needs to innovate and differentiate from its competitors. To compete well, NKE needs to continue its strong relationship with its consumers, continue producing superior products, and expand into new or growing markets before its competitors. In the past,

Nike’s online revenues have grown immensely over the last five years at a 43.93% CAGR

Nike lost a collective 4.2% of athletic footwear market share in North America in FY2017

having a strong brand identity was enough for most companies to keep a loyal customer base. According to numerous marketing studies, millennials are much less brand loyal than past generations. Because of this, it is important that Nike does not rely too heavily on its brand to earn new customers.

Figure 11: NKE athletic footwear market share vs competitors



Source: QUARTZ.com

Nike and its competitors operate in one of the largest segments of the apparel industry. Athletic footwear and apparel accounts for about 20% of the apparel industry and is one of the fastest growing industries within the apparel industry with a CAGR of 4.3% until 2020 according to Allied Market Research. However, in Nike’s most recent quarters, Nike missed its earnings estimates largely due to the loss of market share in North America. For the current fiscal year, Nike lost 4.2% athletic footwear marketshare, primarily to Adidas. The largest reason for this loss in market share is because Adidas is the industry leader in the “athleisure” apparel category, and Nike’s lacks a large presence in this category (not even top five). Adidas owns 23% of this market, followed by Sketchers, Converse, Sperry, and Keds. Moving forward, Nike plans to expand into this segment as well as in the women’s athletic wear segment as it is also a high growth opportunity.

In Nike’s most recent fiscal year, the firm underperformed compared to its competitors, with sales growth of only 6%, which is 8% less than Adidas. NKE’s slow sales is largely due to loss of market share in North America. That being said, Nike has the highest inventory turnover relative to its competitors, meaning that the firm manages its cash flow well.

Nike had lower sales growth than competitors in its most recent fiscal year, but has the highest inventory turnover among comps (although the last two fiscal years are down)

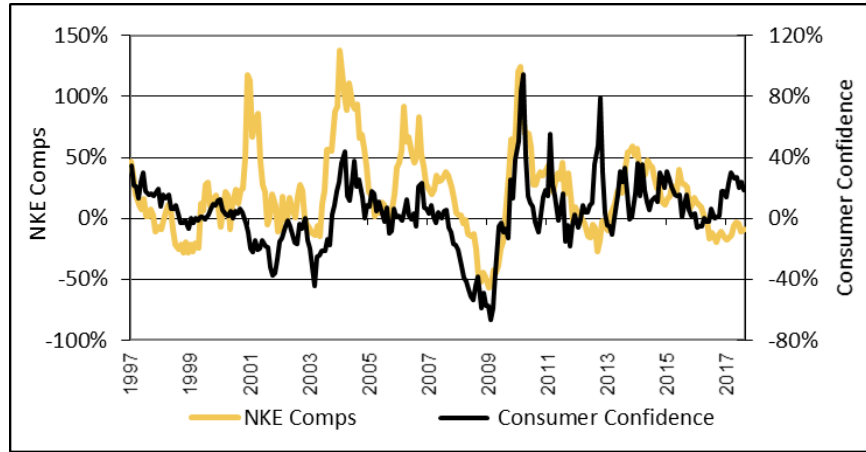
Figure 12: NKE Financial and Operating Data compared to competitors

Firm	Sales Growth From Previous FY	Gross Margin	Net Margin	Inventory Turnover (5yr Avg)
Nike	5.5%	43.4%	12.4%	4.06
Adidas	14.1%	46.7%	5.3%	3.10
Under Armour	21.8%	46.2%	4.1%	3.07
Sketchers	13.2%	43.7%	6.8%	3.15
Puma	7.1%	44.0%	1.7%	3.07
Deckers Outdoor	-5.0%	46.5%	0.3%	3.18

Source: FactSet

Macroeconomic Trends

Figures 13: Consumer confidence compared to NKE comps



Source: Bloomberg

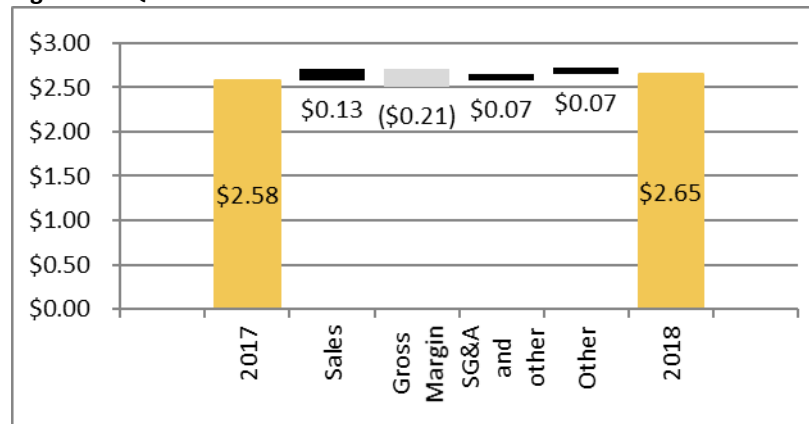
The athletic apparel business is a fairly cyclical business, and is positively correlated to consumer confidence. As seen in figure, Nike and its competitors have almost been perfectly correlated to consumer confidence since 2009. Additionally, it is observed that in times a recession and slow economic development, Nike’s stock price tends to fall with the economy. Due to this, Nike’s stock price is somewhat reliant on the overall health of the economy, making consumer confidence an important driver of NKE in the future.

Financial Analysis

I anticipate EPS to grow to \$2.65 in FY 2018. While holding all other things constant, my sales projections of 5.1% growth result in a \$0.13 increase in EPS. A major contributor to this sales growth is Nike’s international expansion, especially into China, with 12.6% sales growth in 2018. Furthermore, I expect gross margin decreases from 2017 to decrease EPS by \$0.21. I expect that Nike will continue to see unfavorable changes in foreign currency rates, driving down its gross margin. Additionally, I anticipate that the 0.7% decrease of SG&A as a percentage of sales from last year to this year will have a \$0.07 effect on EPS. Lastly, I predict that Nike is going to keep its cash balance in check by paying out a slightly higher dividend as well as buying back a portion of its outstanding shares. In November of 2015, Nike’s Board of Directors passed a four-year, \$12 billion share repurchase program. Since then, Nike spent about \$6.2 billion on share repurchases and I expect this to continue. Overall, I expect share repurchasing to cause a \$0.07 increase in EPS.

The expansion of sales in regions such as China are key to the overall growth outlook of NKE.

