

# Abercrombie and Fitch

Firm valuation and Financial Statement Analysis

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## Analyst Recommendation

Abercrombie: Sell (Overvalued), as of November 1<sup>st</sup>, 2015

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Observed Price (11/1/2015)</td> <td style="width: 50%;">\$21.19</td> </tr> <tr> <td>52 Week Range</td> <td>\$15.42-\$30.10</td> </tr> <tr> <td>Revenue</td> <td>\$3.74 Billion</td> </tr> <tr> <td>Market Capitalization</td> <td>\$1.45 Billion</td> </tr> <tr> <td>Shares Outstanding</td> <td>71.8 Million</td> </tr> <tr> <td>Book Value per Share</td> <td>\$18.84</td> </tr> <tr> <td>Return on Equity</td> <td>3.00%</td> </tr> <tr> <td>Return on Assets</td> <td>1.82%</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Cost of Capital</b></td> </tr> <tr> <td>T-bill(Note) rate used</td> <td>Adj. 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## Executive Summary

Abercrombie & Fitch (Abercrombie) is a major apparel retailer that not only operates in the United States, but also 17 other countries in Europe, Asia, and Latin America. They primarily sell clothing and accessories to a “young adult” target market. Below, we have summarized our company valuations and financial statement analysis for Abercrombie.

### Industry Overview

What the apparel industry does is generate retail sales of various types of clothing and accessories. These include jeans, coats, shirts, shoes, and other types of wearable fashion. The apparel industry is very large and is made up of different segments. Abercrombie’s market segment is one of retailers that sell primarily in shopping malls and target teenage boys and girls. In order to conduct a more accurate comparative analysis, we needed to compare Abercrombie to other firms in its market segment. The firms we chose to compare it to are American Eagle, Gap, and Aeropostale. For the sake of this report, when we discuss Abercrombie’s industry, we are referring to its market segment.

While these firms are not exactly identical to each other, they operate in very similar ways. All four of them design all the clothes they sell, but they all have them manufactured by third party vendors. They are also all publicly traded companies and managed by shareholders. They also share other characteristics like leasing many physical stores and holding a lot of inventory.

In a way, this industry has been seeing changes in their operations. The primary source of this industry’s revenue comes from sales done in its brick and mortar stores. However, we have noticed that an increasing amount of business is being done on direct-to-consumer sales on each firm’s website. We believe this is because of a new trend of online sales becoming more popular. This is significant because it could change

the traditional operations of the industry by closing down stores and relying more on online sales.

By using Porter's Five Forces of competition analysis, we were able to find the level of competition in each of his five categories. We found that the rivalry among existing firms was high, threat of new entrants was high, threat of substitute products was high, bargaining power of customers was high, and the bargaining power of suppliers was low. These high levels of competition mean that the firms in this industry are price-takers and have little control over how much they can charge customers.

Category	Competition/Bargain Power Level
Rivalry Among Existing Firms	High
Threat of New Entrants	High
Threat of Substitutes Products	High
Bargaining Power of Customers	High
Bargaining Power of Suppliers	Low



## Accounting Analysis

Because Abercrombie is a publicly traded company, they are required to file their 10-K reports with the SEC while following GAAP's guidelines. Under GAAP rules, firms are allowed to adopt certain accounting policies that may benefit them in how they present themselves. Unfortunately, this can lead to certain important information being left out of the statements. This is why it was important for us to look for any "red flags" while valuing this company.

While we were looking through Abercrombie's 10-K, we made sure to examine two types of their accounting policies. Type one policies relate to how the company discloses their key success factors within their footnotes. Type two policies relate to certain accounts in the financial statements and how they may be distorted in a GAAP-approved way to mislead the reader.

For the Type-One analysis, we first identified Abercrombie's key success factors as brand image, shopping experience, product quality, product variety and innovation of fashion. We then read through the entire 10-K and 8-K looking for their own discussion about these topics. We found that Abercrombie actually had a lot to say about these factors throughout the reports. Because of this, we identify Abercrombie as a highly disclosed firm.

While doing the Type-Two analysis, we looked closely at Abercrombie's financial statements for possibly distorted accounts. Three common accounts that can be misstated through GAAP are lease liabilities, research & development, and goodwill. Abercrombie doesn't have goodwill or research & development accounts so those do not apply for them. However, leases do make up a large part of their business since they lease about 1,000 stores. We found that they had been conservative when reporting their lease obligations so we did the calculations and made this table with our estimates of the true operating lease liabilities due in the future.

	1	2	3	4	5	6
2015	409,046					
2016		366,909				
2017			279,960			
2018				210,674		
2019					165,307	
Thereafter						525,286

\*Data in thousands

After assessing these true values for the lease obligations, we identified Abercrombie’s level of disclosure for Operating Leases as high, but with an aggressive style of accounting.

	Level of Disclosure	Style of Accounting
Goodwill	--	--
Operating Leases	High	Aggressive
Research & Development	--	--

### Financial Analysis

To do the financial analysis, we used the data from the financial statements of Abercrombie to compare it to its competitors. Since these four companies are all of different sizes, we can’t beneficially compare their individual accounts to each other. However, we used this data to find the ratios that would measure percentages which can allow different sized companies to be compared with each other. To get a broad sense of the company’s performance and financial situation, we used liquidity ratios, efficiency ratios, profitability ratios, financial leverage ratios and growth rates.

Liquidity ratios measure how much available cash the firm has on hand so that they can repay any short-term debts. The liquidity ratios we used for the industry are the current ratio, quick ratio, and working capital turnover. From our analyses, we have

identified that Abercrombie does not have as much liquidity as it should when compared to industry averages.

Efficiency ratios measure how efficient a firm is with production and generating sales. The efficiency ratios we used for this industry are inventory turnover, days' supply of inventory, accounts receivable turnover, asset turnover, and cash to cash cycle. From our analyses we found that they are mostly underperforming when it comes to efficiency.

Profitability ratios measure how profitable the firm is. The ratios we used to measure profitability are gross profit margin, operating profit margin, net profit margin, return on assets, and return on equity. From these ratios we identified that Abercrombie's profitability is performing slightly above average.

Financial leverage ratios measure how much debt the company has proportionally. For this report, we only looked at the debt-to-equity ratio. We found that Abercrombie's proportion of debt to equity was below the industry's average.

Lastly, the growth rates show how much the company can grow without changes in its capital structure. The growth rates we calculated are the internal growth rate and the sustainable growth rate. We found that Abercrombie's growth rates are also slightly above average.

With all of these ratios calculated, we were then able to find the Altman z-scores for each firm. The Altman z-score measures how likely a firm will default on its loans. Over the past six years, we found that the industry average z-score has been declining while Abercrombie's has been increasing. This has caused Abercrombie's z-score to be above the average for the first time in 2014.

Lastly, we were able to calculate Abercrombie's cost of debt, cost of equity, and weighted average cost of capital. We found their cost of debt to be 3.37%, their cost of equity is expected to be 18.4%, and their expected before-tax weighted average cost of capital is 12.09%.

## Valuation Summary

The final step to our analysis was to conduct a valuation analysis. In order to do this we used comparable valuation and intrinsic valuation. For each method, we used November 1<sup>st</sup>, 2015's observed stock price of \$21.19. By using a 10% fair-value range, our lower and upper bounds for the analyses are \$23.31 and \$19.07. When an analysis states that the price is above \$23.31, we will identify it as undervalued for that regard. However if it is valued below \$19.07, we will identify it as overvalued. If it is valued between this range, we will say it is fairly valued.

The method of comparables uses different ratios and multiples to compare Abercrombie's with the industry's. Using the industry average, we are then able to use that value to calculate a new price for Abercrombie if their ratio conforms with the industry in the future. The ratios/multipliers that we used are the Trailing P/E, Forward P/E, Dividend-to-Price, Price-to-Book, P.E.G., Price/EBITDA, EV to EBITDA, and Price/FCF. As you can see from the chart below, they are split evenly with four saying it is overvalued and four being undervalued.

<b>ANF</b>	<b>Results</b>
<b>Trailing P/E</b>	overvalued
<b>Forward P/E</b>	overvalued
<b>Dividend to Price</b>	undervalued
<b>Price to Book (P/B)</b>	undervalued
<b>P.E.G.</b>	overvalued
<b>Price/EBITDA</b>	undervalued
<b>EV to EBITDA</b>	undervalued
<b>Price/ FCF</b>	overvalued

Next we did intrinsic valuation. The intrinsic valuation involved using four different methods to come up with intrinsic values for the firm. We used the discounted

dividends model, discounted free cash flow model, residual income model, and the long-run residual income model. For the discounted dividends model, we found that the price should be between \$3.67 and \$11.71 which is why we stated it was undervalued for this measure. According to the discounted free cash flow model, the range was between \$4.61 and \$82.47. While some of these prices did indicate it was undervalued, most of the ones in the matrix stated that it was overvalued again. The range of prices for the residual income model was \$8.07 - \$12.91, implying that Abercrombie's price was overvalued here as well. Lastly the long-run residual income model gave a range from \$10.94 - \$16.63, so once again this states that Abercrombie's stock is overvalued. Since most of these valuations say that Abercrombie is overvalued, our official recommendation is that it is in fact overvalued.

## Abercrombie & Fitch

Abercrombie (market cap=\$1.45 Billion) is a retailer of casual clothing and accessories for women, men and kids, represented under the Abercrombie & Fitch (ANF), Abercrombie Kids, and Hollister brands. Although similar, each brand focuses on its niche within the market. ANF primarily focuses on a modern and casual luxury line of clothing for young adults, while ANF Kids targets the age group below. Hollister, the third and most differentiated of the brands, targets much of the same age group but with a more laid-back Southern California vibe. The company is operating 969 stores with over 80% of them located in the U.S.

<b>A&amp;F Inc.</b>	<b>% of Total Sales</b>	<b>% of Total Stores</b>
<b>US Stores</b>	50.17%	82.46%
<b>International Stores</b>	27.59%	21.28%
<b>Direct-to-Consumer</b>	22.24%	-
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

<b>A&amp;F Inc.</b>	<b>% of Total Sales</b>	<b>% of Total Stores</b>
<b>A&amp;F</b>	38.98%	28.79%
<b>A&amp;F Kids</b>	8.64%	12.59%
<b>Hollister</b>	52.37%	58.62%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

The brand was first established in 1892, and it was known as a supplier of outdoor gear. David T. Abercrombie started the company under his name, as a small waterfront shop and factory in Downtown New York. This store was inspired by David's love for the outdoors, and it became a shop that sold only highest-quality camping, fishing, and hunting gear. The clientele predominantly consisted of professional hunters, trappers, and explorers (BusinessInsider).

In 1900, a man called Ezra Fitch bought into the business and became a partner. By 1904, the name changed to Abercrombie & Fitch and by 1917 it had become one of the biggest sporting goods store worldwide. The company continued to grow until it went bankrupt in 1977. In 1988, The Limited Inc. purchased Abercrombie & Fitch and by 1999, ANF became an independent company again (BusinessInsider).

Today it exists as a publicly held company. The firm now operates with close to 1000 stores worldwide. However, with the turn of the century, the focus has been evolved to online sales through the omni-channel as a method to reach out to more customers and increase sales. Other priorities the company is planning to concentrate on are (1) improving store productivity and profitability, (2) selective international growth, and (3) reducing expenses (Abercrombie 10-K). With these changes, ANF is looking to improve upon their recent slide in past years.

With regards to Abercrombie's capital allocation, they plan to continue investing in the highest risk-adjusted return projects while returning cash to the shareholders as well (Abercrombie 10-k). Being at a low cost to enter the industry, Abercrombie is in an extremely competitive market across the world. There are three competitors on the

public exchange they compete with, and these are American Eagle, Gap, and Aeropostale. These firms typically target the same young adults and kids, attempting to win over a higher percentage of the market share.

The largest of the competitors is Gap Inc. (market cap of \$14.43 billion). Originally incorporated in the State of California in the year 1969, they have since grown into one of the largest retailers in the world. During the fiscal 2014 year Gap generated \$16.435 billion (\$2.5 billion online) in sales and grew to over 3,500 stores worldwide. Gap's two primary brands providing competition to A&F are "Gap" and "Old Navy," but including all five brands it is composed of: (1) "Gap"-A retailer of apparel and accessories focused on capturing the American casual style. Founded in San Francisco in 1969, it targets both men and women as well as all ages. Having grown to 968 stores in North America and 421 stores internationally during 2014, the Gap brand was responsible for \$6.165 billion in sales. (2) "Banana Republic"- A global apparel and accessories retailer that delivers modern, covetable style for both men and women. Acquired with two stores in 1983 as a travel and adventure outfitter, it has since grown to 596 stores in North America and another 54 stores internationally generating \$2.922 billion in sales during the fiscal 2014 year. (3) "Old Navy"- First opening in 1994, focused on making current American essentials accessible to every family, sales on-trend clothing and accessories for adults and children at exceptional prices. Primarily based in North America until Old Navy expanded into Asia during 2012, by the end of the fiscal 2014 year Old Navy had grown to 1,004 stores in North America and 18 stores in Asia generating a total of \$6.619 billion in sales. Which accounts for the greatest percentage of all five Gap brands. (4) "Athleta"- A premier fitness and lifestyle brand targeting the women's active apparel market. Acquired in 2008, Athleta has expanded to 65 stores in North America but has yet to expand internationally. (5) "Intermix"- Acquired at the end of 2012, Intermix is a retailer of must-have styles from popular emerging and established designers. Staying within North America, the



brand had a 37 stores by the end of the fiscal 2014 year. Athleta combined with Intermix accounted for only \$729 million of Gap Inc.'s total 2014 Sales (Gap 10-K).

<b>GAP INC.</b>	<b>Sales(\$ in billions)</b>	<b>Percent of total</b>
<b>Old Navy</b>	6.619	40.27%
<b>Gap</b>	6.165	37.51%
<b>Banana Republic</b>	2.922	17.78%
<b>Athleta &amp; Intermix</b>	0.729	4.44%
<b>Total</b>	16.435	100.00%

The key to Gap's success is its ability to develop and evolve existing brands. Gap continues to invest in itself, as they believe their distinct brands are their most important assets. Other areas Gap believes it can help improve itself is through customer experience, enhancements of online shopping sites, international expansion, remodeling of existing stores, and improving the supply chain (Gap 10-K).

American Eagle Outfitter (market cap of \$3.32 billion) founded in 1977, is an apparel and accessory retailer that targets primarily teenagers and young adults. American Eagle is composed of two brands, "American Eagle Outfitter" and "Aerie," that accounted for 1,056 stores and \$3.283 billion in total sales during the fiscal 2014 year. With 920 stores in the U.S. (including Commonwealth of Puerto Rico), 101 stores in Canada, and 35 stores internationally, the company has nearly 97% of its stores located in North America.

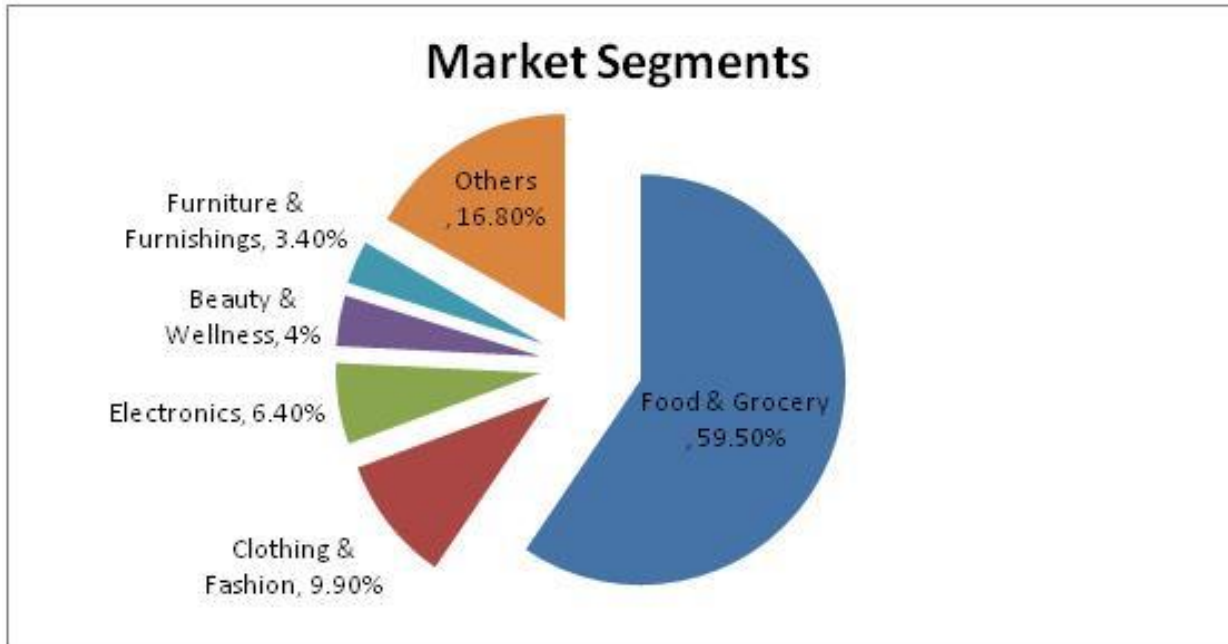
<b>AEO</b>	<b>Stores</b>
<b>American Eagle Outfitters</b>	955
<b>Aerie</b>	101
<b>Total</b>	1,056

Aeropostale Inc. (market cap of \$75.54 million) founded in the early 1980's, is a retailer of casual apparel and accessories, focused on targeting 14 to 17 year-old men and women through its Aeropostale and 4 to 12 year-olds through the P.S. from Aeropostale stores and website. During the fiscal 2014 year, Aeropostale had total Sales of \$1.838 billion through store and online stores, and ended the year operating 860 stores. Of these stores, 799 (includes all 26 P.S. stores) are operated in the U.S. and Puerto Rico, while the other 61 are operated in Canada. In addition as of January 31, 2015, Aeropostale had license agreements covering international countries that totaled 239 (56 P.S. stores) stores that had licenses to operated. Brand differentiation is key to Aeropostale's success as it is their priority to gain market share by differentiating the brand through desired products. The company plans to continue improving its current line of merchandise and adding new products categories such as bedding and home accessories it recently added. Other focuses of improvement within the company lie with customer insight and engagement, store productivity, real-estate portfolio optimization, continue to expand internationally, and improving E-commerce profits (Aeropostale 10-K).

## Industry Overview

There are hundreds of various niches in the retail industry. There are five different areas covering a total of 18 Industry sectors. These sectors can vary depending on their size and the number of people they have employed. The segment we will focus on is the apparel retail industry.

According to Census.gov, the apparel retail industry generated \$244,548 billion in revenue in 2012. One of the most profitable segments is women's clothing, which accounts for about 50% of the total revenue. There are a large number of retailers that make up for the bulk portion of the apparel market, but also smaller business, such as boutiques and niche apparel stores. The larger apparel retailers have a slightly small advantage when it comes to suppliers. Due to their orders of such large quantities of apparel, they receive better deals from suppliers. Small companies pay higher prices to the suppliers, but they make up by selling just certain products and certain styles of clothing (Chron). Based on the type of products and size in business, we identified the main competitors as Aeropostale Inc., American Eagle Inc., and Gap Inc.



## Porter's Five Forces Model

Porter's Five Forces Model is the tool we will use to determine where the power lies within the industry. Below is a table presentation of the Five Forces outline. The reasoning behind this analysis is to define the strengths and weaknesses of the competitors within the market, barriers that can be developed to prevent others from entering the market and threats of the substitutes. The bargaining power of suppliers and buyers:

Table 1: Porter's Five Forces Analysis Summary

Category	Competition/Bargain Power Level
Rivalry Among Existing Firms	High
Threat of New Entrants	High
Threat of Substitutes Products	High
Bargaining Power of Customers	High
Bargaining Power of Suppliers	Low

By analyzing the Five Forces, we will show how we concluded that the Apparel Industry, in general, is highly competitive. The rivalry among existing firms is relatively intense. The apparel industry is divided into different age sections, but ANF is mainly competing against Aeropostale, Gap, and American Eagle. These competitors offer similar products and services, and it makes it hard for all of them to have power with regards to suppliers and buyers. There is a high threat of new entrants in this industry due to the low barriers. A new firm does not have a mover advantage barrier because no company has an upper hand in this market. The threat of substitute products is rather high as well in this industry. Later on, we will be discussing in more depth about the relative price and performance of their competitors. Another factor that we will be talking about is the buyer's willingness to switch to another product. The fourth force we will emphasize is the bargaining power of buyers. This is analyzing how easy it is for

buyers to drive prices down. In the apparel industry, the power of bargaining is high due to different companies offering similar products. Last but not least we will address the bargaining power of suppliers. Suppliers in this industry are mostly price takers. They cannot drive up their prices because there are a large number of competitors that can offer the same product. It is all in the uniqueness of their product or services.

## Rivalry Amongst Existing Firms

This section of the Five Force analysis examines the forces that influence competition among existing firms. There are many ways that rivalry in industries can be measured. For the purpose of this report, we will focus on these elements: industry growth rate, concentration and balance of competitors, the degree of difference, switching cost, fixed and variable cost, excess capacity and exit barriers. Many factors dictate rivalry in markets. In the apparel industry, rivalry is very high because there are a lot of firms in the market. As previously stated, we have identified Abercrombie's three main competitors as American Eagle, Aeropostale, and GAP. The main goal of a firm in a highly competitive market is to find a competitive edge over rivals because this will lead to higher profits.

### Industry Growth Rate

A significant factor of rivalry in the industry is the rate of growth it is experiencing. When the growth rate is high, companies' sales grow in proportion to the market so there is less of a need to compete. But when growth rates are low, there is only so much business available for each company that they must compete with their rivals to make their sales grow. The apparel industry has been fluctuating in sales numbers over the last five years. Below, we have the market segment's total revenues and percentage of growth (or shrinkage) in the last 5 years:

	2010	2011	2012	2013	2014
<b>Total Revenues of Market Segment</b>	23,478,498	24,169,383 Grew 2.9%	26,023,785 Grew 7.7%	25,661,601 Shrunk 1.6%	25,300,560 Shrunk 1.4%

Data in thousands (excluding percentages)

As you can see, the market segment started in 2010 with about \$23.4 billion. In the first two years, it experienced annual growths of 2.9% and 7.7% making revenues peak in 2012 at \$26 billion. Then in the next two years, total sales shrunk 1.6% and 1.4% bringing the total back down to \$25.3 billion. Next we can take a look at each of the four companies' sales throughout the year. The following table shows the net sales for Abercrombie and the identified competitors over the last five years:

Source: 10-Ks of the companies from the last fiscal year. Data in thousands

	2010	2011	2012	2013	2014
<b>Abercrombie and Fitch</b>	3,468,770	4,158,058	4,510,805	4,116,897	3,744,030
<b>American Eagle Outfitters</b>	2,945,294	3,120,065	3,475,802	3,305,802	3,282,867
<b>The GAP</b>	14,664,000	14,549,000	15,651,000	16,148,000	16,435,000
<b>Aeropostale</b>	2,400,434	2,342,260	2,386,178	2,090,902	1,838,663

From this data we can see that sales totals are fluctuating throughout the industry. Abercrombie’s and American Eagle’s sales seem to have followed the trend of the market. They each started in 2010 at \$3.4 billion and \$2.9 billion respectively. They then peaked in 2012 at \$4.5 billion and \$3.4 billion. Then, they fell back down to \$3.7 billion and \$3.2 billion. Gap experienced growth throughout the 5-year period starting in 2010 at \$14.6 billion, steadily increasing to \$16.4 billion in 2014. Aeropostale however saw almost consistent losses in sales starting in 2010 at \$2.4 billion and dropped to \$1.8 billion in 2014.

The results of this competition between industry rivals can also be seen in the change of each firm’s percentage hold on the industry’s sales. Below is a table that shows the change in control over the market segment’s total sales throughout the last 5 years:

	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Abercrombie and Fitch</b>	14.8% of segment	17.2% of segment	17.3% of segment	16% of segment	14.8% of segment
<b>American Eagle Outfitters</b>	12.5% of segment	12.9% of segment	13.4% of segment	12.9% of segment	12.9% of segment
<b>The GAP</b>	62.5% of segment	60.2% of segment	60.1% of segment	62.9% of segment	64.9% of segment
<b>Aeropostale</b>	10.2% of segment	9.7% of segment	9.2% of segment	8.1% of segment	7.3% of segment



Abercrombie went from having 14.8% of the segment's total sales to 17.3%, back down to 14.8%. American Eagle slightly increased from 12.4% to 12.9%. Gap increased from 62.5% to 64.9% while Aeropostale shrunk from 10.2% to 7.3%. This data implies that in the competition for industry dominance over the past 5 years, American Eagle and Gap have been attaining a stronger hold on the market. Meanwhile, Abercrombie has been maintaining their hold and Aeropostale is losing their percentage to Gap and American Eagle.

The low growth rate seen in the tables above indicate that competition in the apparel industry is rising. The stagnant growth of the market is important because it means that in order for Abercrombie to increase sales, they will have to draw customers away from its rivals and into their own stores/websites. It also means that this market should be more price-taking instead of price-setting.

### Concentration and Balance of Competitors

The amount of concentration in an industry is determined by both the number of firms within the industry and the relative sizes of those firms. The fewer firms in an industry, the less competition there will be because there aren't as many rivals. The more companies in an industry, the more competition there is because each company would have fewer sales than they would otherwise. One way to measure competition in this industry would be by comparing their sales per square foot over time. Since these firms have stores with different sizes and layouts, sales per square foot show us how effective at generating revenue with the floor space that they have. As we can see from the table below, Abercrombie and American Eagle both follow the same trend from industry's total sales by starting at \$390 and \$422 per square foot in 2010. They then peak in 2012 at \$485 and \$489, but then they fall back down to \$381 and \$420 in 2014. Gap's sales per square foot start in 2010 at \$342 and gradually increase to \$361

in 2014. Aeropostale starts off in 2010 at a relatively good number of \$626 per square foot. However, it rapidly decreases year after year all the way down to \$403 in 2014. This data tells us that American Eagle is currently outperforming the other firms in sales per square foot. However, if the trend of Gap's sales per square foot remaining steady at around \$360 while the other companies continue to fall, Gap could be on track to having the advantage within the next decade.

### Sales per Square Foot

	2010	2011	2012	2013	2014
<b>Abercrombie</b>	\$390	\$463	\$485	\$417	\$381
<b>American Eagle</b>	\$422	\$438	\$489	\$444	\$420
<b>Gap</b>	\$342	\$337	\$364	\$365	\$361
<b>Aeropostale</b>	\$626	\$561	\$538	\$445	\$403

Source: 10-Ks of the companies for their respective fiscal year.

### Degree of Differentiation

The idea of differentiation is that a firm must set themselves apart in some way to gain an advantage over their rivals. This can be done by creating an image for your firm that is desirable, by offering quality that customers want, or by offering a good shopping experience. In the apparel industry, different firms put more emphasis on different aspects. One example of how successful brand image has been for the firms in this industry is by looking at the number of followers each brand has on the social

networking website Twitter. Abercrombie has 590,000 followers, American Eagle has 468,000, GAP has 445,000, and Aeropostale only has 300,000. These figures are important because they show the popularity of each brand and the more popular a brand is, the more people will want to do business with them. In a stagnant market like the apparel industry, a competitive advantage such as positive differentiation could be important to increase a firm's sales.

### Switching Costs

Switching costs are the costs that companies would pay if they decided to move into a different industry. Depending on what type of industry an apparel firm wanted to move into, the switching costs could be significant. In 2014, existing leases cost Abercrombie \$407 million, American Eagle \$301 million, Aeropostale \$397 million, and GAP \$1.1 billion. If one of these companies decided to go into an industry that did not require retail stores, they would still be obligated to pay the rest of the rent bills unless they can sublease them. On top of that, they may also have to acquire new inventory and any additional plants, properties, or equipment. This alone would be a really expensive switching cost. However if they wanted to switch to an industry that could still use their stores, like fast-food, then the costs wouldn't be as high. The only major costs would be new ingredient inventory and refurbishing the store to accommodate cooking needs with \$15,000-\$50,000 per store (baseequipment.com) depending on what type of food is served. So because of these two routes these companies could take, the switching costs could be either high or low.

## Fixed and Variable Costs

A company's expenses can be categorized as either fixed costs or variable costs. Fixed costs are expenses that a firm must pay in order to continue operating. In the apparel industry they include rent/operating leases, wages, utilities, and insurance. Variable costs are those cost that can change from period to period and can be increased or decreased based on the financial needs of the company. Variable cost for the apparel industry can include marketing and advertising, seasonal employees, and inventory. In the table below, we have calculated the fixed to variable cost ratios of each firm using the high-low method. Since there is no available information on the number of products sold by the company, we were only left with sales to use as the activity level which will provide data that may not be as accurate, but still worthwhile to look at.

### Variable to Fixed Cost Ratios

	2010	2011	2012	2013	2014
<b>Abercrombie</b>	3.84	3.92	4.12	3.87	3.75
<b>American Eagle</b>	4.01	4.1	4.24	4.11	3.92
<b>Gap</b>	2.89	2.97	3.2	3.24	3.26
<b>Aeropostale</b>	3.48	3.41	3.18	3.02	2.85

Once again, we are seeing the same trend we saw in the total sales and sales per square foot. Abercrombie and American Eagle started with ratios of 3.84 and 4.01 in 2010. As total industry sales increased in the next two years, so did the ratios that went up to 4.12 and 4.24. As total sales decreased, so did their ratios that went all the

way down to 3.75 and 3.92. Meanwhile, Gap's had steadily increased from 2.89 in 2010 to 3.26 in 2014. Aeropostale saw the same decrease in their ratios as their sales declined from 3.48 in 2010 to 2.85 in 2014. Since variable costs in these years are mostly 3-4 times bigger than fixed costs, this industry has a high proportion of variable costs which is a price setting quality.

### Exit Barriers

An exit barrier is something that makes it difficult for a firm to get out of its current business. If exit barriers are high a firm may be forced to continue operating in a declining market and losing money, or just not meeting the profit margin desired. Exit barriers for the apparel industry can include excess inventory, operating leases, manufacturing contracts, and marketing/distributing contracts. Below is a table with each firm's current obligations:

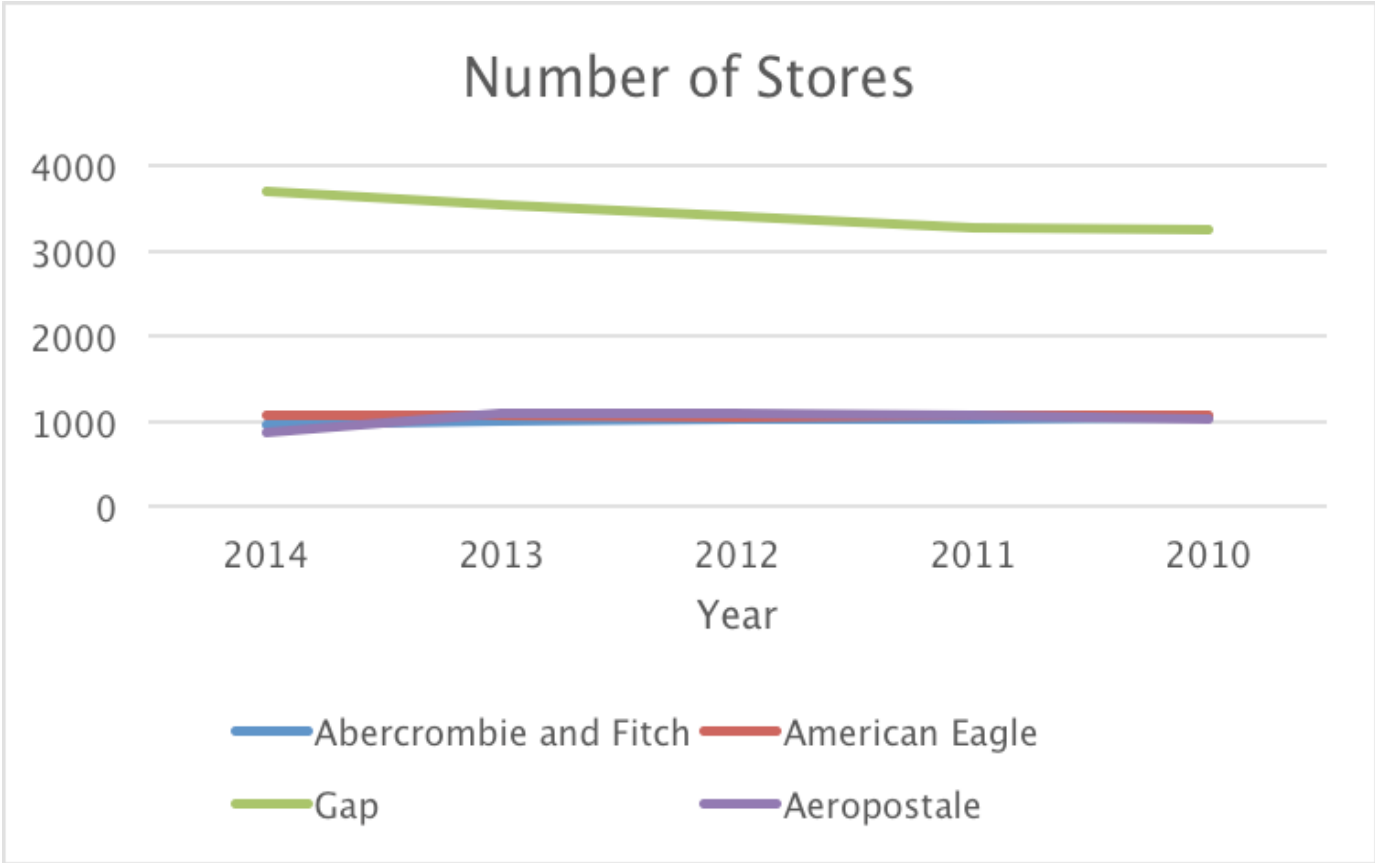
#### **Excess Inventories, Remaining Leases, and Contracts Outstanding**

<b>Abercrombie and Fitch</b>	<b>American Eagle Outfitters</b>	<b>The GAP</b>	<b>Aeropostale</b>
\$460,000,000	\$278,000,000	\$1,890,000,000	\$130,000,000

Source: 10-Ks of the companies from the last fiscal year.

If any of the firm's in this industry needed to exit, Abercrombie would have \$460 million on its hands while American Eagle would have \$278 million, GAP would have \$1.89 billion, and Aeropostale would have \$130 million remaining.

In addition to this, the graph below displays the number of stores for each competitor. Abercrombie, American Eagle, and Aeropostale have close to 1,000 stores each. Whereas GAP has close to 3,300 stores although they used to have nearly 3,700. Companies wishing to exit the industry with all these leased stores would have to pay the high price of the previously mentioned lease liabilities without having them generating income. That is why this industry has high exit barriers, giving it a price-taking characteristic.



## Conclusion

After examining these factors of rivalry among existing firms it is clear that the apparel industry has a high degree of rivalry. This comes largely from the high number of firms and fractions in the industry. This high degree of rivalry also creates the need for firms to be price takers instead of price setters.

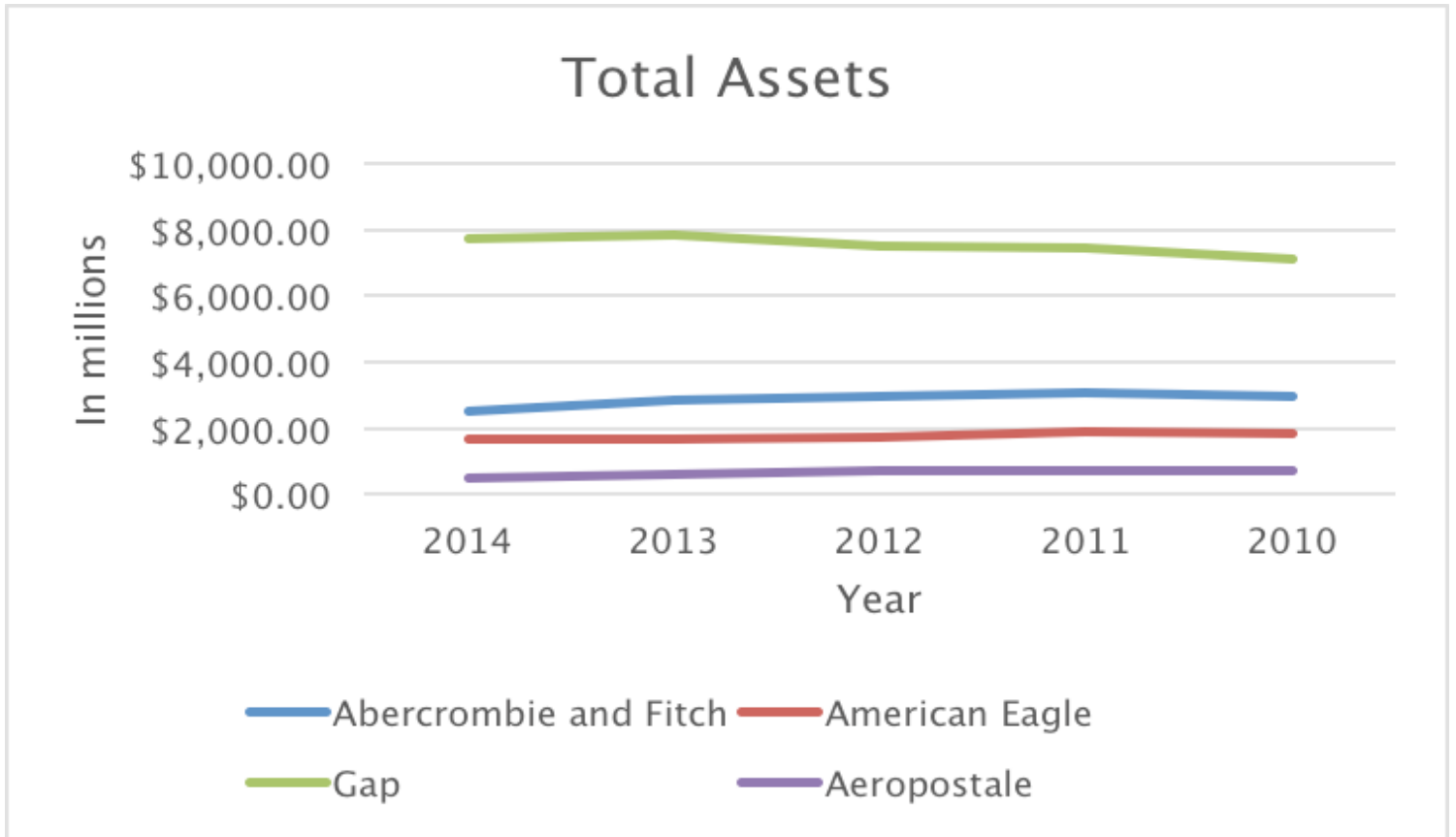
## Threat of New Entrants

Today, no firm is safe from the threat of new entrants into their industry. With today's financial creativity, more and more firms now have the resources to expand their footprint and enter into new markets. Entering into a new market will have its challenges. Firms should estimate the risk involved, and must ensure that it has the infrastructure, administrative, and financial resources to overcome the barriers involved with entering into a new market. These barriers include: economies of scale, first mover advantage, distribution access, relationships, and legal barriers.

## Economies of Scale

Economies of scale are the cost advantages that a company can achieve where output cost per unit decreases with increasing number of productions since fixed costs are distributed among more units of output. It is easier for a firm to enter the market if a firm has the financial resources to do so. In order for this to happen, firms must be willing to either take on a large capacity which might not be utilized until they build their brand, or they can operate at suboptimal capacity. Fortunately for existing firms, new companies that enter into the industry will have to initially suffer from a cost disadvantage in competing with existing firms. In the retail apparel industry, this barrier is relatively high for any potential new entrants. Developing a brand, advertising, industrial equipment, physical assets, research and development are all initial costs that any company will need if trying to enter into the apparel industry. Large firms have large capital and access to easy fund raising such as capital market in order to do so.

The following two graphs will show the amount of total assets and sales revenue that a new firm may needs in order to compete with these rivals.



As shown above, Abercrombie, American Eagle, and Aeropostale have total assets of about \$3 billion, \$2 billion, and \$500 million respectively. Meanwhile, GAP owns \$7.5 billion which is much higher than its competitors. With so much competition and the huge presence of firms in the industry, it is very difficult to enter into this market. Most companies in this apparel industry are either price leaders or differentiate their products to their customers. A new entrant has to compete either as a price leader or make its product "special". If it wants to offer itself as a price leader, then it has to



compete with many other price leaders in the industry. On the other hand, with other strategy it has to differentiate itself with “special” products by fighting with general beliefs and stereotyped consumers. Therefore, the required capital, labor and other recourses makes it very challenging to get into the apparel industry. With such barriers in achieving economies of scale discourage other firms to enter into this market. However, it may not be the top concern for small local companies serving small number of customers.

**First Mover Advantage**

First mover advantages can be achieved by entering into the market before others. The advantages of this strategy are in achieving larger market share, understanding market operations or better customer relations. It also gives firms the upper hand because they have more than likely negotiated long-term deals with suppliers to drive down their materials costs. This strategy is often applied to a newly created market in order to earn above average profits. However, the apparel industry does not experience much first-mover advantage for their products. When one company creates a new style of clothing that is popular, its competitors can quickly replicate it with their own manufacturers. Below we included a table with the number of manufacturers each company is in business with:

	<b>Abercrombie</b>	<b>American Eagle</b>	<b>Gap</b>	<b>Aeropostale</b>
<b>Number of Manufacturers</b>	150	139	248	104

As you can see, Gap has the most manufacturers of 248. Abercrombie has 150, American Eagle has 139, and Aeropostale has 104. Since clothing designs cannot be

copyrighted in most instances, ([http://www.newmediarights.org/business\\_models/](http://www.newmediarights.org/business_models/)) there is nothing stopping any of these firms from getting any of your hundreds of manufacturers to mass produce a similar design in a relatively short time period. Because of this factor, the apparel industry does not have first-mover advantages.

## Distribution access and relationships

Distribution access refers to a firm’s partnership with suppliers and buyers. Firms rely heavily on suppliers to deliver the needed supplies, so that the firm can produce to meet the demands of the consumer. In the retail apparel industry, typically firms have many different suppliers to meet their demands. It is vital for a firm to have a network of suppliers so that the delivery of finished products is delivered to stores around the world. If one supplier is unable to deliver goods, that firm will move onto to the next supplier to satisfy their needs. Needless to say, there is a saturation of suppliers for this industry. Therefore it presents a low barrier for new entrants. The one advantage a firm could have in this industry is if it starts buying out the suppliers, but again, this is virtually impossible for a firm to do that in this industry.