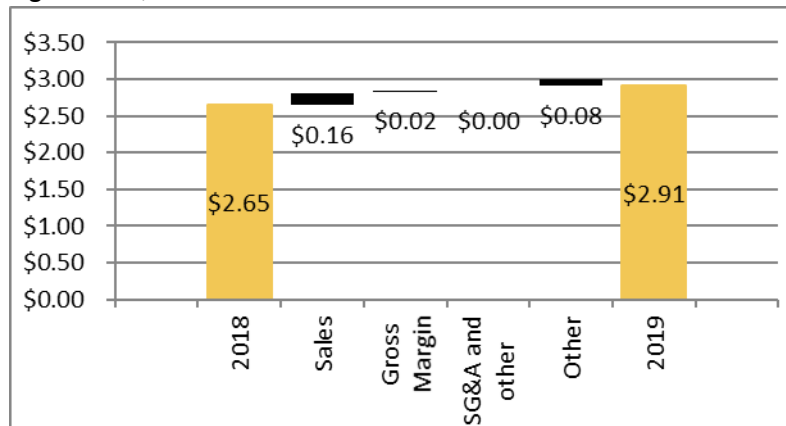
Figure 14: Quantification of 2018 EPS drivers



Source: Company Reports, IMCP

I expect FY 2019 EPS to grow to \$2.91. I anticipate EPS to rise \$0.16 due to the overall 5.8% increase in sales from 2018 to 2019. Similarly to my FY18 assumptions, I believe that a large portion of the sales increase will be coming from China. Not only is China’s population almost four times larger than the U.S., but it also has a fast growing sports economy as well as the world’s largest middle class as percent of population. Additionally, I gross margin to rise again leading to a \$0.02 increase in EPS. Furthermore, Nike’s SG&A expenses will have no impact as they are expected to rise with sales. Lastly, I foresee Nike continuing to buy back shares at an average price of \$55.60, which will ultimately provide a \$0.08 increase in EPS.

Figure 15: Quantification of 2019 EPS drivers



Source: Company Reports, IMCP

I am slightly more optimistic than the analysts’ consensus EPS forecasts. The FactSet consensus has projected EPS for FY18 and FY19 at \$2.32 and \$2.66. A portion of this variance comes from my overall sales growth estimates are about 1.0% higher than the consensus largely due to my higher than average outlook for sales growth in the North America. I believe that the Nike/Amazon deal will have a large impact on U.S. sales growth as NKE implements more online retail platforms. Additionally, the FactSet consensus projects that Nike will have a gross margin of 43.7% in 2018, a significant 1.0% less than my projections. This difference alone would ultimately decrease my estimated EPS of \$2.65 in 2018 by \$0.19. My above average estimates on gross margin reflect Nike’s expansion of its online presence to drive gross margin, which is currently 44.6%.

I am \$0.33 more optimistic than consensus for EPS in 2018 and \$0.25 more optimistic for 2019

Figure 16: Revenue, EPS, and YoY growth estimates

	2018E	2019E
Revenue - Estimate	\$36,105	\$38,215
YoY Growth	5.11%	5.84%
Revenue - Consensus	\$35,772	\$38,196
YoY Growth	4.14%	6.78%
EPS - Estimate	\$2.65	\$2.91
YoY Growth	2.64%	9.91%
EPS - Consensus	\$2.32	\$2.66
YoY Growth	-10.10%	14.66%

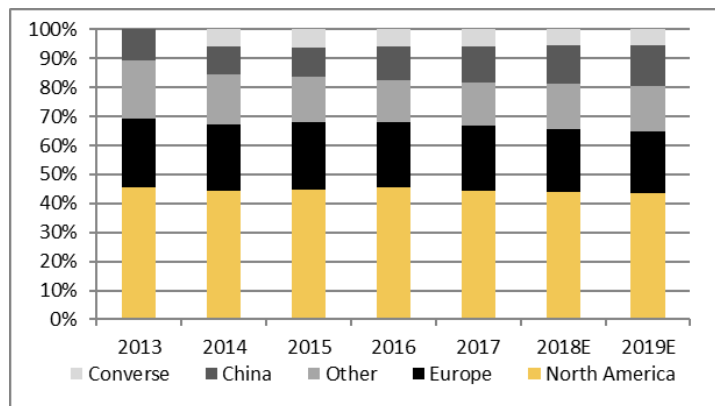
Source: FactSet, IMCP

Revenues

Nike’s revenue has been steadily increasing since its small dip in FY 2010, although, growth has slowed recently. In FY 2014, Nike saw 10% revenue growth, and growth has now settled down to roughly 6% in FY 2016 and 2017. While I expect that trend to continue in 2018 and 2019, I anticipate the revenue growth rates will continue to shift from North America and Europe towards Asia, especially China. The U.S and European markets have seen a decline in revenue growth since 2013 primarily due to competition in the market. However, Nike’s new agreement with Amazon.com may help NKE regain some of the North American and European market share that it has lost in its last fiscal year.

I forecast continued double-digit (13%) revenue growth in China through FY 2018 and into FY 2019. Additionally, I estimate that Japan and Nike’s emerging markets will also continue to rise at about 8% after growing 13.2% in FY 2017. While these are notable high growth rates North America and Europe make up roughly 65% of Nike’s overall revenue worldwide and will keep a lid on overall growth rates for Nike.

Figure 17: Nike segment revenues breakdown, 2013 – 2019E

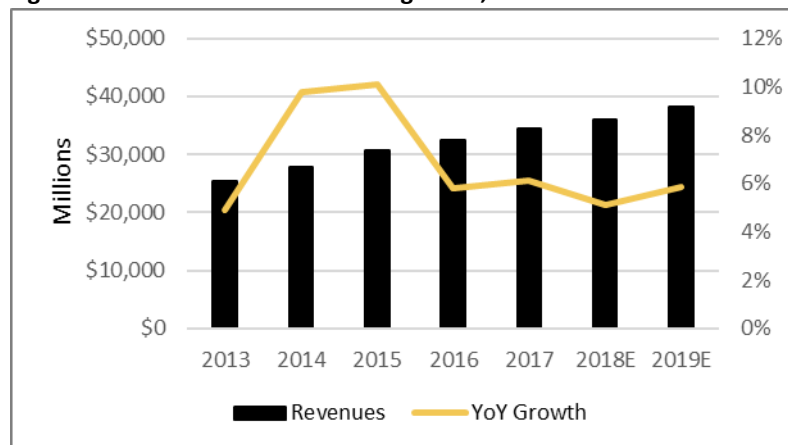


Source: Company Reports, IMCP

Direct-to-consumer revenue will be the dominant source of revenue growth and margin increases moving forward. In June 2017, NKE announced that it would eliminate 1400 jobs in a restructuring mission to sell more shoes directly online. Furthermore, Nike has also been working to make its sneaker-selling apps available in more parts of the world. By making these apps available in more places around the globe, not only is NKE broadening its range of sales, but it is also extending its brand into regions that have not been broken into yet.

NKE plans to cut 1400 jobs to begin the shift to a more online revenue presence

Figure 18: Revenue vs YoY revenue growth, 2013 – 2019E



Source: Company Reports

Return on Equity

Nike's ROE has risen 10% since FY 2014, but ROE should remain relatively steady over the course of the next two years with a slight drop in 2018 due to a 0.7% decline in its EBIT margin. This combined with a decrease in asset turnover results in a lower ROA for FY 2018. In 2018, the decline in ROA was slightly offset by an increase in leverage, although; the overall ROE for NKE is still expected to drop in FY18. In 2019, NKE will experience a slight rebound in EBIT margin as well as asset turnover; therefore, ROA will rise. Because of this and slightly higher leverage, NKE's ROE will rise 1% in 2019.