Transportation channels and location of sales is also an important factor to succeed in this industry. Transporting finished products quickly and effectively to the stores is a critical factor to success. Otherwise, it can be costly since most of the suppliers in this industry are from Asia and Central America. Furthermore, direct-to-consumer operation over Internet is one of the most popular ways to reach out to the apparel industries target market. Below is a table that shows the percentage of sales from direct-to-consumer sales:

	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Abercrombie</b>	16%	20%	20%	23%	22%
<b>American Eagle</b>	12%	18%	17%	19%	20%

<b>Gap</b>	17%	22%	25%	25%	29%
<b>Aeropostale</b>	5%	7%	10%	16%	16%

As you can see from the table above, each company saw an increase in the percentage of sales coming from online purchases. In 2010, Abercrombie’s percentage was 16%, American Eagle’s was 12%, Gap’s was 17%, and Aeropostale’s was 5%. In 2014, they were all up to 22%, 20%, 29%, and 16% respectively.

In conclusion, distribution access has low barriers in entering into the apparel industry. There are many suppliers in this industry, and direct-to-consumer market operation requires little costs to implement.

### Legal barriers

In regards to the retail apparel industry, there are not many legal barriers that become a factor to the firms. For most retail manufacturers, environmental laws can be a significant barrier to the companies wanting to enter their industry. However, all 4 companies in this market segment hire outside manufacturers in other countries to produce their goods. This makes them immune to any environmental law problems.

Also as previously mentioned, fashion companies cannot copyright their designs in most cases. However, a company can trademark certain brands or logos. Below is a table of each company’s amount of trademarks as stated on their 10-k’s:

	<b>Abercrombie</b>	<b>American Eagle</b>	<b>Gap</b>	<b>Aeropostale</b>
<b>Number of Trademarks</b>	28	18	55	12

As you can see, Gap holds the most trademarks at 55. Abercrombie has 28, American Eagle has 18, and Aeropostale has 12. Although a new entrant to this industry should make sure that they aren't copying a competitor's trademark, it is not likely that they will and be in legal trouble. Because of this, we believe there are low legal barriers for companies which is a price-taking characteristic for this industry.

## Conclusion

After discussing the barriers to entry for the retail apparel industry, we can conclude that the barriers are relatively high to enter in this industry. Economies of scale barrier can be high depending on the target market. Large companies have advantages over this. However, small firms serving small areas may face low barrier in economies of scale. First mover advantage barrier is high because the market is well developed in U.S. However, international market can be an exception and companies may achieve first mover advantages. Distribution access barrier is low for this industry. With a saturation of suppliers in this industry, it will be easy for a firm to receive the needed materials for production. Moreover, Internet sales are easy to implement. Legal barriers can be moderate or low depending on the firm's desired activity within the industry. If a company wants to compete internationally, then it will be a barrier to overcome. If the company chooses to compete domestically, then the barrier will be relatively low. Overall, the barriers of new entries into the apparel industry are relatively high, and threat of new entrants is low.

## Threat of Substitute Products

In this section of the Five Force Analysis, we will examine the threat of substitute products in the apparel industry. Two main factors we will focus on are the relative price and performance across the industry, and the buyer's willingness to switch.

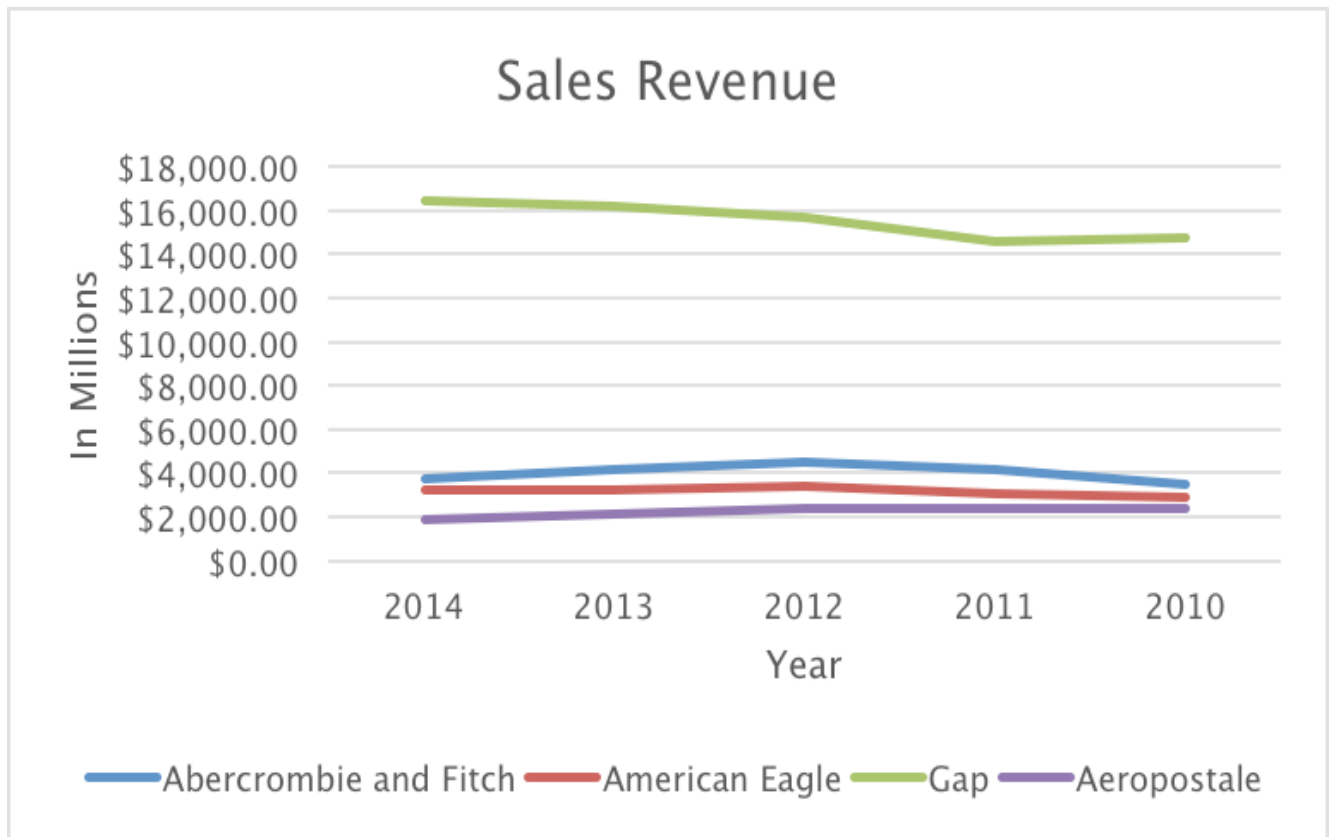
The consumer's perception of a substitute is very important. In some markets, treats of substitution may come from sources that are not similar to the product at all, such as modes of transportation. But for some markets all substitutions are very similar in makeup, so the way that consumers perceive the product is very important. This is the case in the apparel industry.

The first factor that concerns firms in the apparel industry is the relative price and performance of their competitors. If another firm offers a slightly lower price for a similar product, there is a threat that the original firm will lose its buyers to the cheaper firm. Likewise, if another firm offers better quality or performance than the original firm for the same price, there is a threat of taking customers away from a competitor. This is one reason there is a great deal of competition across the apparel industry. Some companies seek to lower this threat by offering alternatives or substitutes within their company; an example of this is Abercrombie and Fitch and Hollister. In the table below, we have listed the average prices of different clothing types offered by each company from their respective websites:

	<b>Abercrombie</b>	<b>American Eagle</b>	<b>Gap</b>	<b>Aeropostale</b>
<b>Women's jeans</b>	\$55.84	\$57.65	\$60.12	\$60.46
<b>Men's Jeans</b>	\$52.65	\$54.81	\$51.47	\$49.87
<b>Women's Coats</b>	\$102.69	\$97.33	\$98.64	\$87.01
<b>Men's Button-Down Shirts</b>	\$45.21	\$45.44	\$48.14	\$40.72

As you can see, prices in each category do not change much for each company. Women's jeans cost \$55.84 at Abercrombie, \$57.65 at American Eagle, \$60.12 at Gap, and \$60.46 at Aeropostale. The prices for men's jeans are \$52.65, \$54.81, \$51.47, and \$49.87. The prices for women's coats are \$102.69, \$97.33, \$98.64, and \$87.01. The prices for Men's button-down shirts are \$45.21, \$45.44, \$48.14, and \$40.72. So as you can see, the prices for most of these clothing types are near the same for each company which is another sign of these firms are price-takers.

The next factor that causes a threat of substitution is the buyer's willingness to switch. Everybody needs apparel in one form or another, so if the buyers are unhappy with a firm's prices or quality or if they feel they can get a better deal from another firm they will go there. Since this is the case, firms in the apparel industry must find a way to give themselves an edge over other firms. This comes from differentiation, which is examined in more detail in another section. The bottom line is that a firm must make itself more desirable than other competitors. This means a buyer will be willing to pay a premium price to keep from switching to another competitor. The following graph shows the net sales for Abercrombie and Fitch and the identified competitors:



While Gap had much more sales revenue averaging at about \$15 billion, the other companies averaged between \$2 million and \$4 million. They also show similar trends in sales growth and amount (excluding The GAP) suggest that these firms are in close competition and that people are likely to substitute one for the other if the right incentive is presented to them, such as a sale.

In conclusion, there are little to no substitutions from outside of the market since everybody needs apparel in one form or another. However, there are many threats of substitution within the apparel market from companies that offer similar goods and prices. This gives buyers leverage over sellers and means firms must find a way to distinguish themselves from the rest.

## Bargaining Power of Customers

The bargaining power of the buyer is an important part of industry analysis because it affects the price setting ability of the firms within the industry. In this section of the Five Force Analysis we will discuss six factors that influence the bargaining power of buyers: price sensitivity, relative bargaining power, switching cost, differentiation, importance of product for costs and quality, and number of buyers. We will look at what these factors are and how they directly relate to the apparel industry.

### Price Sensitivity

Price sensitivity is defined as the degree to which the price of a product affects buyers purchasing behaviors (Investopedia.com/price sensitivity). Price sensitivity can vary from industry to industry and from buyer to buyer. In the apparel industry we find there is a very high degree of price sensitivity. Price sensitivity in this industry is apparent on this previously shown table of average prices for the 4 firms:

	<b>Abercrombie</b>	<b>American Eagle</b>	<b>Gap</b>	<b>Aeropostale</b>
<b>Women's jeans</b>	\$55.84	\$57.65	\$60.12	\$60.46
<b>Men's Jeans</b>	\$52.65	\$54.81	\$51.47	\$49.87
<b>Women's Coats</b>	\$102.69	\$97.33	\$98.64	\$87.01
<b>Men's Button-Down Shirts</b>	\$45.21	\$45.44	\$48.14	\$40.72



The small changes in prices do not only show the threat of substitute products, but also the effect of price sensitivity in the market. The total price range for women's jeans is \$4.62, the range for men's jeans is \$4.94, the range for women's coats is \$15.68, and the range for men's button-down shirts is \$7.42. These small changes in prices are the effect of price sensitivity in the industry. If a firm sells a coat for too much, the demand for that coat will fall and instead go for a competitor's cheaper coat. This relationship of supply and demand is what pushes these goods' prices so close together. This further supports that this industry is price-taking.

### Relative Bargaining Power

Relative bargaining power is simply the power two parties in a transaction have over each other. In the apparel industry, these two parties would be the seller and buyer. In the low end of the apparel industry the buyer has higher relative bargaining power than the seller because competition is so high, if the buyer doesn't like a particular firm's price they can simply go to another firm for the an extremely similar product. When clothing retailers face this problem, they hold sales. Each firm's 10-k states how many sales they have per year and we have put them in the table below:

**Number of Clearance Sales per Year**

	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Abercrombie</b>	30	32	33	35	35
<b>American Eagle</b>	25	25	25	25	28
<b>Gap</b>	37	40	40	40	40
<b>Aeropostale</b>	23	23	23	23	23

As you can see, this industry holds many sales throughout the year. Abercrombie had 30 sales in 2010 but now has 35. American Eagle had 25 but now has 28. Gap had 37 but now has 40. Aeropostale has consistently had 23 for the past 5 years. The number of clearance sales each year has increased on average due to the firms' decreasing bargaining power.

### Switching Cost

Switching cost is the cost for a buyer to switch from one product to the next. This has a big effect in the apparel industry because there are no switching costs for the buyers. If a buyer does not like the prices from a firm, they can simply go to another apparel firm that offers a better price. This further makes this industry a price-taking one.

### Differentiation

Since there is so much competition in the apparel industry, it is important for a firm to make itself stand out from the rest. A firm must strive to make its brand or icon distinguished and very desirable to gain bargaining power over the buyer. This is seen in high-end retailers who can set whatever price they want for items and buyers will still buy. The following table shows the number of Twitter followers for Abercrombie and Fitch and the selected competitors. This can be used as a measure of popularity comparison for firms. As you can see, Aeropostale has the most Twitter followers at 775,000 people. Abercrombie has 653,000, American Eagle has 704,000, and Gap has 634,000.

<b>Abercrombie and Fitch</b>	<b>American Eagle Outfitters</b>	<b>The GAP</b>	<b>Aeropostale</b>
653,000	704,000	634,000	775,000

Source: Twitter.com

### Importance of Product for Cost and Quality

In the retail market, the higher the quality of the merchandise, the higher the cost is. This applies to both the seller and the buy. The seller must pay for better quality in materials and production, and the buyer sees this cost when they shop for apparel. The seller needs to find a balance between producing a product that the buyer feels has acceptable quality but isn't too expensive. The buyer holds bargaining power in this aspect since they can easily go to a different seller if they are not satisfied with the product.

### Number of Buyers

The number of buyers for a particular industry has a big effect on buyers bargaining power. There is an inverse relationship between the number of buyers and their bargaining power; the fewer the buyers, the greater their power to set prices, and vice versa. The 2010 US Census reported 64.7 million people in the age range of 15-30 years old which is the target age group of Abercrombie and Fitch and its competitors. Since there are so many buyers for the apparel industry, the industries bargaining power is weak. This also ties in the price sensitivity factor; if one buyer does not wish to purchase a firm's product for a certain price, it is very likely another buyer will.

## Conclusion

From these six factors we can draw the conclusion that the buyer has more bargaining power than the seller in the apparel market, with the very high-end retailers being an exception. This means that firms within this market are price takers, not price setters.

## Bargaining Power of Suppliers

Bargaining power of suppliers is another point we consider in the industry analysis. This force analyzes the power a business's supplier has and the extent to which they can control prices and conditions to their contracts with companies that need different materials for their businesses. When suppliers have bargaining power, they can charge the company more than usual, adjust the quality of the product, and control the availability. When the suppliers have this kind of bargaining power, they can easily affect the competitive element and influence the profitability of a company. The fewer there are, the more power they have. For the clothing and apparel industry, the power of suppliers is low mainly because there are plenty of other vendors who can offer same services. If a supplier is raising its costs, the firm could easily go somewhere else. Because apparel companies have unlimited options when it comes to suppliers for the merchandise they need, we believe the businesses in this industry have more bargaining power over its suppliers. In the apparel industry, the bargaining power of suppliers is reliant on the economy of scale, switching cost, supplier selection standards, and differentiation.

Economy of Scale

Bargaining powers can be added to the companies in the apparel industry by the amount of money they are spending. Gap spent 9.6 billion this year on goods and services provided by their suppliers (MarketWatch, GPS). Aeropostale spent 1.4 billion (MarketWatch, ARO), American Eagle 2.13 billion (MarketWatch, AEO) and last but not least, Abercrombie spent 1.43 billion this year on goods and services (MarketWatch, ANF). These expenses do not concentrate on the same suppliers. ANF is using 170 different suppliers, from 12 different countries. By analyzing these numbers, we believe that the companies in the apparel industry have more bargaining power over its suppliers because of the economy of scale.

Company	COGS excluding D&A
ANF	1.43B
ARO	1.4B
AEO	2.13B
GPS	9.6B

## Switching Costs

Switching Cost is the negative cost that a company is subject to, as a result of changing suppliers. Switching costs can refer to monetary costs but also to effort and time-based costs.

The biggest disadvantage in this industry is that suppliers are price takers, and they can be easily replaced if they decide to increase costs or lower the quality of their product. Quality is crucial since it directly affects the company. Quality issues can create a negative experience for the consumers and can result in complaints, returns or, worst-case scenario, stop the use of the product. In the apparel industry, there are many suppliers, and usually a company will source merchandise from different suppliers so they can get the best arrangement.

Abercrombie & Fitch used merchandise from approximately 150 vendors located around the world, mainly in Asia and Central America. The company did not purchase more than 10% of their materials from a single factory or supplier, during Fiscal 2014 (Abercrombie 10-k). Abercrombie works with vendors from 12 different countries, including the U.S. Aeropostale sourced 81% of their merchandise in 2014 from their top five merchandise vendors, located in Asia and Central America. American Eagle purchased merchandise from suppliers that manufacture their merchandise, supply merchandise manufactured by other or both (American Eagle 10-k). They purchase their merchandise mainly from non-North-American suppliers. Last but not least, Gap purchases its private label and non-private label merchandise from over 1,000 vendors (Gap 10-k). Their suppliers have factories in about 40 countries, where no purchase accounted more than 5% from a specific vendor. All four companies negotiate their foreign sourcing in U.S. dollars. Suppliers in this industry are operating in a competitive market, where different companies in U.S. but also outside the country, offer the same product or services. As a result, we believe that companies in this industry have more bargain power on the suppliers because the suppliers need to compete to get business. The supplies required in this industry are almost anywhere, and for that reason; the switching cost to a different supplier will not be high.

## Supplier Selection Standard

For the apparel companies to select different competitors in the vendor market, they all require the suppliers to meet different standards. In such a competitive market, we believe firms must produce quality products at reasonable prices. Each company has different standards and Business Conducts that need to be met by the suppliers.

Before selecting its suppliers, Abercrombie makes sure they meet the high-quality standards of the Company (ANF 10-k). To help monitor and to ensure the quality of the fabrics and materials, the Company uses both home office and field representatives. Before production begins, the factories also have to go through a quality assurance appraisal to make sure it meets proper standards. On top of all the quality valuations, factories must comply with the Code of Business Conduct and Ethics. They want to make sure the physical working conditions, health and safety practices, as well as payments and age documentation are in order (ANF 10-k).

Aeropostale requires its suppliers and independent manufacturers to comply with all the foreign and domestic laws and regulations (Aeropostale 10-k). Unlike Abercrombie, this company (even though is promoting ethical business) does not control their third parties for labor practices. If something unethical happened, the company's reputation would suffer a lot since the shipments might be delayed or the quality of the products altered. For them to minimize the risk, they engage a third party independent contractor to visit the facilities and make sure everything is going accordingly.

American Eagle requires its suppliers to meet the terms and conditions of the Master Purchase Agreement and to conduct business with them in compliance with the policies and procedures found in their Corporate Vendor Manual (AEO 10-k). The company has a quality control department at their distribution center that makes sure to inspect the incoming merchandise and make sure everything was made accordingly. Gap also ensures that the suppliers adhere to their Code of Vendor Conduct.

## Differentiation

In the apparel industry, there is not a big product differentiation when it comes to distinctive suppliers. There are small differences between the top fashion brands and the bottom ones. The industry is mainly comprised of textiles and apparel. The textile mills and product industry are constituted by workshops that produce threads, yarn, and fabric (Economics Web Institute).

The apparel manufacturing industry refers to the transformation of fabrics produced by the textile manufacturers, into clothing and accessories. The apparel industry mainly refers to the workers that perform the cutting and the sewing of an assembly. There are plenty of employees that perform this kind of work in U.S. but companies prefer to go to foreign suppliers so they can take advantage of lower prices. Firms are trying to differentiate from others by creating new products but also services. The differences can be in quality and time management. One of the biggest suppliers for the apparel industry is cotton, and they are largely price takers on the international market, which will not permit them to increase prices (USDA).

There are small differences that will make a company choose certain suppliers, but they are all trying to keep the quality and maintain the prices so they can stay in business.

## Importance of Product for Costs and Quality

We believe quality is an essential subject when it comes to apparel industry and sometimes the least understood. Companies must pay attention to the management system, skills of the workers, supervisors, production heads and trying to prevent defects from the beginning so that they can maintain product quality. Defects, found by buyers or customers, cost a lot more to the organization because of the rework/rejection cost. Even if the defects are internal, it will still increase the product cost and reduce the profit. Different processes such as rework in cutting, sewing, finishing or embroidery can enhance the cost of a product.



## Conclusion

Based on our analysis, the suppliers in this industry have a low amount of bargain power over most of the companies because of their economy of scale, low switching cost of suppliers, supplier selection standard and small differentiation among products.

## Key Success Factors for Value Creation in the Industry

Retail sales of apparel through brick and mortar stores and direct to-consumer operations consist of a multibillion-dollar industry. This is a highly competitive industry with a large number of participants, including small boutiques and large big-name retailers. Companies in this industry like Abercrombie, American Eagle, Aeropostale and GAP are expanding internationally as more and more stores open. As a result, this industry also faces competition internationally from established local chains, as well as local specialty stores. On the other hand, demand for apparel products also vary based on brand, fashion, quality, location, price and service. Therefore to be effective, the firms within the industry need to develop strategies in order to meet these demands from various aspects. Based on 10-K information of Abercrombie & Fitch and its top 3 competitors - Aeropostale, American Eagle and GAP, it is evident that this industry focuses mainly on cost leadership and some differentiation strategies.