Figure 19: ROE breakdown, 2014 – 2019E

5-stage DuPont	2014	2015	2016	2017	2018E	2019E
EBIT / sales	12.9%	13.8%	14.3%	14.4%	13.7%	13.8%
Sales / avg assets	1.54	1.52	1.51	1.54	1.52	1.53
EBT / EBIT	99.1%	99.3%	99.6%	98.8%	98.4%	98.4%
Net income / EBT	76.0%	77.8%	81.3%	86.8%	86.8%	86.8%
ROA	14.9%	16.3%	17.5%	19.0%	17.7%	18.0%
Avg assets / avg equity	1.65	1.71	1.72	1.81	1.89	1.92
ROE	24.5%	27.8%	30.1%	34.4%	33.6%	34.6%

ROE expected to stay relatively flat over the next two years

Source: Company Reports

Free Cash Flow**Figure 20: Free cash flows 2013 – 2019E**

Free Cash Flow	2013	2014	2015	2016	2017	2018E	2019E
NOPAT	\$2,449	\$2,718	\$3,295	\$3,775	\$4,292	\$4,293	\$4,578
<i>Growth</i>		11.0%	21.2%	14.6%	13.7%	0.0%	6.6%
NWC*	6,541	6,623	5,971	6,574	7,110	7,474	7,911
Net fixed assets	3,958	4,898	5,624	6,354	7,198	7,641	8,131
Total net operating capital*	\$10,499	\$11,521	\$11,595	\$12,928	\$14,308	\$15,115	\$16,042
<i>Growth</i>		9.7%	0.6%	11.5%	10.7%	5.6%	6.1%
- Change in NWC*		82	(652)	603	536	364	437
- Change in NFA		940	726	730	844	443	490
FCFF*		\$1,696	\$3,221	\$2,442	2,912	\$3,486	\$3,651
<i>Growth</i>			89.9%	-24.2%	19.2%	19.7%	4.7%
- After-tax interest expense	(2)	25	22	15	51	70	74
FCFE**		\$1,671	\$3,199	\$2,427	\$2,861	\$3,416	\$3,577
<i>Growth</i>			91.4%	-24.1%	17.9%	19.4%	4.7%
FCFF per share*		\$1.90	\$1.87	\$1.45	\$1.77	\$2.19	\$2.36
<i>Growth</i>			-1.5%	-22.3%	22.1%	23.4%	8.0%
FCFE per share**		\$1.87	\$1.86	\$1.44	\$1.74	\$2.14	\$2.31
<i>Growth</i>			-0.7%	-22.3%	20.7%	23.0%	7.9%

I expect that the primary use of cash over the course of FY18 and FY19 will be share repurchases

Source: Company Reports, IMCP

NKE's free cash flow has been growing at a moderately steady rate over the last several years. In November of 2015, Nike approved a four-year, \$12 billion share repurchase program. After two years of this program, approximately \$8 billion worth of shares have been repurchased. I expect that over the next two years Nike will continue to make efforts to complete the \$12 billion program. I anticipate that Nike to repurchase approximately \$2.5 billion worth of shares in both 2018 and 2019. I expect net operating capital will grow at a slightly faster pace than NOPAT over the next two years due to NKE's slightly decreasing inventory turnover ratio and slightly increasing accounts payable turnover ratio. Additionally, I foresee that Nike will continue to increase dividends over the course of

the next two years as this will benefit shareholders as well as keep Nike from having too much excess cash. Lastly, I expect that Nike is going to keep issuance of new debt to a low because it does not necessarily have a use for the excess cash.

I expect both FCF and FCFE to increase about 20% in 2018 largely due to less investment in operating capital than 2017. However, I anticipate FCF and FCFE to grow only 4.5% in 2019 as investment spending rises modestly.

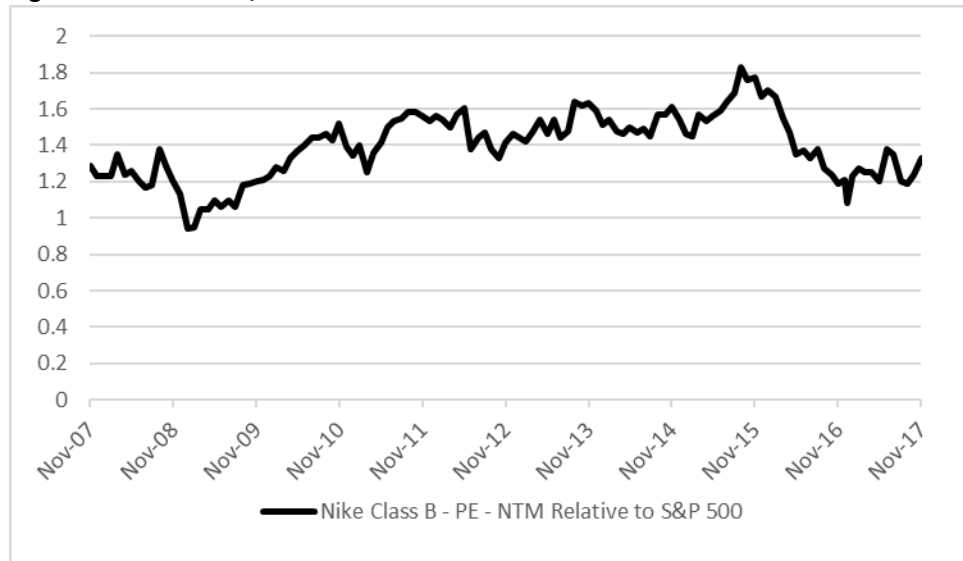
Valuation

NKE was valued using multiples and a 3-stage discounting cash flow model. Based on earnings multiples, the stock is worth \$68.50. Relative valuation shows NKE to be slightly overvalued based on its fundamentals versus those of its peers in the retail apparel industry. Price to book valuation yielded a target price of \$77. A detailed DCF analysis values NKE slightly higher, at \$71.33; although I give the price to book valuation a little more weight because its regression has a high R-squared. Finally, a scenario analysis yields a price range of \$76.50 to \$66.03. As a result of these valuations, I value the stock at \$68.00.

Trading History

NKE is currently trading near its ten-year low relative to the S&P 500. This is the result of the reduction of net income growth as well as the fact that most analysts believe that earnings will drop this fiscal year. NKE’s current NTM P/E is at 27.6 compared to its five-year average of 25. This P/E is considerably higher than the past two years. Because of this, I anticipate the NTM P/E will fall somewhere around 25.5 instead of 27.6. For the purpose of this valuation, I will use the NTM P/E of 27.6 that is based on NKE’s current stock price of about \$68.00.

Figure 21: NKE NTM P/E relative to S&P 500



NKE P/E relative to the market is trading at an almost 10 yr low

Source: Factset

Assuming the firm maintains a 27 NTM P/E at the end of 2018, it should trade at \$71.00 by the end of the fiscal year.