## Cost Leadership in the Industry

### Economies of Scale

An advantage that all firms want is the ability to dominate their rivals by their sheer size. Generally speaking, the larger the size of the company, the more inventory they must purchase from manufacturers or manufacture themselves. As these companies buy/produce larger volumes inventory to sell, the individual cost per item typically falls due to “buying in bulk” discounts and the lowered fixed costs per unit made. Retailers with this price advantage can then pass the savings onto the customers by selling their products at a lower price than smaller companies can afford to. This is an advantage because it may siphon customers from competitors who are in the market for a similar product. This phenomenon is known as the Economies of Scale and plays a large role in the apparel industry. In 2015, GAP held \$1.89 billion worth of inventory whereas Abercrombie, American Eagle, and Aeropostale had \$460.79 million, \$278.9 million, and \$130.47 million in inventory respectively. This large difference in sales volume between competitors gives GAP a potential price setting advantage.

### Efficient Production

Another important strategy apparel firms use to maintain lower costs is Efficient Production. Accidents are a part of life and this remains true for the employees of these apparel manufacturers. If sewing machines are not set up correctly or the wrong color dye is used, those resources that were involved in that accident are expensed away as waste. The same principle applies to in-store operations. If a manager schedules 10 employees to work an early morning shift to unload a delivery truck but the truck never comes, the wages paid to those employees were also an unnecessary expense. These costs caused by human error add up quickly and can make a large dent in the company’s gross margin. Because of this, many financial managers take action against needless expenses by promoting methods to boost the company’s efficiency in

production. The gross margins of each company in this industry can reflect just how efficient they are in their operations. Abercrombie's gross margin for 2015 was 55.88%, American Eagle's was 31%, Aeropostale's was 20.8%, and GAP's was 37.95%.

### **Limited Research and Development or Brand Advertising**

The last major cost saving measure used in this industry is the limitation of research and development along with advertising. While it may seem like advertising, research, and development are investments for the company, their real returns are usually small and insignificant. The players in the apparel business already benefit from brand awareness of the population due to the nature of the industry so advertising isn't so important. In addition, research and development is not an area that should be heavily funded because fashions only change insignificantly every couple years so it doesn't need to be consistently examined or altered. One can accurately gauge just how much each company in this industry spends on advertising, research, and development by simply taking a look at their 10-k annual disclosures. In 2014, Abercrombie ended up paying a total of \$84.6 million, whereas American Eagle, Aeropostale and GAP spent \$94.2 million, \$26.7 million, and \$639 million respectively.

### **Differentiation in the Industry**

#### **Brand Image**

One common method that apparel retailers use to differentiate their product is to fabricate their brand's image. Creating a brand image is a marketing strategy that seeks to associate the products with a certain culture or way of life. If successful, the brand image may lure more customers than it would otherwise because they believe they are purchasing more than a piece of clothing. As a result, the retailer will generate higher revenue and make the financial situation more favorable. A possible representation of this industry's branding competition would be a 2014 study showing the "Leading apparel brands with the most fans on Facebook". The results show that American Eagle

leads the group with 10.06 million fans, followed by Abercrombie with 8.99 million, and GAP with 6.2 million. Aeropostale did not have enough Facebook “likes” to be included in the study.

### Shopping Experience

Another factor that can significantly alter the competitiveness of a retailer is its customer service, otherwise known as the “shopping experience” in the retail world. Apparel shopping is often seen as a relaxing and even therapeutic activity to many people. If a customer does not have a pleasant experience while shopping at a store, it will mar their perspective of the company as a whole and dissuade them from wanting to return. To prevent this from happening, many retailers put great emphasis into customer service and the store’s ambiance. If the customer has a positive experience while shopping at a store, it is more likely that they will return in the future to do more business. The amount of effort that each company puts in towards improving their stores’ shopping experience can be reflected by the amount of money they expensed that year for store redesigns per store. For example, Abercrombie spent around \$8,300 to redesign each store while American Eagle, Aeropostale, and GAP spent \$7,200, \$4,000, and \$5,900 respectively.

### Product Quality

The quality of the products can also be an important value driver for retailers. Customers won’t mind paying a reasonable premium for jeans that are more durable or a coat that holds in more heat because they also see these purchases as investments for the next few years. If a retailer were to consistently make clothing with better quality than a competitor that was cutting costs at production, then it may develop a reputation as a company with high product standards. This reputation would then differentiate the firm from its subpar competitors and draw in more customers who are looking for reliable clothing. As far as quality goes; Abercrombie, GAP, Aeropostale, and American Eagle all make clothing that is of standard quality. Aside from their jackets, footwear, and specialty wear, all four of these companies make all of their clothing from 100% cotton.

## Product Variety

Offering a wide variety of products can also make one retailer more favorable than another. Although many people do enjoy shopping, there are also many who do not. This demographic that does not enjoy clothes shopping looks for stores that can offer them convenience. Rather than going to multiple specialty stores, these customers often prefer stores that offer a large selection of different types of clothing from shoes to winter jackets. Stores would also be more attractive to families if they sold clothing for people of all ages and to both sexes. A store that has a large variety of clothing type and styles without sacrificing selection will ultimately see more business than a specialty clothing store targeting one specific market segment. All stores in this specific industry sell to both sexes, they only differ in their target age demographics. Abercrombie stores cater to the 7-25 years old age group, American Eagle targets the 12-25 age group, Aeropostale sells to the 7-25 age group and GAP sells clothing to people from ages 0-55. In addition to this, each company lists all of the different types of styles of clothing they sell on their websites. Using women's shirt styles as a unit of measure, Abercrombie offers 821 different styles, American Eagle offers 956 styles, Aeropostale offers 316 styles, and GAP offers 1,725 styles.

## Firm Competitive Advantage Analysis

### **Abercrombie's Cost Leadership**

#### Economies to Scale

As shown above, Abercrombie does not have an advantage in regards to economies to scale. ANF only orders about \$100 million or more in inventory than American Eagle and Aeropostale. This does not give them much of a price reduction when compared to them. However, GAP orders over a billion dollars more in inventory than Abercrombie, which would almost assuredly give them a pricing advantage.

#### Efficient Production

Abercrombie does however hold a significant advantage when it comes to being efficient. Over half of all sales remain after costs of goods sold are considered which is well above its rivals' 31%, 20.8%, 37.95%. This allows Abercrombie the opportunity to receive a much larger proportion of net profits when compared to its competitors. So in conclusion, this gives Abercrombie the industry advantage of efficiency.

#### Limited Research and Development or Brand Advertising

As for reducing the amount spent on R&D and advertising, Abercrombie neither has an advantage nor disadvantage in its industry. ANF spends \$84.6 million (about 2.3% of its sales) per year on these expenses which around the average of its competitors. Aeropostale spends significantly less while GAP spends significantly more which leaves Abercrombie neutral and in the middle.

## Abercrombie's Differentiation

### Brand Image

Abercrombie has successfully used brand image to differentiate itself from the competition. Its brand Hollister markets itself as a Southern California company and uses imagery from beaches and gulfs to sell that particular lifestyle to its customers. However its other major brand Abercrombie & Fitch has less of a brand image because it only presents itself as a generic higher end retailer without any other distinct characteristics. In a 2015 survey provided by Statista.com, only 50% of respondents viewed Abercrombie & Fitch as an "engaging" brand<sup>1</sup>. This lack of branding identity in this segment of the firm is a disadvantage may be a factor as to why the well-branded Hollister segment is outperforming Abercrombie & Fitch in annual sales.

### Shopping Experience

Another advantage Abercrombie has against its competitors is the shopping experience it provides. A notable feature of Abercrombie & Fitch and Hollister stores is that they dim the lights in the store and play loud music as if it were a night-club. This ambiance in the store is geared towards younger customers to make it seem exciting to be clothes shopping. This type of environment is more suited towards Abercrombie's target market of young adults and may aid in these customers becoming loyal shoppers. Also as previously mentioned, Abercrombie invests \$8,300 per store every year in order to refurbish and update them. This is the largest amount of its competitors and helps contribute to the firm's unique presentation of itself. This amount of capital and their use for it gives ANF the advantage in terms of shopping experience.

### Product Quality

In regards to the quality of their products, Abercrombie's clothing is generally seen to be at par with the average clothing standards. Majority of their clothing is made from 100% cotton which is the standard for most clothing in the United States and is

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not seen as unfavorable in any regard. Their products do not have any spectacular features but one can tell that they did not cut any corners while manufacturing them. Because of this, product quality should neither be an advantage or disadvantage for Abercrombie when competing to attain customers.

### Product Variety

Abercrombie's variety of products is rather limited when compared to GAP and American Eagle. While it does offer clothing products for children and young adults of both sexes, it fails to provide any clothing for demographics outside of the 7-25 year age range. Its competitor GAP Inc. however sells clothing marketed towards all ages and sexes. Because of this, a family going clothes shopping together is more likely to go to a GAP Inc. store instead of an Abercrombie store, thus hindering its sales. In addition, using the metric of the number of styles of women's shirts to gauge the variety of styles each company offered did not bode well for Abercrombie. Abercrombie sells 821 styles of women's shirts but was still beat out by American Eagle who sell 926 different styles. GAP even goes on to dwarf the both of them by selling 1,725 styles of women's shirts. So because of the limited target demographics and smaller diversity of styles, Abercrombie has a disadvantage when it comes to variety.

### Conclusion

Most of the companies in the highly competitive apparel industry are focusing mostly on cost leadership and differentiation strategies, and Abercrombie & Fitch is no exception from it. After analyzing recent financial performance, we believe Abercrombie has successfully located its market segment in the industry when compared to American Eagle, Aeropostale, and GAP. However, according to information on its 10-K disclosure, Abercrombie is facing high competition on brand recognition, price, and promotional activities in retail store and direct-to-consumer sales. In response to this, Abercrombie has engaged in promotional activity and increased its focus on operating efficiency while seeking to preserve the value of its brands. In conclusion, the firm has adequately met the demands for cost leadership and differentiation by the industry.



## Accounting Analysis

The purpose of this analysis is to evaluate if the firms are being transparent about their business or simply trying to make it look better. In this evaluation, we will take six different steps; (1) define and identify the key accounting policies, (2) evaluating the degree of flexibility available with regards to accounting rules, (3) explaining how we evaluate the accounting flexibility managers have, (4) assessing the quality of the firm's disclosures, (5) identifying the red flags and (6) restating the financials of the company to remove any potential bias, introduced by the managers.

## Key Accounting Policies

Accounting policies are the specific measures used by a company with regards to the preparation of the financial statements. These procedures will allow us to identify how much the company is disclosing and the level of transparency with the GAAP. We believe Abercrombie has a good amount of disclosure in their 10-k, but they are trying to emphasize their non-GAAP earnings over the GAAP ones.

We have defined two different types of key accounting policies. Type One key accounting policies is about the relationship between key success factors and the way we identify companies that are operating in the industry. ANF's key success factors include the brand image, shopping experience, product quality, product variety and innovation of fashion.

The second type of accounting policies is related to the strategies that some companies develop to mislead analysts and investors by creating a false value of their company. Because of these policies, companies have flexibility in the way they disclose information with regards to their financial statements. Because most companies are

biased about how their companies are doing, we will analyze Abercrombie's policies disclosure.

Moving forward, we will analyze the extent to which Abercrombie and its competitors are disclosing items related to their key success factors. We will compare the 10-K's of all four companies, to see the extent of disclosure of each one of them.

## Type One of Key Accounting Policies

The apparel industry prospers through differentiation and the capability of creating and providing competitive advantage. To attain this differentiation strategy, we identified four key success factors that define this industry:

Cost leadership, limited research and development, brand advertising, differentiation in the industry. The industry's Type One Key Accounting Policies are related to the key success factors from the industry such as: economies of scale, efficient production, brand image, shopping experience, product quality and product variety. We have analyzed five years of Abercrombie's 10-Ks, in order to be able to perform this analysis.

### Economies of Scale

Bargain powers can be added to the companies in the apparel industry by the amount of money they are spending. Gap spent 9.6 billion this year on goods and services provided by their suppliers (MarketWatch, GPS). Aeropostale spent 1.4 billion (MarketWatch, ARO), American Eagle 2.13 billion (MarketWatch, AEO) and last but not least, Abercrombie spent 1.43 billion this year on goods and services (MarketWatch, ANF). These expenses do not concentrate on the same suppliers. ANF is using 170 different suppliers, from 12 different countries. By looking at these numbers, we believe

that the companies in the apparel industry have more bargaining power over its suppliers because of the economy of scale.

The size of a company is important in the industry because they will be able to purchase more inventory from the manufacturers. The more items produced, the lower the cost of each item. If companies can buy merchandise for less, they can also sell at a lower price to its customers. This is something that smaller companies cannot afford to do.

### **Inventory**

Year	GAP	Abercrombie	American Eagle	Aeropostale
2011	1,620 M	385,857	301,208	156,596
2012	1,615 M	679,935	367,514	163,522
2013	1,758 M	426,962	332,452	155,463
2014	1,928 M	530,192	291,541	172,311
2015	1,889 M	460,794	278,972	130,474

All four companies have fair disclosure with regards to their inventory and by looking at the numbers above; GAP can have a potential price setting advantage. GAP is able to buy more at a lower rate, and also sell at a lower price to its customers. Not all companies have this advantage.

## Efficient Production

Efficient Production is another important key success factor that we are looking at. Abercrombie's priorities for Fiscal 2015 include (1) improving comparable store sales trends, (2) continuing to invest in DTC and Omni channel capabilities, (3) ongoing process improvement and cost management, (4) pursuing additional opportunities to expand the brand, and (5) ensuring the proper organization for the next phase of growth (10-k). Abercrombie is disclosing their difficulties with regards to consumer and competitive environment in the first half of Fiscal 2015. Because of the foreign currency exchange, Abercrombie is expecting an adverse impact on reduced sales (10-k).

Aeropostale is looking at improving their (1) brand differentiation, (2) Customer Insight and Engagement, (3) Store productivity and last but not least (4) E-commerce. GAP is the biggest brand out of all the ones we are looking at. This company is looking at (1) international expansion, (2) opening additional Athleta stores, (3) invest in digital capabilities, (4) returning excess cash to shareholders and many other improvements. Last but not least, American Eagle has similar growth strategies. They are looking at (1) gaining market share, (2) Improve E-commerce, (3) Real Estate, (4) expansion throughout U.S. and many others.

As seen above, all of these companies are trying to improve different aspects of their companies. The information above was disclosed in each of the company's 10-k. These types of investments will lead the companies to increase in value at some point in the future.

## Brand Image

One of the major competitive advantages of ANF is their brand image. The trademarks Abercrombie & Fitch, Abercrombie, Hollister, the "Moose" and "Seagull" logos represent an element of the company's strategy. They are trying their best to make sure that no third parties can copy their logos or products. If this ends up happening, and a third party produces similar clothing but with poor quality, it can have a negative

connotation on Abercrombie's brand image and limit their ability to enter new markets (10-k).

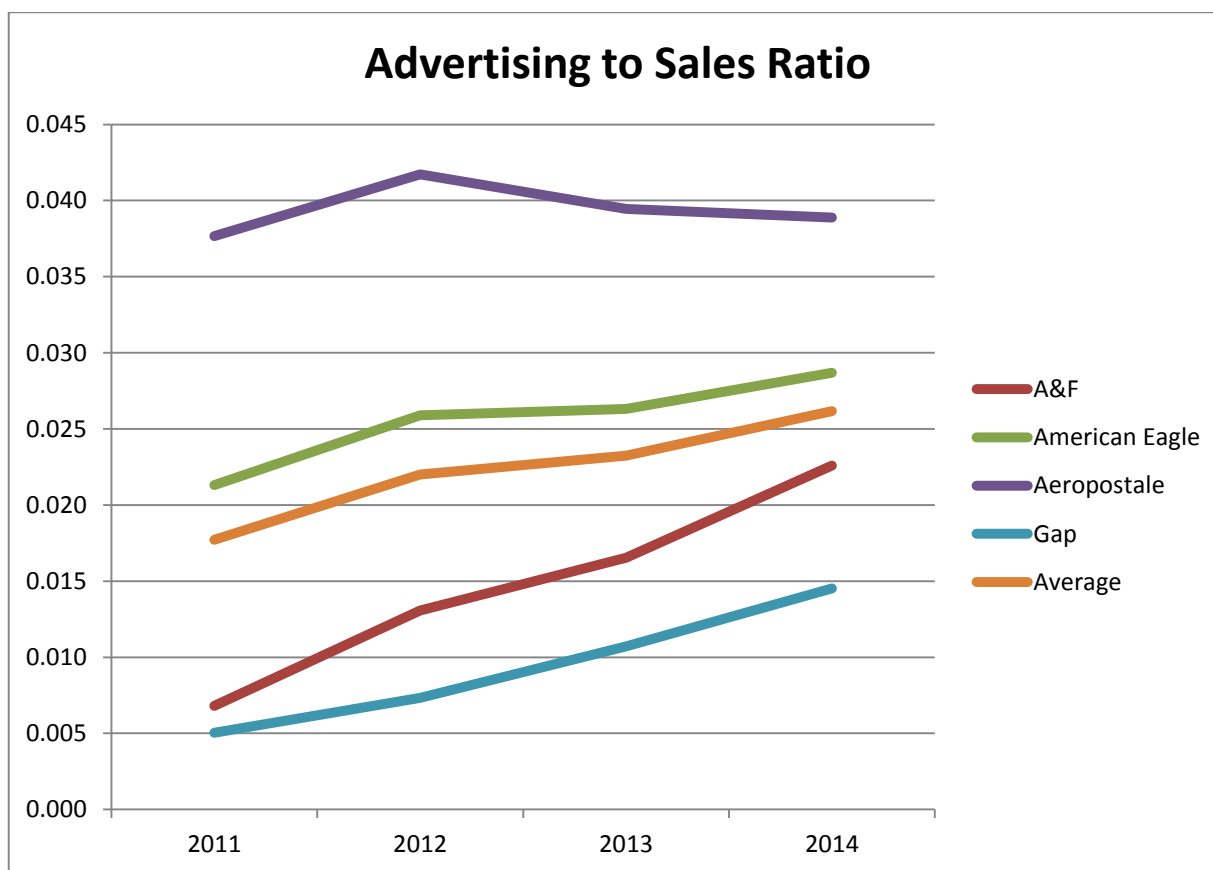
Net Sales by Brand (\$ in millions)							
		Year					
Company	Brand	2009	2010	2011	2012	2013	2014
ANF	Abercrombie & Fitch	1272	1493	1665	1704	1547	1450
	abercrombie	343	383	398	383	347	321
	Hollister	1287	1553	2022	2315	2128	1948
	Gilly Hicks**	26	40	73	110	95	25
	Total	2929	3469	4158	4511	4117	3744
GAP	Gap	5601	5735	5665	6254	6351	6165
	Old Navy	5808	5905	5674	6112	6257	6619
	Banana Republic	2460	2583	2626	2890	2868	2922
	Others	328	441	584	395	672	729
	Total	14197	14664	14549	15651	16148	16435
Aeropostale		No data					
American Eagle		No data					

The net sales by brand have been constantly growing since 2009 for both companies. From 2013 to 2014, we see a decrease in Abercrombie's sales. The companies disclosed their inability to adequately protect their trademarks in the U.S. and internationally.

### Advertising to Sales Ratio

Advertising to Sales ratio is a measurement of the effectiveness of an advertising campaign. It is calculated by dividing total advertising expenses by sales revenue. The advertising-to-sales ratio is designed to show whether the resources a firm spends on an advertising campaign helped to generate new sales. We plot advertising to sales ratio for Abercrombie and its competitors in the following graph. This ratio shows an increasing trend for all the companies, indicating that all the companies are spending high advertising costs relative to their sales revenue over the period, which is not a good sign for these companies as well as the industry.

Advertising to Sales Ratio	2011	2012	2013	2014
<b>A&amp;F</b>	0.01	0.01	0.02	0.02
<b>American Eagle</b>	0.02	0.03	0.03	0.03
<b>Aeropostale</b>	0.04	0.04	0.04	0.04
<b>Gap</b>	0.01	0.01	0.01	0.01
<b>Average</b>	0.02	0.02	0.02	0.03



Abercrombie is spending less than Aeropostale and American Eagle, but more than GAP. However, Abercrombie is spending less than its industry average. Nevertheless, all the companies are getting less and less success in generating revenue from advertising expenses day by day.

### Shopping experience

Shopping experience is a significant factor in the competitiveness of the apparel industry. It is important for a customer to have a pleasant experience while shopping at a store. Otherwise, it will affect their opinion of the brand as a whole. Abercrombie is working towards providing its customers with a more convenient shopping experience both online and in-store. For example, they are enabling "ship-from-store" and "order in store" options. The company operates 46 websites, which include both desktop and mobile versions. Their websites are offered in 10 different languages, and customers can pay in nine different currencies, with shipping to over 120 countries (10-k). By analyzing all the 10-k's, we've come to the conclusion that out of all the competitors, Abercrombie is the one spending the most for store redesigns.

ANF's primary focus is on the product and customer experience. Hence, they are focusing on redesigning their stores to provide a better shopping experience to their customers. ANF provide restructuring charges in their recent financial reports. However, they did not provide the restructuring charges before 2013. Although the absence of these charges in the previous reports may improve some of the measures, our prediction is that these charges were not present or at least not significant before 2013. Therefore, A&F may have added them into other operating expense categories. Nevertheless, their disclosure of this information in recent years supports their strategy to focus on customer experience. Based on the information in the 10-K of ANF and its competitors, the following table provides the restructuring costs for last six years.