- Price = P/E x EPS = 27.6 x \$2.65 = \$71.00

Discounting \$71.00 back to today at a 9.6% cost of equity (explained in Discounted Cash Flow section) yields a price of \$68.50.

Relative Valuation

Nike is currently trading at a P/E lower than most of its competitors, with a P/E TTM of 29.1 compared to a competitor average of 36.5. Investors are paying less for NKE because its competitors have more potential to grow (e.g. Under Armour). NKE has had some outstanding years of sales and earnings growth, but has slowed in recent years. NKE's projected earnings growth is much lower than that of its competitors, growing at only 2.6% in 2018. However, NKE's P/B and P/S ratios are significantly higher than those of its competitors – both are roughly double the average for the group. This is a reflection of NKE's relatively high ROE and net margin compared to its competitors.

Figure 22: NKE comparable companies

Ticker	Name	Current Price	Market Value	Price Change						Earnings Growth						LT Debt/ S&P			LTM Dividend		
				1 day	1 Mo	3 Mo	6 Mo	52 Wk	YTD	LTG	NTM	2016	2017	2018	2019	Pst 5yr	Beta	Equity	Rating	Yield	Payout
NKE	NIKE INC	\$68.29	\$111,100	0.5	5.6	20.6	16.6	20.6	9.2	8.2	6.0%	17.7%	15.4%	2.6%	9.9%	15.8%	0.57	29.5%	A+	1.08%	32.0%
ADS-DE	ADIDAS AG	\$221.26	\$44,880	0.2	5.2	(4.7)	(8.7)	18.6	6.1	21.3	30.2%	36.9%	48.8%	19.4%	18.5%	9.7%	0.67	15.2%		1.07%	
PUM-DE	PUMA SE	\$411.20	\$6,143	1.7	3.5	(12.8)	(7.4)	8.0	(9.2)	40.5	54.5%	65.4%	148.8%	37.4%	24.1%	14.2%	0.44			0.22%	
UAA	UNDER ARMOUR INC	\$18.41	\$8,074	3.7	21.8	48.3	1.0	(15.9)	27.6	25.5	-257.5%	7.4%	-67.2%	16%	50.0%		0.01	37.9%	B+	0.00%	
SKX	SKECHERS U S A INC	\$39.47	\$6,255	(2.2)	2.4	21.7	40.8	49.6	4.3	15.0	96.9%	4.7%	8.3%	24.7%	15.1%	78.3%	-0.11	3.9%	B	0.00%	
DECK	DECKERS OUTDOOR CORP	\$96.00	\$3,049	0.5	15.7	40.2	49.2	82.1	19.6	9.7	135.4%	-11.7%	4.5%	13.6%	13.1%	-7.7%	0.88	3.1%	B+	0.00%	
Average			\$29,917	0.7	9.0	18.9	15.2	27.2	9.6	20.0	10.9%	20.1%	26.4%	18.9%	21.8%	22.0%	0.41	17.9%		0.40%	32.0%
Median			\$7,164	0.5	5.4	21.1	8.8	19.6	7.6	18.1	42.3%	12.6%	11.9%	17.6%	16.8%	14.2%	0.51	15.2%		0.11%	32.0%
SPX	S&P 500 INDEX	\$2,731		1.2	(2.0)	6.5	10.8	16.3	2.2			0.5%	10.2%	11.0%	10.1%						
Ticker	Website	2017		P/E						2017			EV/		P/CF		Sales Growth			Book	
		ROE	P/B	2015	2016	2017	TTM	NTM	2018	2019	NPM	P/S	OM	ROIC	EBIT	Current	5-yr	NTM	STIM	Pst 5yr	Equity
NKE	http://www.nike.com	35.6%	9.43	25.3	28.0	19.7	29.6	27.9	25.8	23.5	11.9%	3.16	12.2%	28.1%	20.2	25.1		6.9%	7.5%	7.3%	\$7.24
ADS-DE	http://www.adidas-group.com	19.7%	5.57	18.1	18.5	20.2	30.1	23.1	23.6	20.0	6.3%	1.78	8.6%	13.9%	25.6	18.9	16.9	23.2%	14.0%	7.6%	\$39.74
PUM-DE	http://www.puma.com	8.0%	2.97	77.6	48.5	23.8	40.1	26.0	27.0	21.8	3.4%	1.26	5.9%			22.7		19.8%		4.8%	\$138.43
UAA	http://www.underarmour.com	4.0%	3.87	65.0	71.8	152.9	-168.1	106.8	83.7	55.8	1.7%	1.64		-1.7%	45.9	14.1		2.8%	5.0%		\$4.76
SKX	http://www.skechers.com	14.1%	3.27	12.3	19.2	14.5	34.6	17.6	18.6	16.2	6.6%	1.54	8.8%	10.0%	14.7			12.7%	11.0%	21.7%	\$12.08
DECK	http://www.deckers.com	12.9%	2.95	20.1	11.8	13.3	39.5	16.8	20.2	17.9	7.3%	1.69	9.7%	0.6%	11.1	14.9	12.7	1.0%	-1.2%	4.8%	\$32.52
Average		15.7%	4.68	36.4	33.0	40.7	1.0	36.4	33.2	25.8	6.2%	1.84	9.0%	10.2%	23.5	19.1	14.8	11.1%	7.3%	9.2%	
Median		13.5%	3.57	22.7	23.6	19.9	32.4	24.6	24.7	20.9	6.5%	1.66	8.8%	10.0%	20.2	18.9	14.8	9.8%	7.5%	7.3%	

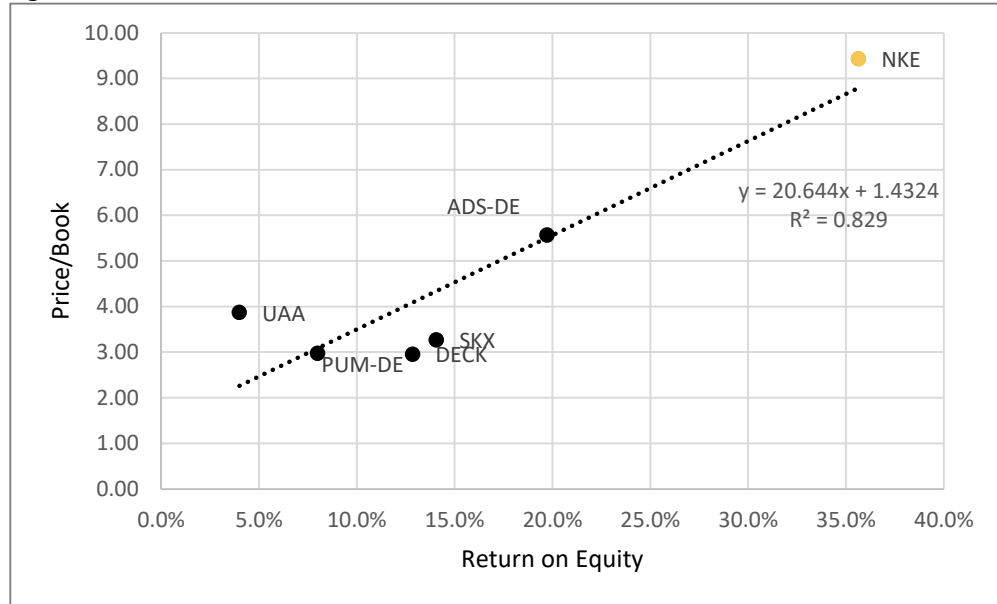
Source: Factset

A more in-depth analysis of P/B and ROE is shown in figure 23. The calculated R-squared of the regression indicates that over 88% of a sampled firm's P/B is explained by its NTM ROE. NKE has the highest P/B and ROE of the competitors shown, and according to this measure is very overvalued. Additionally, given the recent announcements of new products and NBA contracts with star athletes, I believe that ROE will increase again in 2019 (I project a small dip in 2018). Using my 2018 ROE estimates and the formula of the regression in figure 23, I estimate the future price.

- Estimated P/B = Estimated 2018 ROE (34%) x 20.644 + 1.432 = 10.05
- Target Price = Estimated P/B (10.05) x 2018E BVPS (\$7.98) = \$80.00

Discounting back to the present at a 9.6% cost of equity leads to a target price of \$77.

Figure 23: P/B vs NTM ROE



NKE is slightly overvalued according to price to book valuation

Source: Factset

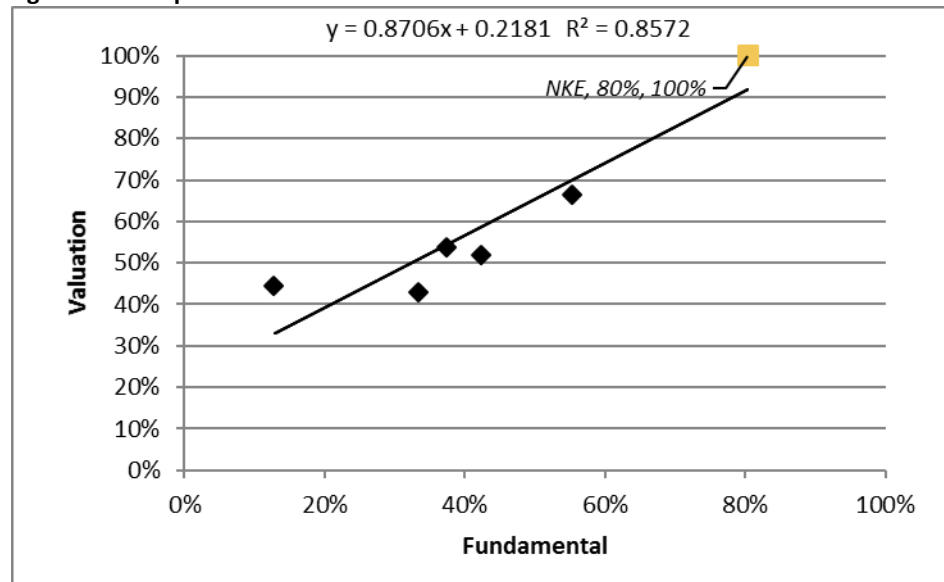
For a final comparison, I created a composite ranking of a few valuation and fundamental metrics. Since the variables have different scales, each variable was converted to a percentile before calculating the composite score. An equal weighting of long term growth rate and NTM ROE was compared to an equal weight composite of P/B, P/S and P/CF. Upon running these fundamental and valuation characteristics as a regression, the regression line had an R-squared of 85%. It is observed in figure 25 that NKE lies above the regression line, therefore making it about 8% overvalued based on its fundamentals.

Figure 24: Composite valuation, % of range

Ticker	Name	Fund	Weight	Fundamental		Valuation		
				25.0%	75.0%	33.3%	33.3%	33.3%
				LTG	ROE	P/B	P/S	P/CF
NKE	NIKE INC	80%	100%	22%	100%	100%	100%	100%
ADS-DE	ADIDAS AG	55%	66%	49%	57%	64%	59%	76%
PUM-DE	PUMA SE	42%	52%	100%	23%	33%	40%	82%
UAA	UNDER ARMOUR INC	13%	44%	18%	11%	34%	43%	57%
SKX	SKECHERS U S A INC	38%	54%	32%	39%	37%	51%	73%
DECK	DECKERS OUTDOOR CORP	33%	43%	17%	39%	31%	50%	47%

Source: IMCP

Figure 25: Composite relative valuation



Source: IMCP

Discounted Cash Flow Analysis

A three stage discounted cash flow model was also used to value NKE.

For the purpose of this analysis, the company’s cost of equity was calculated to be 9.6% using the Capital Asset Pricing Model. The underlying assumptions used in calculating this rate are as follows:

- The risk free rate, as represented by the ten year Treasury bond yield, is 2.65%.
- A ten year beta of 0.95 was utilized since the company has higher risk than the market.
- A long term market rate of return of 10% was assumed, since historically, the market has generated an annual return of about 10%.

Given the above assumptions, the cost of equity is 9.6% (2.65 + 0.95 (10.0 – 2.65)).

Stage One - The model’s first stage simply discounts fiscal years 2018 and 2019 free cash flow to equity (FCFE). These per share cash flows are forecasted to be \$2.15 and \$2.38, respectively. Discounting these cash flows, using the cost of equity calculated above, results in a value of \$4.15 per share. Thus, stage one of this discounted cash flow analysis contributes \$4.15 to value.

Stage Two - Stage two of the model focuses on fiscal years 2020 to 2024. During this period, FCFE is calculated based on revenue growth, NOPAT margin and capital growth assumptions. The resulting cash flows are then discounted using the company’s 9.6% cost of equity. I assume 5.5% sales growth in 2020, rising to 6% through 2024. The ratio of NWC to sales and NFA to sales will remain relatively the same as 2019 levels. Also, the NOPAT margin is expected to rise to 12.2% in 2024 from 12% in 2019. Finally, the amount of shares outstanding is expected to grow 0% by 2024, compared to shrinking -3.0% in 2019 due to NKE’s \$2 billion share repurchase program.

Figure 32: FCFE and discounted FCFE, 2018 – 2024

	2018	2019	2020	2021	2022	2023	2024
FCFE	\$2.15	\$2.38	\$2.33	\$2.62	\$2.82	\$3.08	\$3.38
Discounted FCFE	\$2.07	\$2.09	\$1.87	\$1.91	\$1.88	\$1.87	\$1.88

Added together, these discounted cash flows total \$13.56.

Stage Three – Net income for the years 2020 – 2024 is calculated based upon the same margin and growth assumptions used to determine FCFE in stage two. EPS is expected to grow from \$2.91 in 2019 to \$4.30 in 2024.

Figure 33: EPS estimates for 2018 – 2024

	2018	2019	2020	2021	2022	2023	2024
EPS	\$2.65	\$2.91	\$3.15	\$3.40	\$3.71	\$4.06	\$4.30

Stage three of the model requires an assumption regarding the company's terminal price-to-earnings ratio. The current P/E of 26 reflects NKE's positive growth outlook. By 2024, NKE will most likely have matured so a lower multiple ranging from 20-23 is reasonable. Nike will still be dominant and command an above market multiple. However, the market will most likely continue to price in a higher premium over the next year. Therefore, a P/E ratio of 24 is assumed at the end of NKE's terminal year.