Restructuring Charges (in thousands)						
	2009	2010	2011	2012	2013	2014
<b>A&amp;F</b>	-	-	-	-	81,500	8,431
<b>American Eagle</b>	-	-	-	-	-	17,752
<b>GAP</b>	No data					
<b>Aeropostale</b>	No data					

As we can see in the above table, GAP and Aeropostale have no data in their 10-k with regards to restructuring charges. Up until 2013, Abercrombie did not spend any money on restructuring, nor did American Eagle.

### Product quality

Product quality is an important value driver in the apparel industry. Customers do not mind paying a little bit more for a product of higher quality. If companies try to cut cost at production, it can affect their reputation and will differentiate itself negatively from its competitors. For Abercrombie to get high-quality products, they will want to make sure that all of their suppliers meet certain standards. The company uses both home office and field employees to make sure the suppliers are meeting the standards required (10-k). Before any production, the factories must go through a quality assurance evaluation as well as adhering to the Code of Business Conduct and Ethics. Abercrombie is dependent on third parties for the manufacturing and delivery of all merchandise.

Lack of product quality will lead to a decrease in sales and increase in costs (10-k). They do not own nor operate any manufacturing facilities. Most of the merchandise that Abercrombie uses comes from outside the U.S through 150 vendors. Various factors can disrupt their export to U.S. which can affect the shipping and quality



standards Abercrombie has. This could then cause adverse effects to the customer as well as to their competitive position. All of these interruptions will result in a negative impact to the financial condition and results of operations (10-k). Abercrombie is fairly disclosing information about their liabilities and risks they have by not manufacturing and delivering the merchandise themselves.

Meanwhile, some of Abercrombie's competitors like Aeropostale do not monitor their suppliers. The company admits in their 10-k that this can lead to poor quality products, as well as time issues or cancelation of the order without notice.

None of the companies provide financial information on different qualities of products. However, since the industry mostly focuses on the differentiation strategy, we can look at sales revenues to infer how product quality is one of their key success factors. Based on the information on the 10-K of ANF and its competitors, the following table provides the sales revenue for last five years. Unfortunately, since A&F does not provide clear information to support this strategy, we cannot conclude anything about the accounting policy of this key success factor.

### Product Variety

In this industry, product variety is important because many people do not find shopping appealing. Some customers would rather go to a store that has everything from shoes to winter jackets and all ages and sizes. Abercrombie has a rather limited variety because they are targeting specific customers. Abercrombie does offer clothing for both children and young adults, but they are limited to the ages between 7 and 25. Conversely, Gap offers clothing for all ages and sexes which makes it more appealing to family shopping experiences.

None of the companies provide financial information on different varieties of products. However, we can look at other financials such sales revenues and net sales by brand to infer how product variety is one of their key success factors. Unfortunately,

since ANF does not provide clear information to support this strategy, we cannot conclude anything about the accounting policy of this key success factor.

## Conclusion

We conclude that ANF provides clear and adequate information for most of the categories to support their key success factors, which are economies of scale, brand image, shopping experience, product quality, and product variety. Also, their competitors do not disclose all the information as detailed as Abercrombie.

## Type Two Key Accounting Policies

Type Two accounting policies are the items related to the company's financial statements, which may have been distorted, and could affect the true value of the company. For this industry (apparel), these accounting policies include operating leases and goodwill. Neither Goodwill or operating leases are directly related to the key success factors in the apparel industry, but GAAP allows us to assume certain features that allow the misinterpretation of the financial statements.

Goodwill is classified as intangible assets on a company's balance sheet and is considered to be the excess of purchase consideration over the total value of assets and liabilities. For the apparel industry, goodwill can be used to overstate the assets. Goodwill estimates are subject to estimates that are based on different historical data. The estimates of Goodwill can increase or decrease the value of a firm, and thus make risky assumptions for investors. The importance of Goodwill and the way different companies handle it is what makes the key accounting policies for the particular industry. However, ANF does not provide any information on goodwill in their financial statements. Therefore, we do not need to evaluate the potential impact of goodwill while restating financial statement.

We do, however, need to evaluate the operating lease for ANF since they provide this information in their financial statement. An operating lease is a contract to allow the company to use that asset but does not transfer the ownership of that asset to the company. Since operating leases are not capitalized, they are not stated in the balance sheet and may improve some of the financial ratios by underestimating the expenses. Abercrombie and its competitors report some level of operating leases, so we need to identify some of the potential red flags associated with these accounting policies.

In conclusion, ANF has accounting policies associated with operating leases, but it does not have any association with goodwill.

### Assessing Accounting Flexibility

Accounting flexibility is the idea that financial reporting can be altered to a certain extent. Under the GAAP (Generally Accepted Accounting Principles) of the United States, there is some allowance for accounting flexibility. It is not required for all companies to use GAAP, but the SEC (Standards and Exchange Commission) does require that all publicly regulated and traded companies use GAAP. Firms will use this idea of flexibility to create a better image of themselves to investors. While a certain degree of flexibility is legal, record financial falsification is not, so firms must be careful with how much flexibility they use. This section of the firm analysis will focus on the flexibility used by businesses in the apparel industry. The areas of financial reporting with the most flexibility are Goodwill and Research and Development (R&D) because these are considered in theory to be intangible or future assets. Most firms in the apparel industry do not have a significant amount of goodwill or R&D expenses and Abercrombie and its identified competitors do not report any goodwill or R&D on their financial reports at all. Since Abercrombie and its competitors do not have these accounts in their financial statements, there is little flexibility to be analyzed. The areas with the most flexibility for these companies in the apparel industry are Property and Equipment and Operating Leases.

## Operating Leases

ANF leases property for its stores under operating leases. Lease agreements may contain construction allowances, rent escalation clauses and/or contingent rent provisions (10-k). The annual store rent is either a fixed minimum amount and/or dependable based on a percentage of sales. For construction allowances, the Company records a deferred lease credit on the Consolidated Balance Sheets and amortizes the deferred lease credit as a reduction of rent expense on the Consolidated Statements of Operations and Comprehensive (Loss) income over the term of the lease.

	2010	2011	2012	2013	2014
Fixed Minimum(1)	333,419	388,004	414,061	464,937	432,794
Contingent	9,306	16,942	16,828	8,624	8,886
Deferred lease credits amortization	-48,373	-48,219	-45,926	-45,899	-38,437
Total store rent expense	294,352	356,727	384,963	427,662	403,243
Buildings, equipment and other	4,988	4,719	6,259	4,987	4,619
Total rent expense	299,340	361,446	391,222	432,649	407,862

(1)Includes lease termination fees of \$12.4 million, \$39.2 million and \$3.4 million for Fiscal 2014, Fiscal 2013 and Fiscal 2012, respectively. For Fiscal 2014 and Fiscal 2013, lease termination fees of \$6.8 million and \$39.1 million, respectively, related to the Gilly Hicks restructuring.

In January 2015, A&F committed to non-cancelable leases with remaining terms of one to 16 years. Below there is a table with the obligations A&F has. There are currently cancelable lease terms, at the Company's discretion with no conditions. The

Company can terminate certain leases if the sales volume levels are not met or certain operation are canceled in a certain country. Below is a table with a summary of operating lease commitments, including leasehold financing obligations, under the non-cancelable leases:

(Thousands)

Abercrombie 10-Ks

	1	2	3	4	5	6
2015	409,046					
2016		366,909				
2017			279,960			
2018				210,674		
2019					165,307	
Thereafter						525,286

In certain leases, A&F is involved in the construction or modification of the building. It can be determined that the Company has all of the risks of ownership during the construction of the leased property and, therefore, is deemed to be the owner of the construction project. The Company has to record an asset for the amount of the total project costs, including the portion funded by the landlord, and an amount related to the value attributed to the pre-existing leased building in Property and Equipment, Net, and a corresponding financing obligation in Leasehold Financing Obligations, on the Consolidated Balance Sheets (10-k). As of January 31<sup>st</sup>, 2015 and February 1<sup>st</sup>, 2014, the Company had \$50.5 million and \$60.7 million, respectively, of long-term liabilities related to leasehold financing obligations.

## Conclusion

Abercrombie exhibits accounting flexibility primarily in the area of operating leases. The Company has a high level of disclosure in many areas, but lacking the R&D and Goodwill. In the next section, we will analyze Abercrombie's actual accounting strategy regarding these accounting items.

## Actual Accounting Strategy

To determine the real accounting strategy of a firm, we must examine the financial statements given and determine both the degree of disclosure and the reporting style of that firm. The accounting standards allow flexibility when it comes to the financial statements, so they can better reflect genuine business differences in their companies. Companies must meet a minimum set of regulations. A low-disclosure company simply meets the minimum requirements, while a high disclosure company provides information that goes beyond the minimum requirements.

## Degree of Disclosure

When determining the degree of disclosure for a firm, we must assess the levels of disaggregation, discussion, segment reporting and other forms of disclosure within the financial reports. While examining the reports for Abercrombie and its identified competitors, it is seen that they offer both a GAAP-based set of accounting reports and a non-GAAP set. This is a sign of a high degree of disclosure because the firms willingly report the actual numbers but also give reasons to try to justify the adjusted numbers to investors. These reasons are explained and discussed in detail in the financial

reports. Also, Abercrombie and its competitors have separated segment reports with discussions. There are also two sections in Abercrombie's reports titled "MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS" and "CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE". These two sections discuss the non-GAAP decisions made by the firm.

### Reporting Style

Firms have the choice to either take a conservative approach or an aggressive approach with regards to accounting. A conservative style leads to an undervaluation of a firm and has little risk to investors. On the other hand, the aggressive style leads to overvaluation of the company, mainly because of the management's overuse of flexible accounting functions. Companies can protect their strategies and information while still communicating their companies' true economic performances. The table below summarizes the fact that Abercrombie has a high disclosure with regards to operating leases but lacking in Goodwill and R&D.

	Level of Disclosure	Style of Accounting
Goodwill	--	--
Operating Leases	High	Aggressive
Research & Development	--	--

One thing that Abercrombie has that many other companies don't, is the disclosure of their conference calls. In the 8-Ks we can find the transcripts of their conference calls. The last event time was on November 20<sup>th</sup>, 2015 at 1.30 PM GMT. The overview of the conference call was the Co. reported 3Q15 net sales of \$879m and adjusted non-GAAP net income per diluted share of \$0.48

It is important to determine whether a firm has an aggressive or passive reporting style when determining the actual accounting strategy. A company to make it look better than it is to investors would use an aggressive approach. This is tied into accounting flexibility. While aggressive accounting is not necessarily illegal, it is frowned upon. As discussed above, Abercrombie and its competitors have little room for flexibility due to the lack of R&D and Goodwill. A passive approach uses conservative numbers to create lower estimates and goals. This is a good strategy because it is easier for a firm to exceed the more conservative numbers and show higher than expected growth.

### Conclusion

From the information discussed above and from reviewing the other areas of the financial statements it can be stated that Abercrombie has a high degree of disclosure in their financial statements and also is passive in their reporting style. The high level of disclosure is beneficial for investors because information is easily available for them.

## Quality of Disclosure

Financial reports are seen as the comprehensive review of a company's performance in both quantified numbers and written words. Unfortunately, they can also be difficult to understand or can be misinterpreted by the readers. In the past, financial managers of companies such as Onward Kashiwama (a Japanese apparel firm) have used methods like income smoothing to make themselves look better. To hide the company's poor performance, they might try to adjust the disclosure by either making it less transparent or adding in useless information. Abercrombie has not been performing ideally in some areas the past couple of years. It is possible they have strategized their



method of disclosure to boost its reflection of themselves at the expense of the reports' quality.

### Usefulness

Abercrombie is a mixed bag when it comes to the usefulness of their disclosures. While their 10-K provides adequate financial data that is beneficial to the readers, it frequently recommends the reader to look at the 8-K for non-GAAP measures. What these non-GAAP measures show are net incomes that exclude expenses that the financial managers think are "irregular" and shouldn't be taken into consideration. As seen in the excerpt of the 8-K below, the GAAP income statement of ANF shows a net income of about \$51 million. On the other hand, the non-GAAP shows \$112 million due to excluding \$60 million from expenses.

	<b>Fiscal 2014</b>		
	<b>Operating Income</b>	<b>Net Income</b>	<b>Net Income per Diluted Share<sup>(2)</sup></b>
<b>GAAP</b>	\$ 113,519	\$ 51,821	\$ 0.71
<b>Excluded Charges <sup>(1)</sup></b>	78,174	60,488	0.83
<b>Non-GAAP</b>	\$ 191,693	\$ 112,309	\$ 1.54

This inclusion of unofficial financial statements may have been intended to distract the reader from paying too much attention to the official numbers and instead focus on these adjusted figures.

## Disaggregation

Abercrombie operates under the brands Abercrombie & Fitch, A&F Kids, and Hollister. In the 10-K, Abercrombie acknowledges their segmentation and lists their respective annual sales along with store openings/closings. However, the disclosure on the individual brands is limited to this extent. ANF's competitors GAP, American Eagle, and Aeropostale are also lacking in this disaggregation of brands. The disclosure of these filings could have been in greater detail by listing the balance sheet, income statement, and cash flow statement for each segmentation that Abercrombie and its competitors have. Despite this, in comparison to its industry, ANF provides sufficient disaggregation.

## Discussion

In contrast to the previous two sections, Abercrombie provides sufficient discussion in its 10-K. In items 1-7A of the report, Abercrombie discusses in detail about the closing of Gilly Hicks operations and possible risk factors they could face in the future along with their plan on how to avoid such situations. For example, when discussing their search for a new CEO, Abercrombie commented, "The selection process for a new Chief Executive Officer may create uncertainty about our business and future direction." This unbiased admittance of having operational problems can lead the reader to believe that at least the beginning of the report is effectively transparent.

## Footnotes

Another notable feature about the annual report was how in-depth the footnotes to the financial statements are. There is a total of 27 pages of just footnotes following these statements. Abercrombie includes helpful information like the numbers for the specific types of items that make up each account. ANF's footnotes specify that in their Plants, Property, & Equipment account; they hold \$37 million worth of land, \$296

million worth of buildings, \$689 million in fixtures, \$1.4 billion of leasehold improvements and \$33 million of construction in progress. This supplemental information is beneficial to the reader because it will allow them to make better-informed decisions, and it contributes to Abercrombie being a highly disclosed company.

### Conclusion

In conclusion, Abercrombie's disclosure has a mixed quality to it. A lot of their supplemental non-GAAP information in the 8-K is not useful. However, their discussion and commentary in the section preceding the financial statements were unbiased and in great detail while the footnotes were extensive and gave specific information on the individual accounts.

## Type Two Policies and Red Flags

As stated earlier, Operating Leases are subject to Type Two accounting policies which means that it can be reported in a way that distorts the readers' judgment of the company. Below, we identify whether these "red flags" are present in Abercrombie's reporting.

### Identifying Red Flags

When altering the text of a 10-K report is not enough for the financial managers of a company, they may resort to excluding data from the financial statements. They can do this by making unreasonable assumptions of Goodwill, capitalizing Research & Development, and distorting Operating Lease liabilities. While these practices are within GAAP's rules, they harm the reader of the 10-K because they are misinformed. Although Abercrombie does not report Goodwill or R&D, it is plausible that they could have distorted the information about Operating Leases.

### Operating Leases

Instead of including the operating leases in the Liabilities section of the balance sheet, Abercrombie has been allowed to exclude it. It effectively lowers the Liabilities of the company and improves their liquidity ratios that creditors take into consideration. Instead, the operating lease numbers are placed in the discussion section before the financial statements. Abercrombie did this in hoping that the readers of the report would fail to see that a major liability was left out and only see their distorted and undervalued Liabilities. Below this section, we have included a non-distorted income statement that includes the operating leases under Liabilities.

### Non-GAAP Statements

The addition of non-GAAP financial statements to Abercrombie's 8-K also raises concern. As stated before, these adjusted numbers are made to distract the reader from the actual lower net income. This leads us to believe that the management of ANF was so worried about their GAAP reported financials being viewed negatively, that they were willing to put in extra effort to overload the reader with positive looking data.

As many companies in the retail industry do, their leases are reported as operating leases in order to be kept off long-term liabilities on the balance sheet. Doing

so can make the company appear to be in better shape financially by being responsible for a smaller portion of liabilities in future periods. After discounting Abercrombie & Fitch's future lease payments at a rate of 4.75% (2010-2014 10-k's), their restated long-term liabilities would increase an average of \$2.05 billion. This significantly changes the financial structure of the company by reducing stockholder equity by roughly 25% relative to assets and inversely by the same amount for liabilities. Such a significant increase when capitalizing operating leases raises a "red flag," but can be common in the retail industry.

<b>A&amp;F</b>	<b>Difference in Long-Term Liabilities</b>	
<b>2010</b>	\$	2,087,211
<b>2011</b>	\$	2,434,003
<b>2012</b>	\$	2,161,644
<b>2013</b>	\$	1,952,210
<b>2014</b>	\$	1,637,583
<b>Average increase to Liabilities</b>	\$	2,054,530

<b>A&amp;F</b>	<b>Stated 2010-2014 Avg</b>	<b>Re-Stated 2010-2014 Avg</b>
<b>Assets</b>	100.00%	100%
<b>Current Liabilities</b>	20.8%	12.1%
<b>Long-Term Liabilities</b>	18.6%	52.4%
<b>Stockholder Equity</b>	60.6%	35.4%

## Conclusion

It turns out that Abercrombie did, in fact, exclude the operating leases of its retail stores from the balance statement. This can make a big difference when external

users of the 10-K interpret their data believing that the numbers provided are accurate when they are quite misleading.

## Financial Ratio Analysis and Forecasting

In this section, we calculate the financial ratios to analyze the current situation of ANF and its competitors, along with forecasting future financial statements and their ratios. We first do a Trend Analysis of the last five years to find Abercrombie's ratios of leverage, liquidity, capital structure and Altman's Z-score. We also calculate Abercrombie's internal growth rate and sustainable growth rate. Next we run a Cross-Sectional Analysis by finding the same ratios of ANF's competitors and then compare them to each other with charts. Then we forecast future financial numbers by creating common-size financial statements. Then we will estimate the cost of capital of Abercrombie. Finally, we value Abercrombie stock as undervalued, fairly valued, or overvalued based on our analysis.

## Financial Ratio Analysis

### Introduction

A sustainable business and mission requires effective planning and financial management. Financial ratio analysis is a useful management tool that improves the understanding of financial results and trends over time, and provide key indicators of organizational performance. Financial ratio analysis is the selection, evaluation, and interpretation of financial data, along with other pertinent information, to assist in investment and financial decision-making. Ratio analysis may be used internally to evaluate issues such as employee performance, the efficiency of operations, and credit

policies, and externally to evaluate potential investments and the credit-worthiness of borrowers, among other things.

### Liquidity Ratios

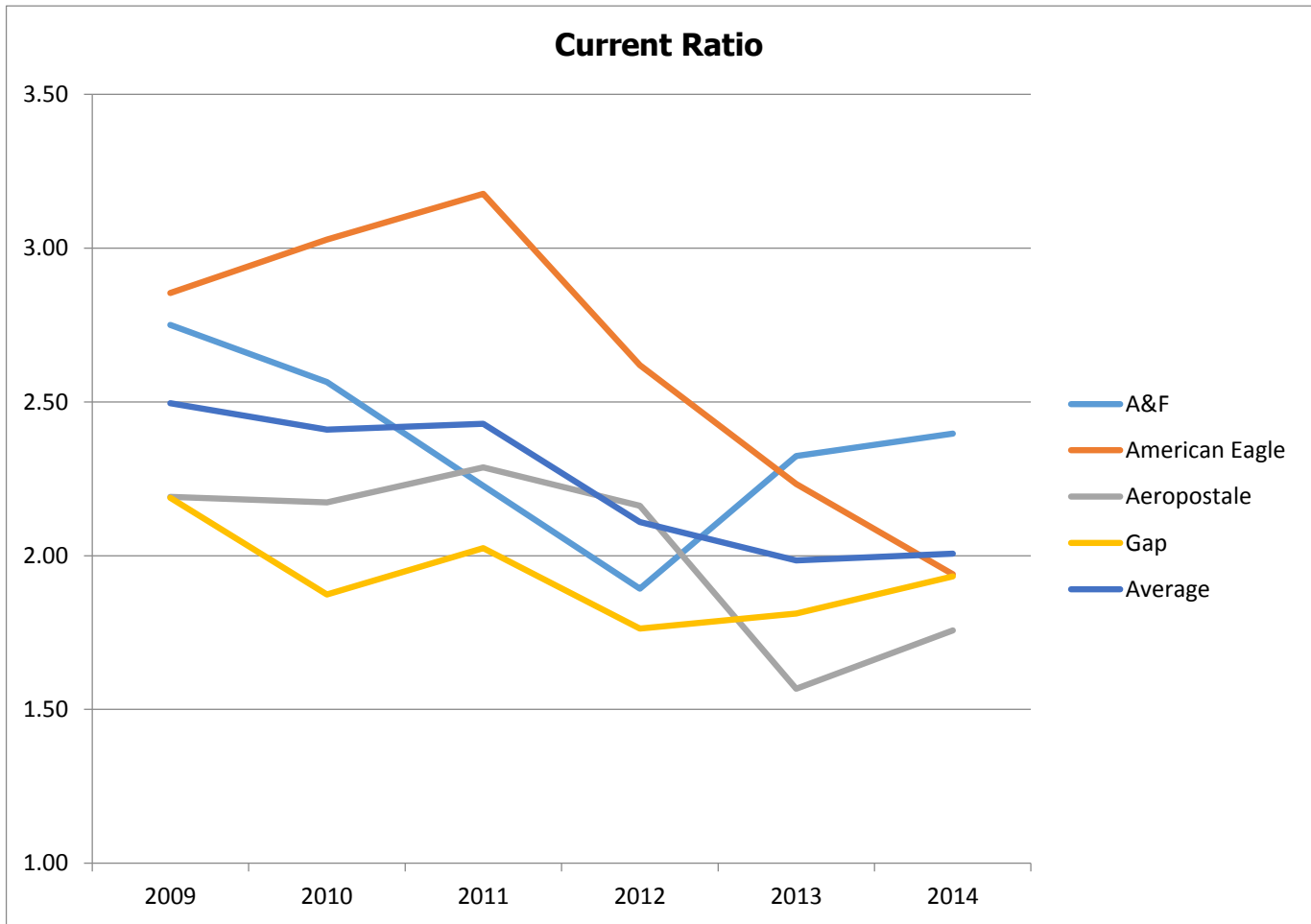
Liquidity ratios analyze the ability of a company to pay off both its current liabilities as they become due as well as their long-term liabilities as they become current. In other words, these ratios show the cash levels of a company and the ability to turn other assets into cash to pay off liabilities and other current obligations. In this section, we will discuss three liquidity ratios of Abercrombie and its competitors: current ratio, quick ratio and working capital turnover

### Current Ratio

The current ratio is used to measure a firm's liquidity by dividing its current assets (cash, accounts receivables, inventory, and marketable securities) by its current liabilities (accounts payable, accrued expenses, debt and lease expenses due within the year). This ratio is valuable to the lenders perspective as they view it as the firm's ability to meet short-term payment obligations.