Given the assumed terminal earnings per share of \$4.30 and a price to earnings ratio of 24, a terminal value of \$103.26 per share is calculated. Using the 9.6% cost of equity, this number is discounted back to a present value of \$57.23.

Total Present Value – given the above assumptions and utilizing a three stage discounted cash flow model, an intrinsic value of \$71.33 is calculated ($4.18 + 9.48 + 57.67$). Given NKE's current price of \$67.14, this model indicates that the stock is slightly undervalued.

Scenario Analysis

Nike is difficult to value with certainty because it has seen a variety of EPS and sales growth fluctuations over the past few years. Furthermore, the ability for Nike to grow sales in China is going to be another difficult aspect to add to a valuation. With China's economy slowly transitioning from a production based economy to a consumption based economy, there is great potential for NKE to continue its Chinese growth. I valued NKE under three scenarios by changing combinations of two key factors. More detailed numbers can be found in Appendix 8.

Sales Growth – Strong growth assumes that NKE can grow its online sales at an increasing rate over the course of the outlook. Additionally, NKE's continued efforts to expand its business in China is also going to have a great impact on its overall revenue. I would say that this scenario has a higher probability than a poor scenario simply because of the plans already in place for NKE to expand online as well as internationally. Overall, the good scenario assumes that NKE sales will grow by 6% in 2020 and increase to 9% in 2024. Modest growth is the base assumption used in the prior DCF analysis, and is the scenario with the highest probability. Poor growth assumes that Nike has not successfully stopped its competitors from gaining market share. In FY17 and the beginning of FY18, NKE lost a considerable amount of the footwear market to its competitors. Under this scenario, revenue shrinks to 4% growth in 2020 to only 5% growth in 2024; I give this outcome a relatively low probability because while NKE may be losing market share in the U.S, the potential in foreign markets seems promising.

Gross Margin – Scenario one, strong gross margin, assumes that NKE can keep charging a premium for its products as well as keep its cost of goods sold to a minimum. To do this, NKE must continue to expand sales globally as well as maintain its image of excellence and prestige. This will allow NKE to continue charging high prices for its products. Scenario two, declining gross margin, assumes that NKE is forced to start charging less for its products to take back some of the market share from its rising competitors. Because NKE has a strong brand identity and is in the process of signing more

professional athletes, I assume that the scenario with the strong gross margin has a higher probability than NKE having a lower gross margin.

Good scenario:

Total Present Value – given the above assumptions and utilizing a three stage discounted cash flow model, an intrinsic value of \$76.50 is calculated ($4.15 + 9.18 + 63.17$). Given NKE's current price of \$67.14, this model indicates that the stock is slightly undervalued.

Poor scenario:

Total Present Value – given the above assumptions and utilizing a three stage discounted cash flow model, an intrinsic value of \$66.03 is calculated ($4.15 + 9.41 + 52.47$). Given NKE's current price of \$67.14, this model indicates that the stock is slightly overvalued.

Business Risks

Although I see that there are many reasons to be optimistic about Nike, I believe that it is priced fairly at its current price

Exposure to currency fluctuations:

Nearly 55% of NKE's revenues are from international countries. Because of this, fluctuations of the dollar against currency's like the Euro, Yen, and Yuan could cause a decrease in margins.

Competitors in market:

Competitors in the athletic marketplace are everywhere. Nike is premier brand in this market, and therefore charges more for its products. This leaves room for its competitors to price lower and therefore take part of NKE's market share.

Innovation:

Being such a competitive market, it is important for athletic apparel companies to stay as innovative as possible. If NKE does not remain one of the most innovative companies, this will leave opportunity for its competitors to gain a leg up.

Global economic conditions:

As stated many times in this report, NKE's future success is heavily dependent on how well it can grow its current business in China. Recently, China's economy has been growing at a fast rate. That being said, if China's economy begins to slow in growth, this could have a negative effect on NKE's revenue.

New Amazon partnership:

Starting this year, Nike has begun selling its products directly on Amazon.com. At first glance, this strategy seems as if it should increase margins for Nike. However, if Amazon decides to charge Nike a high premium for using its website, this could result in less of a margin increase for Nike than anticipated.

Appendix 1: Porter's 5 ForcesThreat of New Entrants – Relatively Low

Since the athletic apparel industry is already so competitive, it is difficult for new companies to successfully enter this industry.

Threat of Substitutes – Very High

As stated multiple times, one of the main drivers behind Nike's decrease in sales growth in North America last quarter was the high performance of its competition. Due to the variety of athletic apparel manufacturers for consumers to choose from, the industry as a whole is very competitive.

Supplier Power – Low

Textile manufacturers of non-luxury clothing items have little to no leverage over their customers, and modern production techniques have made it very easy to switch suppliers with little cost in time, money or efficiency.

Buyer Power – High

Consumers have most of the power in the relationship between consumer and apparel manufacturer or retailer. In the athletic apparel industry, there are many substitute products, therefore giving the consumer the option to pick whichever brand he or she may choose. Additionally, it is not urgent for consumers to buy athletic apparel goods, allowing them to wait until they are offered the best price.

Intensity of Competition – High

As stated above, there are many large competitors in this industry. Over the past fiscal year, NKE has experienced market share loss in North America largely due to Adidas. Additionally, in this competitive industry it is constantly a race to provide consumers the best deal in the fastest possible way. This is driving up online sales.

Appendix 2: SWOT Analysis

Strengths	Weaknesses
High net margin High brand recognition Shoe contracts with NBA stars	Lower than average gross margins Lost U.S. market share in Q1'18
Opportunities	Threats
Internal expansion Digital sales growth Expansion of women's segment	Currency fluctuations Lack of innovation Rising cost of materials

Appendix 3: Income Statement

Income Statements (in millions)							
Items	2013	2014	2015	2016	2017	2018E	2019E
Revenue	\$25,313	\$27,799	\$30,601	\$32,376	\$34,350	\$36,105	\$38,215
Cost of goods sold	14,279	15,353	16,504	17,405	19,038	19,966	21,095
Gross profit	11,034	12,446	14,097	14,971	15,312	16,139	17,120
Operating Expenses							
SG&A, R&D, and other	7,796	8,766	9,922	10,469	10,563	11,193	11,847
Other (income) expenses	(15)	103	(58)	(140)	(196)	-	-
Earnings before interest and taxes	3,253	3,577	4,233	4,642	4,945	4,946	5,274
Interest expense	(3)	33	28	19	59	81	86
Earnings before tax	3,256	3,544	4,205	4,623	4,886	4,866	5,188
Taxes	805	851	932	863	646	642	685
Net operating profit after tax	2,451	2,693	3,273	3,760	4,240	4,224	4,503
Other	(21)						
Net income	2,472	2,693	3,273	3,760	4,240	4,224	4,503
Basic Shares	870.0	894.0	1,723.4	1,682.0	1,643.0	1,594.5	1,546.8
EPS	\$2.84	\$3.01	\$1.90	\$2.24	\$2.58	\$2.65	\$2.91
DPS	\$0.81	\$0.89	\$0.52	\$0.61	\$0.69	\$0.75	\$0.81