<b>Current Ratio</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	2.75	2.56	2.23	1.89	2.32	2.4
<b>American Eagle</b>	2.85	3.03	3.18	2.62	2.23	1.94
<b>Aeropostale</b>	2.19	2.17	2.29	2.16	1.57	1.76

<b>Gap</b>	2.19	1.87	2.02	1.76	1.81	1.93
<b>Average</b>	2.5	2.41	2.43	2.11	1.98	2.01



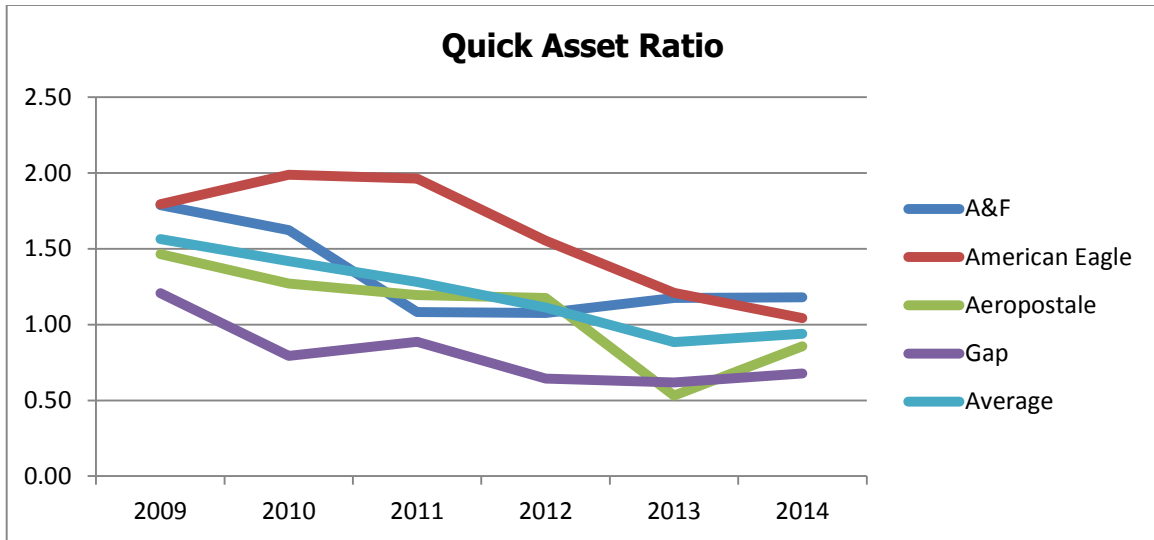
During the past six years of reported financials, Abercrombie & Fitch has maintained a current ratio that has been slowly decreasing (linear) very similarly to the average of the A&F and its three closest competitors. Typically, lenders prefer a current ratio of at least 1, hence Abercrombie and all its competitors are above the margin.



## Quick Ratio

Quick ratio (also referred to as the acid-test ratio), is another measure of a firm's short-term liquidity. Unlike current ratio, quick ratio takes it a step further by only including the most liquid short-term assets when divided by current liabilities. This helps exclude current assets such as inventories, deferred income taxes, and other current assets that cannot be as easily converted into cash. A quick ratio greater than one represents the firm's ability to meet its short-term liability obligations but once again is not necessarily indicative of the firm's actual performance or well-being.

<b>Quick Asset Ratio</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	1.79	1.62	1.08	1.08	1.18	1.18
<b>American Eagle</b>	1.79	1.99	1.96	1.55	1.21	1.04
<b>Aeropostale</b>	1.47	1.27	1.2	1.18	0.53	0.86
<b>Gap</b>	1.21	0.79	0.89	0.64	0.62	0.68
<b>Average</b>	1.56	1.42	1.28	1.11	0.88	0.94

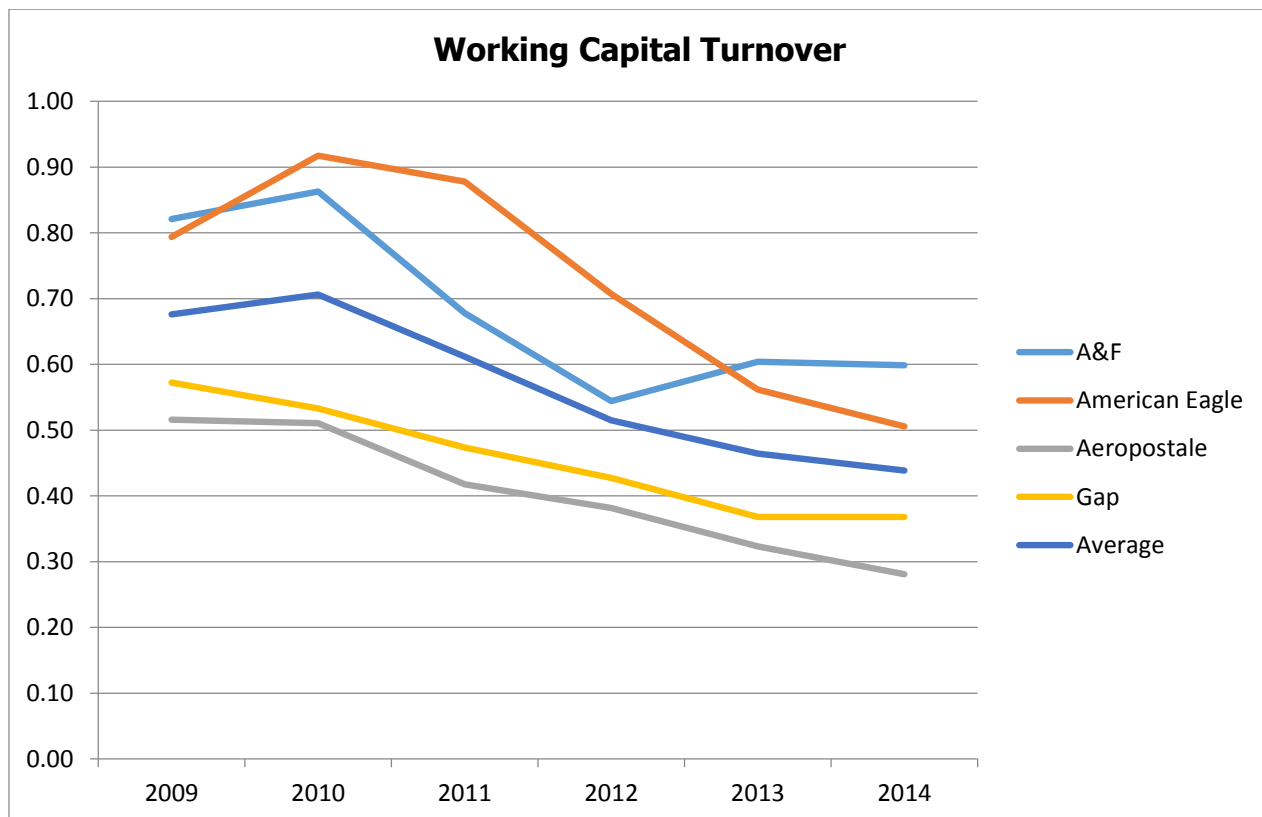


The quick asset ratio for A&F, as well as the other three competitors, has declined over the past six years. During four of the past six years, A&F has been slightly above the average and is the highest of the listed firms in the most recent year of reported financials (2014). Furthermore, since a quick ratio of higher than 1 is considered good, Abercrombie is above the margin where as its competitors are below the margin and hence Abercrombie has better ability to pay the current liabilities with quick assets than its competitors.

### Working Capital Turnover

Working capital turnover is a measurement of a firm's efficiency by taking working capital (current assets-current liabilities) and dividing it by sales. Working capital indicates a company's liquid assets after meeting short-term obligations. The working capital turnover can be valuable as it demonstrates the firm's ability to convert working capital into sales. In essence, higher the working capital the more efficient as it demonstrates a firm's ability to produce higher sales with less working capital. However, if working capital is too low (below 1) and in effect causes the turnover rate to rise, a firm may have a difficult time paying off its current liabilities giving it a false image of efficiency.

<b>Working Capital Turnover</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	0.82	0.86	0.68	0.54	0.6	0.6
<b>American Eagle</b>	0.79	0.92	0.88	0.71	0.56	0.51
<b>Aeropostale</b>	0.52	0.51	0.42	0.38	0.32	0.28
<b>Gap</b>	0.57	0.53	0.47	0.43	0.37	0.37
<b>Average</b>	0.68	0.71	0.61	0.51	0.46	0.44



Over the course of the past six years, A&F has demonstrated their ability to improve their working capital turnover rate. However, compared to the average of their competitors the rate of increase is low, and most recently the lowest of all four firms. This inefficiency brings up a red flag as A&F appears to be falling behind the market average. A&F's inability to increase working capital turnover at a similar rate of competitors can lead investors to believe they are using their working capital less efficiently.

### Efficiency Ratios

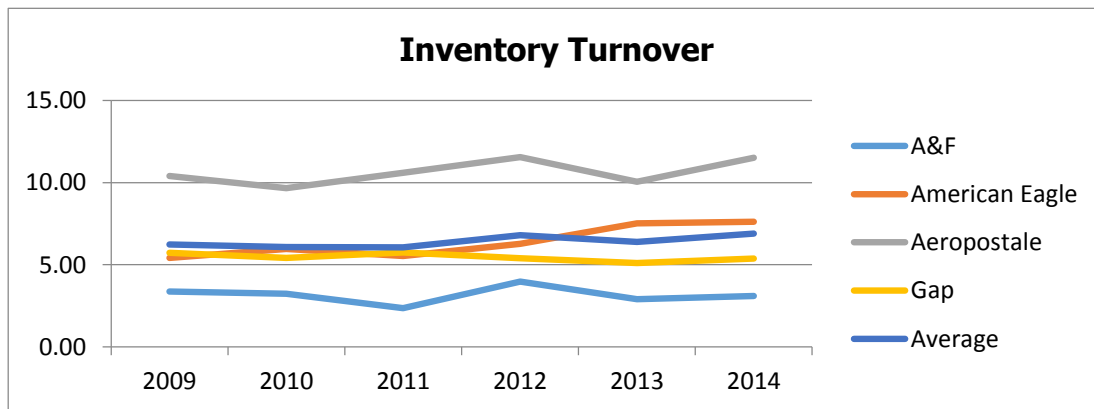
Efficiency ratios are measures of how well assets are used. Activity ratios can be used to evaluate the benefits produced by specific assets, such as inventory or accounts receivable. Or they can be used to evaluate the benefits produced by all a company's assets collectively. These measures help us gauge how effectively the company is at putting its investment to work. We will discuss inventory turnover, days' supply of inventory, accounts receivable turnover and asset turnover and cash to cash cycle in this section.

### Inventory Turnover

Inventory turnover ratio can be very beneficial when evaluating a firm's efficiency compared to its competitors. This ratio is calculated by taking the cost of goods sold and dividing it by the reported inventory. A lower than average inventory turnover often is the result of lower sales and/or maintaining excessive inventory levels. Both results are viewed negatively by investors as poor sales lead to lower profits, and excessive inventory can be costly and increase firms overall risk.

<b>Inventory Turnover</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
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<b>A&amp;F</b>	3.36	3.24	2.36	3.97	2.91	3.1
<b>American Eagle</b>	5.41	5.96	5.53	6.27	7.52	7.63
<b>Aeropostale</b>	10.4	9.67	10.6	11.56	10.06	11.51
<b>Gap</b>	5.74	5.42	5.74	5.39	5.11	5.37
<b>Average</b>	6.23	6.07	6.06	6.8	6.4	6.9

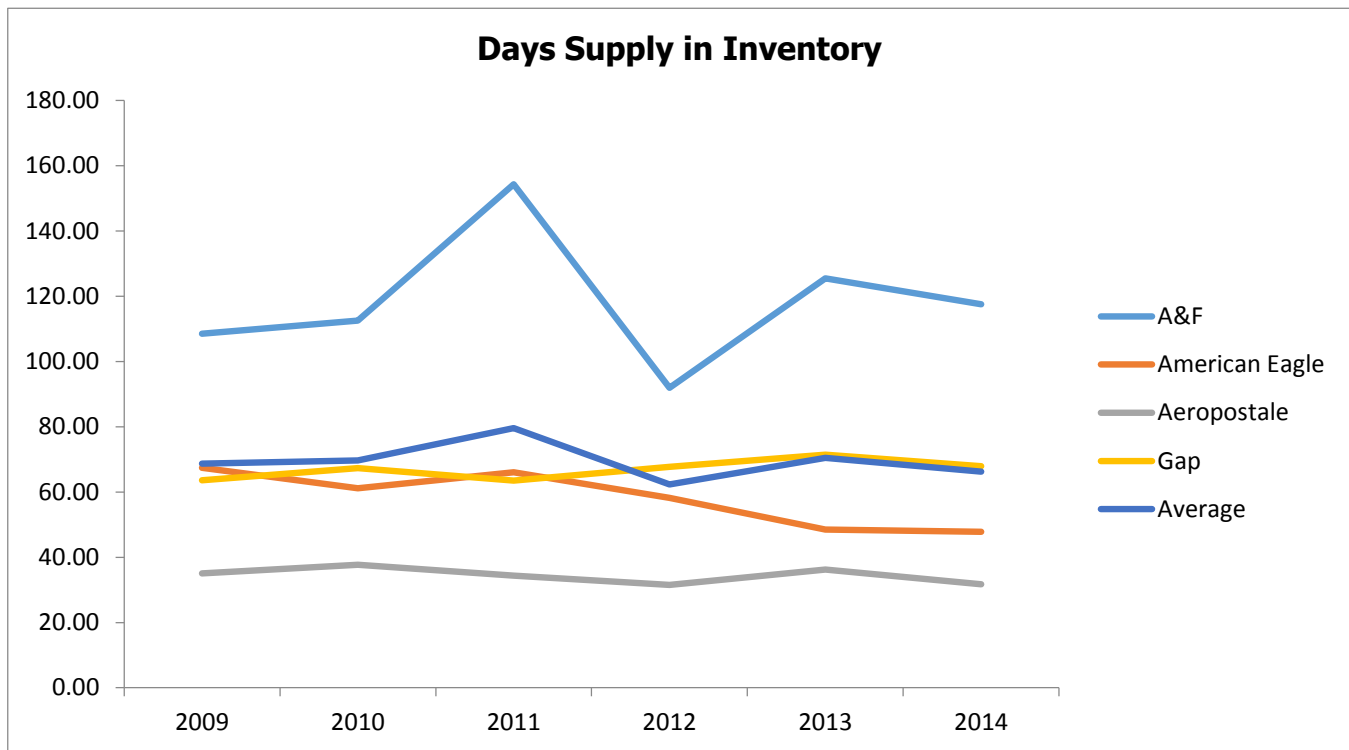


As seen above, A&F has a very poor inventory turnover ratio compared to its three closest competitors as well as the industry. While the average has been slightly increasing, A&F has continued to operate consistently with an inventory turnover rate around three. Being significant below the average from 2009-2014, A&F shows very poor sales and, therefore, excess inventory.

### Days' Supply of Inventory

Day's supply of inventory can be important when measuring how quickly a firm can convert its inventory into sales. The longer inventory is kept can lead to many negatives which that are considered ineffective. This can include: increased cost to retain inventory, older or damaged products, and/or low sales. This indicator of efficiency is measured by taking 365 (days in a year) and dividing by the inventory turnover rate.

<b>Days' Supply in Inventory</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	108.5	112.55	154.35	91.99	125.54	117.58
<b>American Eagle</b>	67.44	61.19	66.03	58.19	48.55	47.85
<b>Aeropostale</b>	35.08	37.75	34.42	31.58	36.28	31.7
<b>Gap</b>	63.63	67.38	63.56	67.69	71.41	67.96
<b>Average</b>	68.66	69.72	79.59	62.36	70.45	66.27

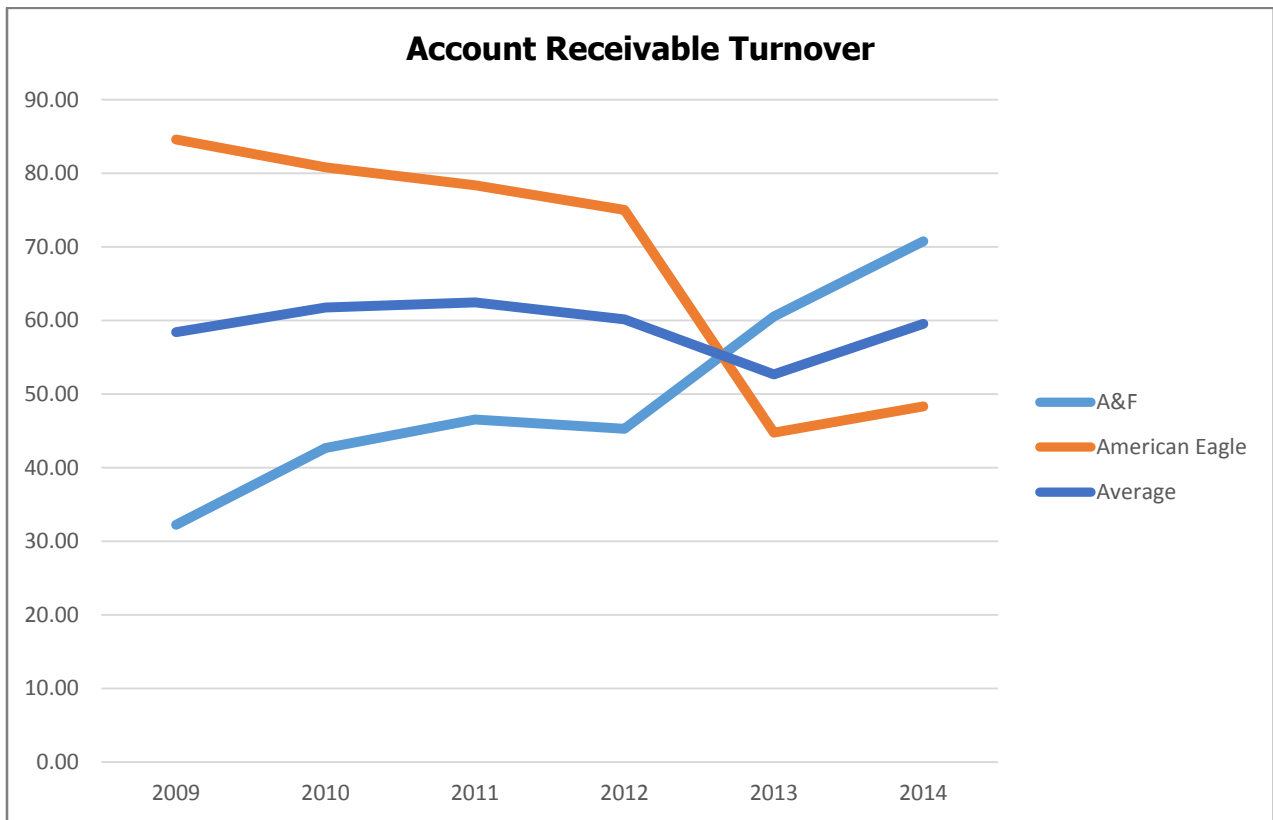


Compared to its competitors, A&F appears to be very inefficient as their days' supply in inventory is considerably higher. This is very alarming as A&F shows they have a major problem in converting inventory to sales while its competitors are having much lower value of this ratio.