Appendix 4: Balance Sheets

Balance Sheets (in millions)							
Items	2013	2014	2015	2016	2017	2018E	2019E
Cash	3,337	2,220	3,852	3,138	3,808	3,799	3,701
Operating assets ex cash	10,289	11,476	12,124	11,887	12,253	12,926	13,719
Operating assets	13,626	13,696	15,976	15,025	16,061	16,725	17,421
Operating liabilities	3,748	4,853	6,153	5,313	5,143	5,452	5,809
NOWC	9,878	8,843	9,823	9,712	10,918	11,273	11,612
NOWC ex cash (NWC)	6,541	6,623	5,971	6,574	7,110	7,474	7,911
NFA	3,958	4,898	5,624	6,354	7,198	7,641	8,131
Invested capital	\$13,836	\$13,741	\$15,447	\$16,066	\$18,116	\$18,915	\$19,743
Marketable securities	-	-	-	-	-	-	-
Total assets	\$17,584	\$18,594	\$21,600	\$21,379	\$23,259	\$24,366	\$25,551
Short-term and long-term debt	\$1,388	\$1,373	\$1,260	\$2,038	\$3,802	\$4,177	\$4,302
Other liabilities	1,292	1,544	1,480	1,770	1,907	2,007	2,107
Debt/equity-like securities	-	-	-	-	-	-	-
Equity	11,156	10,824	12,707	12,258	12,407	12,731	13,334
Total supplied capital	\$13,836	\$13,741	\$15,447	\$16,066	\$18,116	\$18,915	\$19,743
Total liabilities and equity	\$17,584	\$18,594	\$21,600	\$21,379	\$23,259	\$24,366	\$25,551

Appendix 5: Sales Forecast

Sales (in millions)							
Items	2013	2014	2015	2016	2017	2018E	2019E
Sales	25,313	27,799	30,601	32,376	34,350	36,105	38,215
Growth		9.8%	10.1%	5.8%	6.1%	5.1%	5.8%
North America	10,387	12,299	13,740	14,764	15,216	15,825	16,616
Growth		18.4%	11.7%	7.5%	3.1%	4.0%	5.0%
% of sales	41.0%	44.2%	44.9%	45.6%	44.3%	43.8%	43.5%
Europe	5,415	6,366	7,126	7,315	7,698	7,898	8,127
Growth		17.6%	11.9%	2.7%	5.2%	2.6%	2.9%
% of sales	21.4%	22.9%	23.3%	22.6%	22.4%	21.9%	21.3%
China	2,453	2,602	3,067	3,785	4,237	4,771	5,391
Growth		6.1%	17.9%	23.4%	11.9%	12.6%	13.0%
% of sales	9.7%	9.4%	10.0%	11.7%	12.3%	13.2%	14.1%
Other	4,626	4,848	4,686	4,557	5,157	5,570	6,029
Growth		4.8%	-3.3%	-2.8%	13.2%	8.0%	8.3%
% of sales	18.3%	17.4%	15.3%	14.1%	15.0%	15.4%	6.0%
Converse	-	1,684	1,982	1,955	2,042	2,042	2,052
Growth			17.7%	-1.4%	4.5%	0.0%	0.5%
% of sales	0.0%	6.1%	6.5%	6.0%	5.9%	5.7%	5.4%
Footwear	14,539	16,208	18,318	19,871	21,081	22,385	23,694
Growth		11.5%	13.0%	8.5%	6.1%	6.2%	5.8%
% of sales	57.4%	58.3%	59.9%	61.4%	61.4%	62.0%	62.0%
Apparel	6,820	8,109	8,636	9,067	9,654	10,109	10,700
Growth		18.9%	6.5%	5.0%	6.5%	4.7%	5.8%
% of sales	26.9%	29.2%	28.2%	28.0%	28.1%	28.0%	28.0%
Converse	-	1,684	1,982	1,955	2,042	2,166	2,293
Growth			17.7%	-1.4%	4.5%	6.1%	5.8%
% of sales	0.0%	6.1%	6.5%	6.0%	5.9%	6.0%	6.0%
Equipment	1,405	1,670	1,632	1,496	1,425	1,444	1,529
Growth		18.9%	-2.3%	-8.3%	-4.7%	1.3%	5.8%
% of sales	5.6%	6.0%	5.3%	4.6%	4.1%	4.0%	4.0%