### Accounts Receivable Turnover

Accounts receivable turnover demonstrates a firm's ability to turn sales made on credit into cash. Taking the firm's overall sales and dividing by its accounts receivables measure this turnover rate. Many use the accounts receivable turnover to discover the efficiency of a firm to convert sales into cash, in the clothing and retail industry it can often be nearly irrelevant as many sales are made on a cash basis or short lived on credit. This leads to some firm's in the industry leaving accounts receivables off the balance sheet altogether.

<b>Accounts Receivable Turnover</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	32.23	42.69	46.54	45.28	60.57	70.76
<b>American Eagle</b>	84.62	80.81	78.39	75.04	44.74	48.35
<b>Average</b>	58.43	61.75	62.46	60.16	52.66	59.56



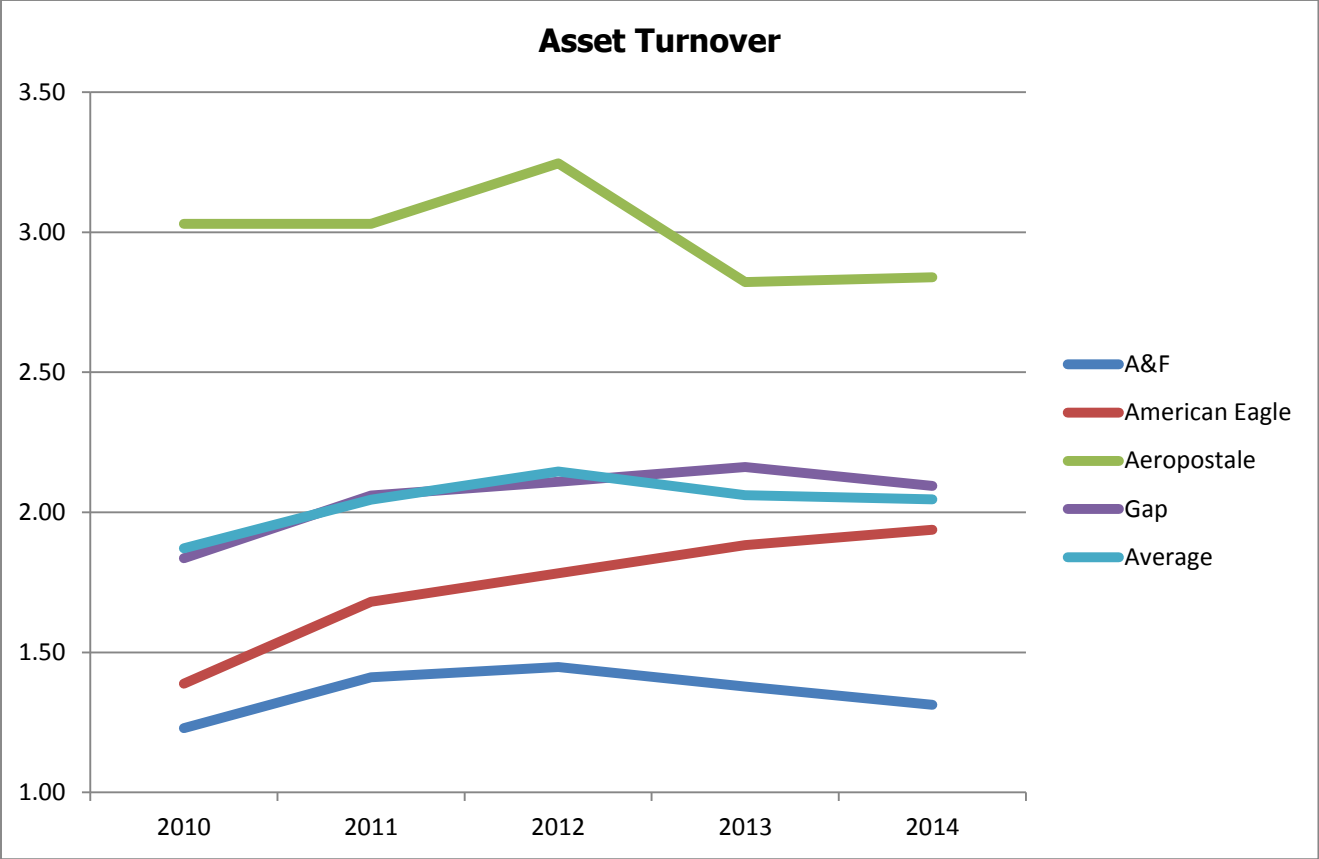
Since 2009, A&F has demonstrated its ability to increase their accounts receivable turnover rate by more than double. Although hard to compare to the industry, having a significant improvement such as A&F's shows improved efficiency and less risk of default on purchases made on credit.



## Asset Turnover

The Asset Turnover ratio can often be used as an indicator of the efficiency with which a company is deploying its assets in generating revenue. It is the ratio of sales to total assets. Taking sales and dividing by total assets calculate asset turnover.

<b>Asset Turnover</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	1.23	1.41	1.45	1.38	1.31
<b>American Eagle</b>	1.39	1.68	1.78	1.88	1.94
<b>Aeropostale</b>	3.03	3.03	3.25	2.82	2.84
<b>Gap</b>	1.84	2.06	2.11	2.16	2.09
<b>Average</b>	1.87	2.04	2.15	2.06	2.05



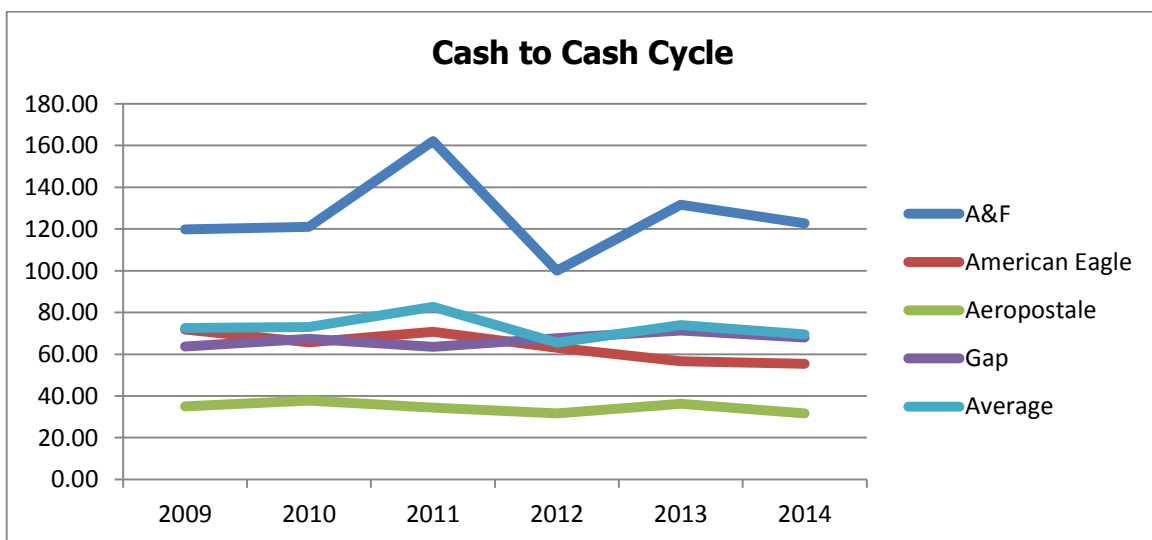
Restated Asset Turnover	2011	2012	2013	2014
A&F	0.83	0.81	0.8	0.78

As seen above, ANF has demonstrated less efficiency by having the lowest asset turnover ratio of only 1.25. The average for the industry is around 2.00. This means that they are not generating as many sales proportionally to their value in assets as all of its competitors. The restated asset turnover indicates that A&F is even generating less sales.

## Cash to Cash Cycle

Cash to cash cycle is a measurement used to discover how many days it takes to convert inventory into cash. This includes the holding period of inventory in addition to the collection of cash once a sale has been made. The fewer amount of days is viewed a positive sign of firm health and management while the firm's taking longer to collect appear to be in greater distress.

Cash to Cash Cycle	2009	2010	2011	2012	2013	2014
<b>A&amp;F</b>	119.82	121.1	162.2	100.05	131.57	122.74
<b>American Eagle</b>	71.75	65.71	70.69	63.05	56.71	55.39
<b>Aeropostale</b>	35.08	37.75	34.42	31.58	36.28	31.7
<b>Gap</b>	63.63	67.38	63.56	67.69	71.41	67.96
<b>Average</b>	72.57	72.99	82.72	65.59	73.99	69.45



Although all four firms showed minimal improvement, A&F's cash to cash cycle is well above that of their competitors with more volatility. Having a conversion cycle close to double of the average shown above displays a major concern for A&F. Being significantly higher puts the firm at a huge disadvantage as it takes a month or two longer to convert their inventory into cash compared to their competitors.

### Profitability ratios

Profitability ratios compare income statement accounts and categories to show a company's ability to generate profits from its operations. Profitability ratios focus on a company's return on investment in inventory and other assets. These ratios basically show how well companies can achieve profits from their operations.

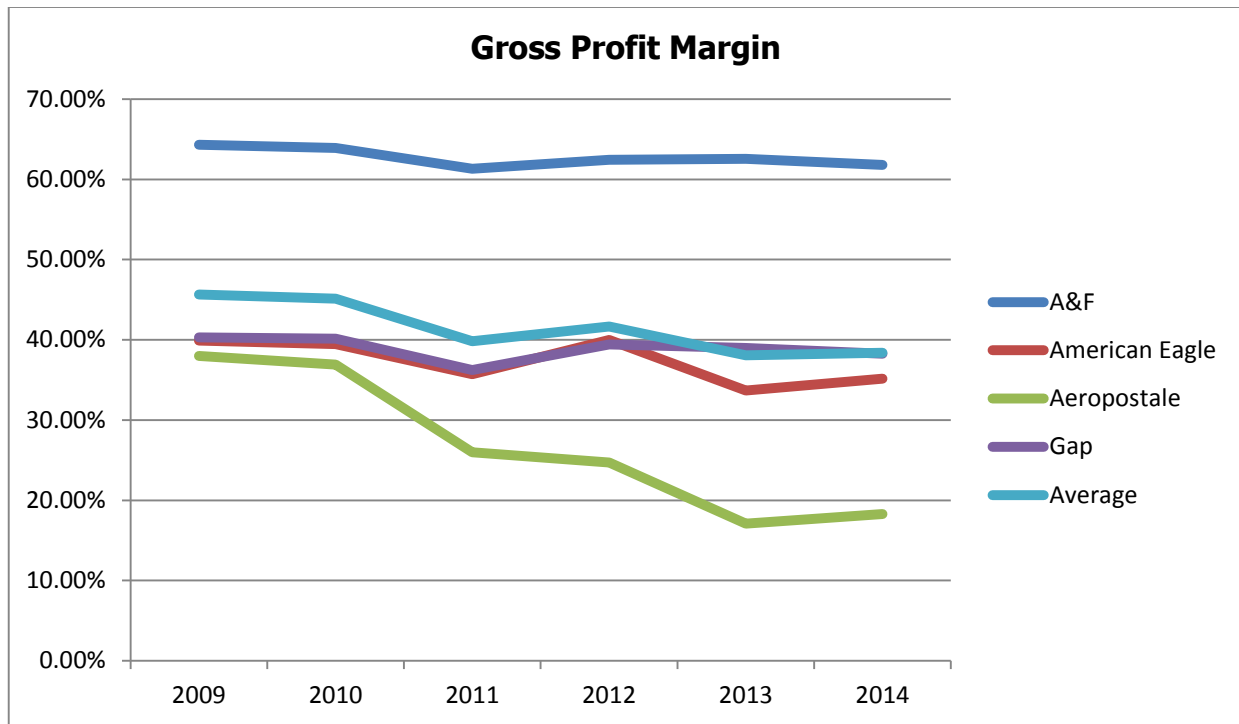
Investors and creditors can use profitability ratios to judge a company's return on investment based on its relative level of resources and assets. In other words, profitability ratios can be used to judge whether companies are making enough operational profit from their assets. In this sense, profitability ratios relate to efficiency ratios because they show how well companies are using their assets to generate profits. In this section, we will discuss the following profitability ratios: gross profit margin, operating profit margin, net profit margin, return on asset and return on equity, internal growth rate and sustainable growth rate.

### Gross Profit Margin

Gross profit margin is a measure of profitability that shows the percentage of revenues a company retains after accounting for the cost of goods sold. We calculate gross profit margin by subtracting the cost of goods sold from sales and then dividing by sales. This metric helps us to evaluate a firm's financial health revealing the proportion of money left over from revenues after accounting for the cost of goods sold. Achieving

higher gross profit margins is always a top priority of managers as it helps fund other expenses the firm may face.

<b>Gross Profit Margin</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	64.32%	63.93%	61.33%	62.44%	62.56%	61.79%
<b>American Eagle</b>	39.91%	39.46%	35.71%	40.00%	33.70%	35.17%
<b>Aeropostale</b>	37.99%	36.92%	25.97%	24.70%	17.09%	18.30%
<b>Gap</b>	40.32%	40.16%	36.25%	39.43%	38.97%	38.27%
<b>Average</b>	45.63%	45.12%	39.82%	41.64%	38.08%	38.38%



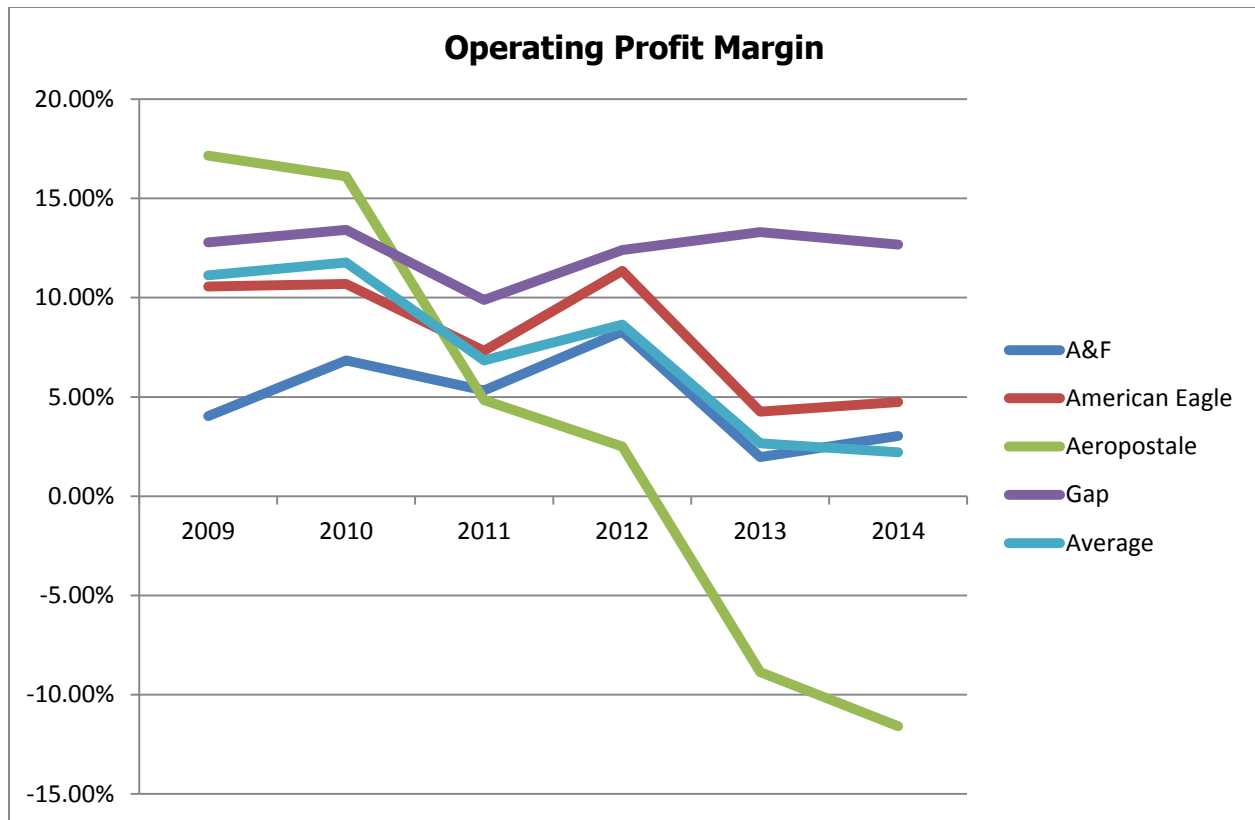
A&F displays well above average gross profit margins compared to competitors, which is a strong indicator of product efficiency. Having a significant advantage in gross profit margin displays strong financial health in this area as it gives A&F better ability to pay its operating and other expenses and build for the future than its competitors.

### Operating Profit Margin

Operating margin is a measurement of what proportion of a company's revenue is left over after paying for variable costs of production. These operating costs for the retail industry include expenses such as store as distribution, marketing, general and administrative, restructuring, and other operating expenses. This measurement is important in evaluating a company's financial status by taking into affect how well controllable expenses are being managed. Often, this measurement displays how well the management team of a firm is performing. Higher than average operating expenses

show inefficiency within a company as a higher percentage of revenues are being drained leading to lower profits.

<b>Operating Profit Margin</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	4.03%	6.84%	5.32%	8.30%	1.96%	3.03%
<b>American Eagle</b>	10.56%	10.69%	7.31%	11.35%	4.27%	4.74%
<b>Aeropostale</b>	17.16%	16.11%	4.85%	2.49%	-8.86%	- 11.59%
<b>Gap</b>	12.78%	13.42%	9.88%	12.41%	13.31%	12.67%
<b>Average</b>	11.13%	11.77%	6.84%	8.64%	2.67%	2.21%



Excluding Aeropostale, A&F displays poor handling of their operating expenses as their margin of revenues is reduced to roughly 5% over the past six years. After having a distinct 20% gross profit margin advantage on all three competitors over the previous six years, having operating profit margins drop below American Eagle and significantly below Gap shows excessively variable costs compared to their closest competitors. Therefore, Abercrombie is not well able to satisfy creditors and create value for shareholders by generating enough operating cash flow. Furthermore, Abercrombie is more likely to fail to pay for its fixed costs, such as interest on debt, so it has high financial risk than its competitors.

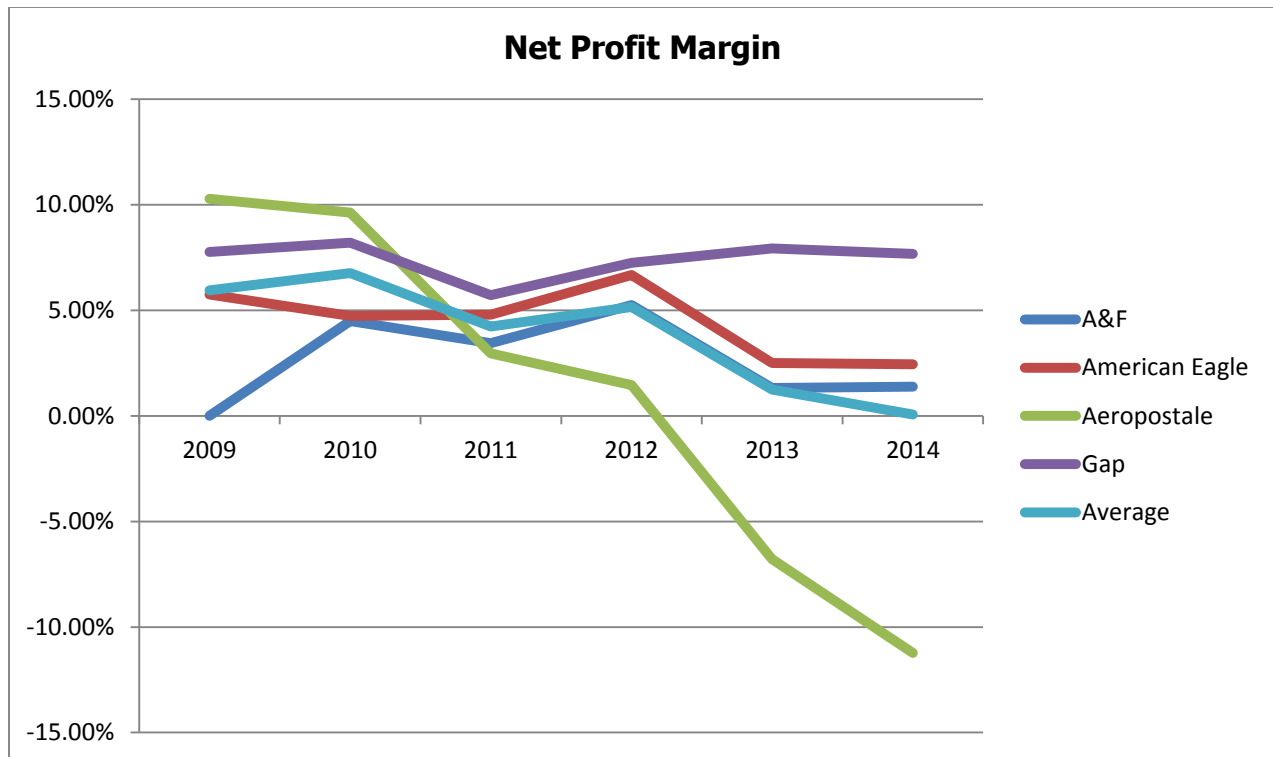
### Net Profit Margin

Net profit margin is obtained by dividing net income by revenue. This calculation shows the overall health of the company by taking into account all expenses the firm



occurs (cogs, operating, tax, and interest). This measurement is often thought as the most important as it measures the overall percentage of revenues obtained after all expenses. Net profit is essential for firm growth as it is used to pay investors (dividends) and increase retained earnings.