Appendix 6: Ratios

Sales (in millions)							
Items	2013	2014	2015	2016	2017	2018E	2019E
Profitability							
Gross margin	43.6%	44.8%	46.1%	46.2%	44.6%	44.7%	44.8%
Operating (EBIT) margin	12.9%	12.9%	13.8%	14.3%	14.4%	13.7%	13.8%
Net profit margin	9.8%	9.7%	10.7%	11.6%	12.3%	11.7%	11.8%
Activity							
NFA (gross) turnover		6.28	5.82	5.41	5.07	4.87	4.85
Total asset turnover		1.54	1.52	1.51	1.54	1.52	1.53
Liquidity							
Op asset / op liab	3.64	2.82	2.60	2.83	3.12	3.07	3.00
NOWC Percent of sales		33.7%	30.5%	30.2%	30.0%	30.7%	29.9%
Solvency							
Debt to assets	7.9%	7.4%	5.8%	9.5%	16.3%	17.1%	16.8%
Debt to equity	12.4%	12.7%	9.9%	16.6%	30.6%	32.8%	32.3%
Other liab to assets	7.3%	8.3%	6.9%	8.3%	8.2%	8.2%	8.2%
Total debt to assets	15.2%	15.7%	12.7%	17.8%	24.5%	25.4%	25.1%
Total liabilities to assets	36.6%	41.8%	41.2%	42.7%	46.7%	47.8%	47.8%
Debt to EBIT	0.43	0.38	0.30	0.44	0.77	0.84	0.82
EBIT/interest	(1,084)	108.39	151.18	244.32	83.81	61.36	61.56
Debt to total net op capital	10.0%	10.0%	8.2%	12.7%	21.0%	22.1%	21.8%
ROIC							
NOPAT to sales	9.7%	9.8%	10.8%	11.7%	12.5%	11.9%	12.0%
Sales to NWC		4.22	4.86	5.16	5.02	4.95	4.97
Sales to NFA		6.28	5.82	5.41	5.07	4.87	4.85
Sales to IC ex cash		2.52	2.65	2.64	2.52	2.45	2.45
Total ROIC ex cash		24.7%	28.5%	30.8%	31.5%	29.2%	29.4%
NOPAT to sales	9.7%	9.8%	10.8%	11.7%	12.5%	11.9%	12.0%
Sales to NOWC		2.97	3.28	3.31	3.33	3.25	3.34
Sales to NFA		6.28	5.82	5.41	5.07	4.87	4.85
Sales to IC		2.02	2.10	2.05	2.01	1.95	1.98
Total ROIC		19.7%	22.6%	24.0%	25.1%	23.2%	23.7%
NOPAT to sales	9.7%	9.8%	10.8%	11.7%	12.5%	11.9%	12.0%
Sales to EOY NWC		3.87	4.20	5.12	4.92	4.83	4.83
Sales to EOY NFA		6.40	5.68	5.44	5.10	4.77	4.70
Sales to EOY IC ex cash		2.41	2.41	2.64	2.50	2.40	2.38
Total ROIC using EOY IC ex cash		23.3%	23.6%	28.4%	29.2%	30.0%	28.4%
NOPAT to sales	9.7%	9.8%	10.8%	11.7%	12.5%	11.9%	12.0%
Sales to EOY NOWC		2.56	3.14	3.12	3.33	3.15	3.29
Sales to EOY NFA		6.40	5.68	5.44	5.10	4.77	4.70
Sales to EOY IC		1.83	2.02	1.98	2.02	1.90	1.94
Total ROIC using EOY IC		17.7%	19.8%	21.3%	23.5%	23.7%	23.2%
ROE							
5-stage							
EBIT / sales		12.9%	13.8%	14.3%	14.4%	13.7%	13.8%
Sales / avg assets		1.54	1.52	1.51	1.54	1.52	1.53
EBT / EBIT		99.1%	99.3%	99.6%	98.8%	98.4%	98.4%
Net income / EBT		76.0%	77.8%	81.3%	86.8%	86.8%	86.8%
ROA		14.9%	16.3%	17.5%	19.0%	17.7%	18.0%
Avg assets / avg equity		1.65	1.71	1.72	1.81	1.89	1.92
ROE		24.5%	27.8%	30.1%	34.4%	33.6%	34.6%
			13.53%	8.28%	14.14%		
3-stage							
Net income / sales		9.7%	10.7%	11.6%	12.3%	11.7%	11.8%
Sales / avg assets		1.54	1.52	1.51	1.54	1.52	1.53
ROA		14.9%	16.3%	17.5%	19.0%	17.7%	18.0%
Avg assets / avg equity		1.65	1.71	1.72	1.81	1.89	1.92
ROE		24.5%	27.8%	30.1%	34.4%	33.6%	34.6%
Payout Ratio		29.7%	27.5%	27.2%	26.7%	28.4%	27.8%
Retention Ratio		70.3%	72.5%	72.8%	73.3%	71.6%	72.2%
Sustainable Growth Rate		17.2%	20.2%	21.9%	25.2%	24.1%	25.0%

Appendix 8: 3-stage DCF Model

	First Stage		Second Stage				
Cash flows	2018	2019	2020	2021	2022	2023	2024
<i>Sales Growth</i>	5.1%	5.8%	5.5%	5.5%	5.8%	5.9%	6.0%
<i>NOPAT / S</i>	11.9%	12.0%	12.0%	12.0%	12.1%	12.2%	12.2%
<i>S / NOWC</i>	3.20	3.29	3.25	3.25	3.25	3.25	3.29
<i>S / NFA (EOY)</i>	4.73	4.70	4.70	4.70	4.70	4.70	4.70
<i>S / IC (EOY)</i>	1.91	1.94	1.92	1.92	1.92	1.92	1.94
<i>ROIC (EOY)</i>	22.7%	23.2%	23.1%	23.1%	23.2%	23.4%	23.6%
<i>ROIC (BOY)</i>		24.2%	24.5%	24.3%	24.6%	24.8%	24.8%
<i>Share Growth</i>		-3.0%	-2.4%	-2.3%	-2.3%	-2.3%	0.0%
Sales	\$36,105	\$38,215	\$40,317	\$42,535	\$45,002	\$47,657	\$50,516
NOPAT	\$4,293	\$4,578	\$4,838	\$5,104	\$5,445	\$5,814	\$6,163
<i>Growth</i>		6.6%	5.7%	5.5%	6.7%	6.8%	6.0%
- Change in NOWC	355	339	793	682	759	817	686
<i>NOWC EOY</i>	11273	11612	12405	13088	13847	14664	15349
<i>Growth NOWC</i>		3.0%	6.8%	5.5%	5.8%	5.9%	4.7%
- Chg NFA	443	490	447	472	525	565	608
<i>NFA EOY</i>	7,641	8,131	8,578	9,050	9,575	10,140	10,748
<i>Growth NFA</i>		6.4%	5.5%	5.5%	5.8%	5.9%	6.0%
Total inv in op cap	799	828	1241	1154	1284	1382	1294
Total net op cap	18915	19743	20983	22138	23422	24803	26098
FCFF	\$3,495	\$3,749	\$3,597	\$3,950	\$4,161	\$4,432	\$4,869
<i>% of sales</i>	9.7%	9.8%	8.9%	9.3%	9.2%	9.3%	9.6%
<i>Growth</i>		7.3%	-4.1%	9.8%	5.3%	6.5%	9.8%
- Interest (1-tax rate)	70	74	79	84	89	94	100
<i>Growth</i>		6.3%	6.0%	6.0%	6.0%	6.0%	6.0%
FCFE w/o debt	\$3,425	\$3,675	\$3,519	\$3,867	\$4,073	\$4,338	\$4,769
<i>% of sales</i>	9.5%	9.6%	8.7%	9.1%	9.1%	9.1%	9.4%
<i>Growth</i>		7.3%	-4.3%	9.9%	5.3%	6.5%	9.9%
/ No Shares	1594.5	1546.8	1,510.5	1,475.7	1,442.5	1,409.4	1,409.4
FCFE	\$2.15	\$2.38	\$2.33	\$2.62	\$2.82	\$3.08	\$3.38
<i>Growth</i>		10.6%	-2.0%	12.5%	7.8%	9.0%	9.9%
* Discount factor	0.97	0.88	0.81	0.74	0.67	0.61	0.56
Discounted FCFE	\$2.08	\$2.10	\$1.88	\$1.93	\$1.90	\$1.88	\$1.89

Appendix 8: 3-stage DCF Model

Third Stage							
Terminal value P/E							
Net income	\$4,224	\$4,503	\$4,759	\$5,021	\$5,357	\$5,720	\$6,063
<i>% of sales</i>	11.7%	11.8%	11.8%	11.8%	11.9%	12.0%	12.0%
EPS	\$2.65	\$2.91	\$3.15	\$3.40	\$3.71	\$4.06	\$4.30
<i>Growth</i>		9.9%	8.2%	8.0%	9.1%	9.3%	6.0%
Terminal P/E							24.00
* Terminal EPS							\$4.30
Terminal value							\$103.26
* Discount factor							0.56
Discounted terminal value							\$57.67
Summary							
First stage	\$4.18	Present value of first 2 year cash flow					
Second stage	\$9.48	Present value of year 3-7 cash flow					
Third stage	\$57.67	Present value of terminal value P/E					
Value (P/E)	\$71.33	= value at beg of fiscal yr 2018					