<b>Net Profit Margin</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	0.01%	4.49%	3.44%	5.25%	1.33%	1.38%
<b>American Eagle</b>	5.75%	4.74%	4.80%	6.68%	2.51%	2.45%
<b>Aeropostale</b>	10.29%	9.64%	2.97%	1.46%	-6.78%	- 11.23%
<b>Gap</b>	7.76%	8.21%	5.73%	7.25%	7.93%	7.68%
<b>Average</b>	5.95%	6.77%	4.23%	5.16%	1.25%	0.07%

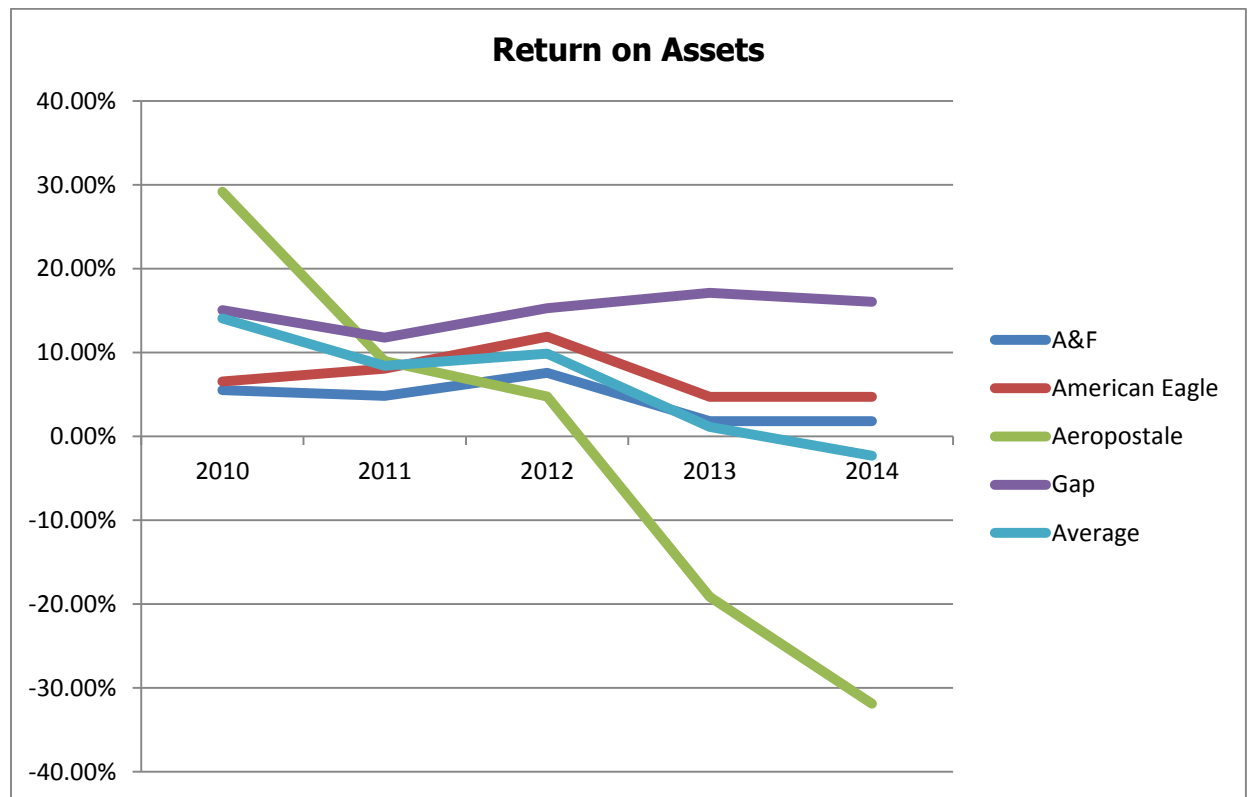


When evaluating net profit margin of the four firms, A&F has the third lowest average of the four. Although A&F is not on the bottom when it comes to net profit margin, being consistently lower than American Eagle and nearly half of Gap's net profit margin over the past six years raises concern. However, the low net profit margin indicates that Abercrombie is either pricing its products incorrectly or is not exercising good cost control. Another sign of distress for A&F is the recent decline that has dropped net income close to that of 2009.

### Return on Assets

The return on assets ratio is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. In other words, the return on assets ratio or ROA measures how efficiently a company can manage its assets to produce profits during a period.

Return on Assets	2010	2011	2012	2013	2014
<b>A&amp;F</b>	5.52%	4.86%	7.60%	1.83%	1.82%
<b>American Eagle</b>	6.58%	8.07%	11.90%	4.73%	4.74%
<b>Aeropostale</b>	29.20%	8.99%	4.75%	-19.14%	-31.88%
<b>Gap</b>	15.08%	11.79%	15.29%	17.14%	16.08%
<b>Average</b>	14.09%	8.43%	9.89%	1.14%	-2.31%



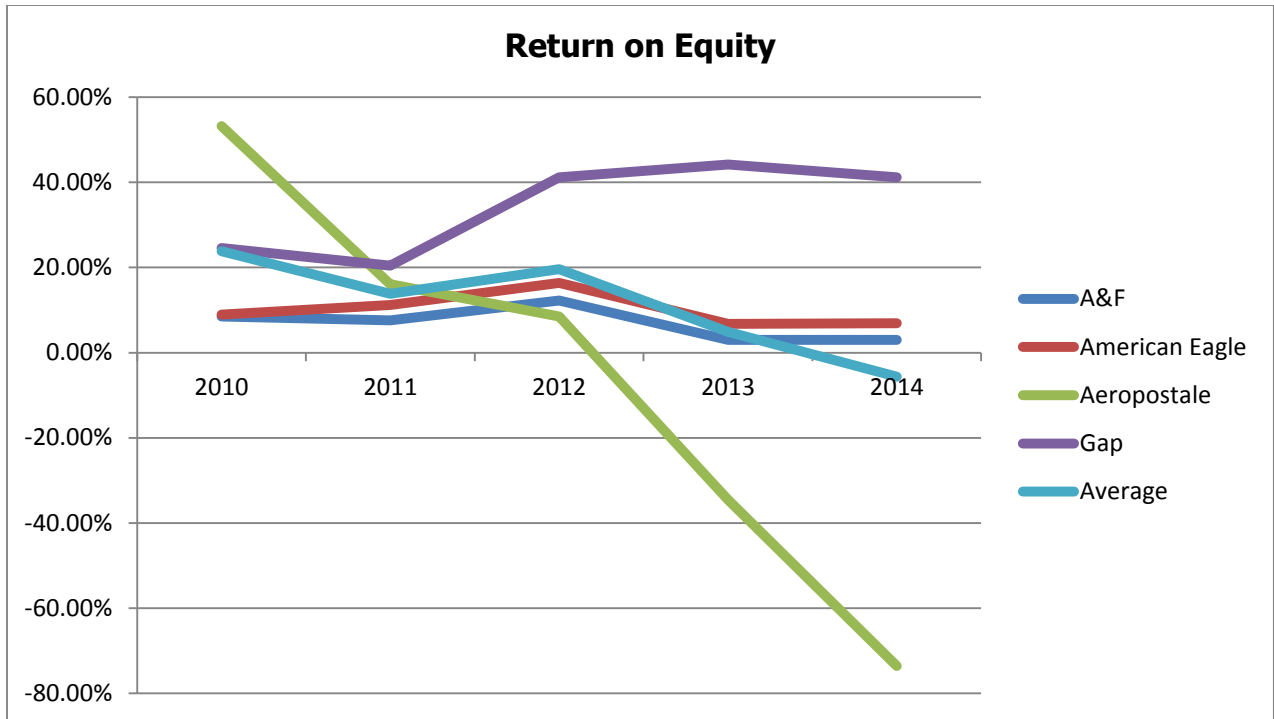
<b>Restated Return on Assets</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	2.84%	4.27%	1.06%	1.08%

Here, we can see that Abercrombie nearly follows the industry's trend of ROA slowly declining. ANF has been averaging around an ROA of about 5% but has recently gotten close to becoming negative. The industry average is now experiencing a negative ROA because of Aeropostale skewing the average with its ROA of -30%. The restated ROA is less than the reported ROA, which means A&F is earning less than they disclose in their 10-K's.

### Return on Equity

The return on equity ratio or ROE is a profitability ratio that measures the ability of a firm to generate profits from its shareholders investments in the company. In other words, the return on equity ratio shows how much profit each dollar of common stockholders' equity generates. It is measured by taking the net income and dividing by shareholder's equity.

<b>Return on Equity</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	8.52%	7.57%	12.27%	3.00%	3.00%
<b>American Eagle</b>	8.91%	11.23%	16.38%	6.80%	6.89%
<b>Aeropostale</b>	53.24%	16.07%	8.53%	- 34.56%	-73.55%
<b>Gap</b>	24.62%	20.42%	41.20%	44.23%	41.21%
<b>Average</b>	23.82%	13.82%	19.60%	4.87%	-5.61%

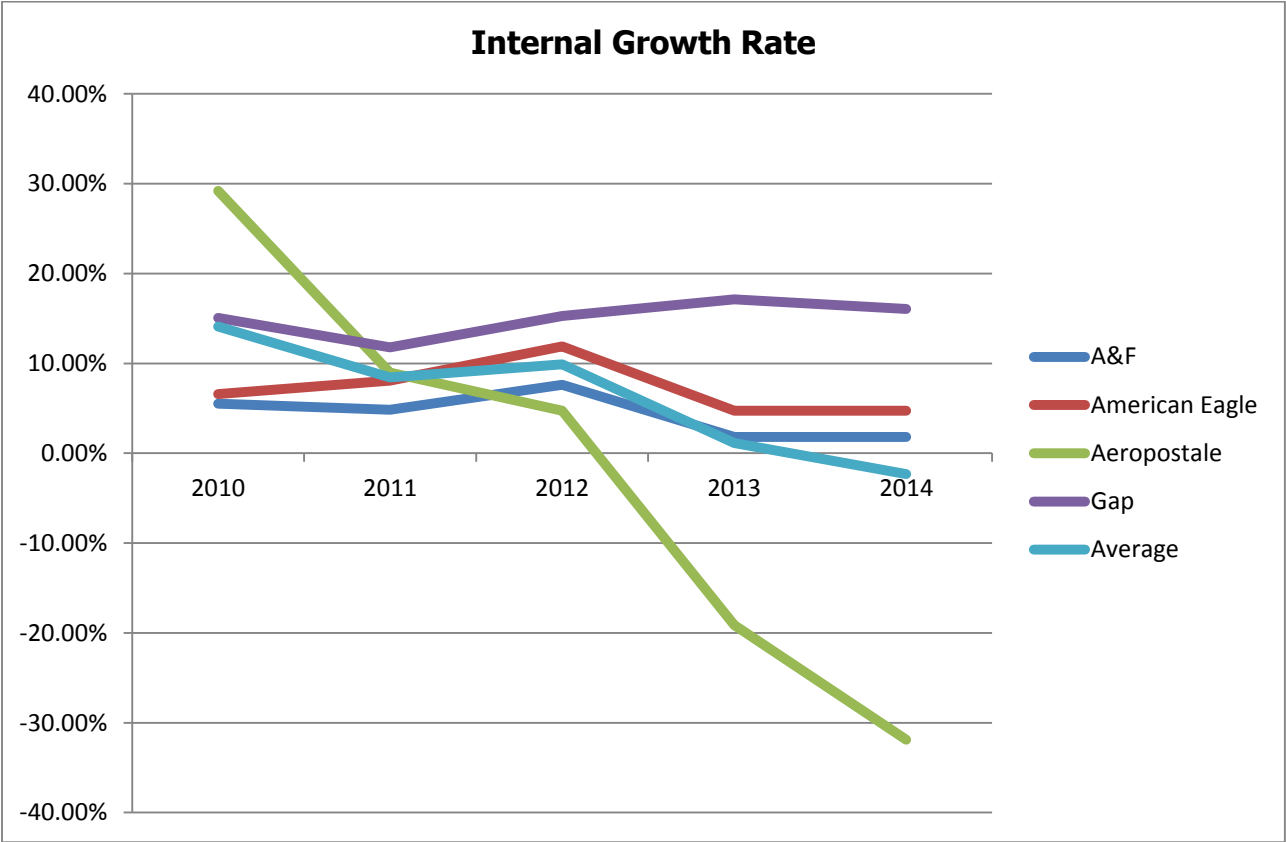


As shown, the results for the industry's return on equity is similar to what was seen for return on assets. Abercrombie followed the industry average of about a 8% ROE that dropped down to 3% in recent years. The gap actually experienced growth in ROE up to 44% whereas Aeropostale's is -73%.

### Internal Growth Rate

The internal growth rate of a firm is measured by taking the return on assets and dividing by retained earnings. This shows the highest level of growth without external financing.

Internal Growth Rate	2010	2011	2012	2013	2014
<b>A&amp;F</b>	5.52%	4.86%	7.60%	1.83%	1.82%
<b>American Eagle</b>	6.58%	8.07%	11.90%	4.73%	4.74%
<b>Aeropostale</b>	29.20%	8.99%	4.75%	-19.14%	-31.88%
<b>Gap</b>	15.07%	11.78%	15.29%	17.13%	16.07%
<b>Average</b>	14.09%	8.42%	9.88%	1.13%	-2.31%



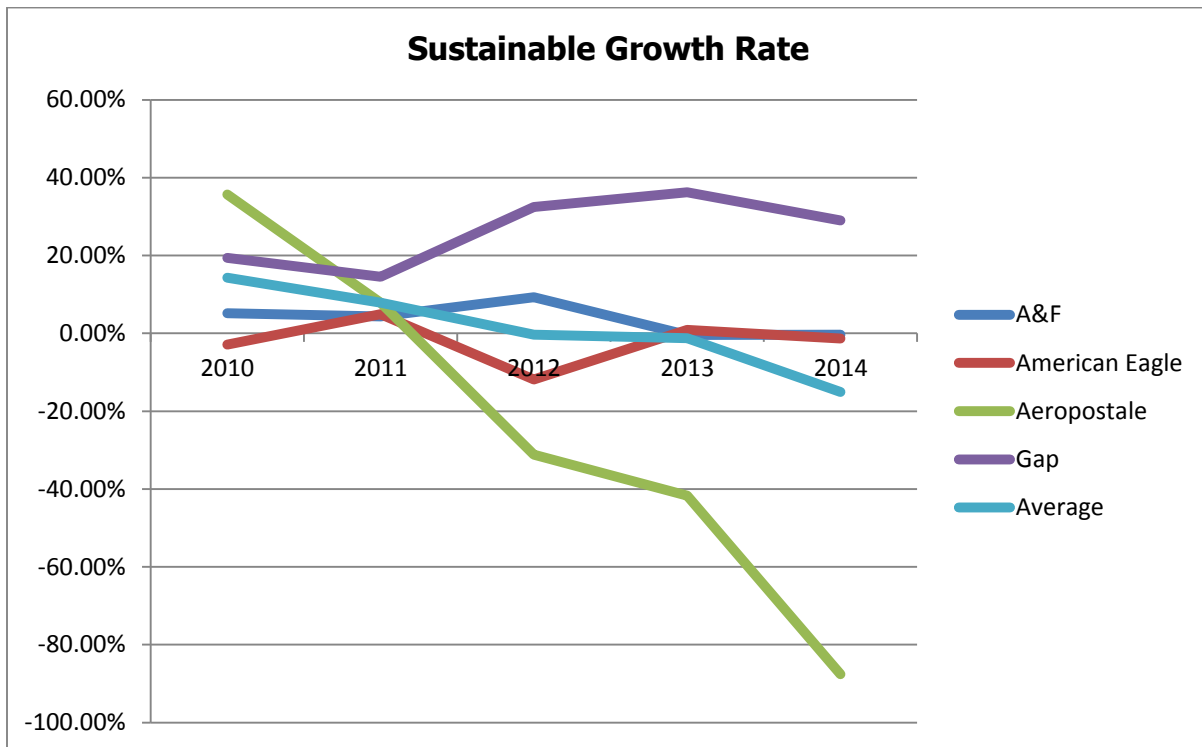
<b>Restated Internal Growth Rate</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	1.64%	3.24%	-0.13%	-0.12%

Once again, we see here that the trend shown for ROA shown here because it is a part of the internal growth rate. Abercrombie is closely matching the industry average's decline going from 5% to near 0%. This is not a good trend for them to have and is something they should work on. Gap has increased its internal growth rate to 17% while Aeropostale dropped to -31%. However, internal growth rate is an important ratio for startup firms and small business, and therefore, evaluating firms in our analysis based on internal growth rate would be inconclusive. Internal growth rate is lower in the restated statement for A&F, which means the firm is not experiencing the growth it was disclosing in the financial statement.

### Sustainable Growth Rate

Sustainable growth rate is the maximum growth rate that a firm can sustain without having to increase financial leverage. In other words, it is a measure of how much a firm can grow without borrowing more money. It is measured by ROE multiplied by "1-dividend payout ratio".

<b>Sustainable Growth Rate</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	5.15%	4.38%	9.30%	-0.38%	-0.33%
<b>American Eagle</b>	-2.93%	4.89%	-11.84%	0.87%	-1.31%
<b>Aeropostale</b>	35.71%	7.85%	-31.21%	-41.72%	-87.59%
<b>Gap</b>	19.41%	14.56%	32.43%	36.27%	28.99%
<b>Average</b>	14.33%	7.92%	-0.33%	-1.24%	-15.06%



Because of its relation to ROE, the sustainable growth rate of Abercrombie shares a similar downward trend. Its sustainable growth rate started at 5% but has now dropped into becoming negative. Once again Aeropostale dropped significantly to -90% and Gap was able to increase its growth rate.

### Financial Leverage Ratios

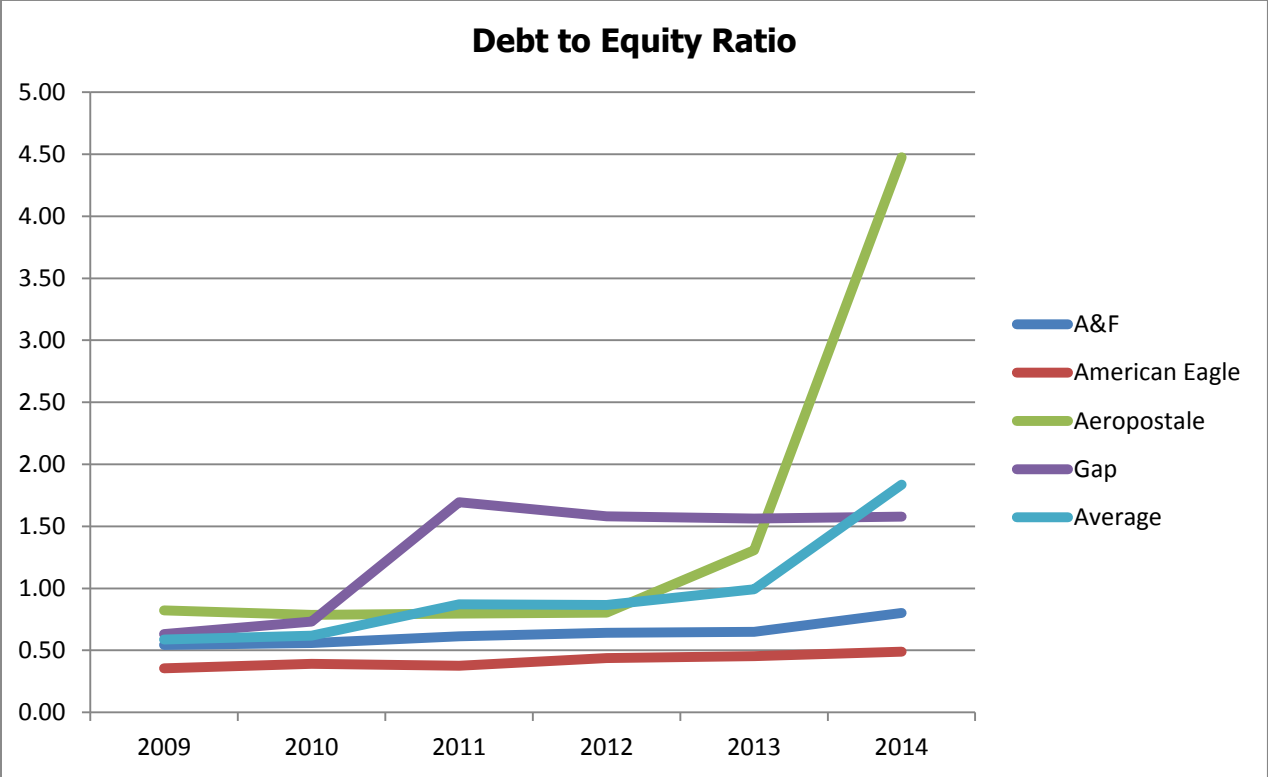
Financial leverage ratios, sometimes called equity or debt ratios, measure the value of equity in a company by analyzing its overall debt picture. These ratios either compare debt or equity to assets as well as shares outstanding to measure the true value of the equity in a business. Here we will discuss debt to equity ratio of Abercrombie and its competitors.



## Debt to Equity Ratio

The debt to equity ratio is a financial leverage ratio that compares a company's total debt to total equity. The debt to equity ratio shows the percentage of company financing that comes from creditors and investors. The debt to equity ratio is calculated by dividing total liabilities by total equity.

<b>Debt to Equity Ratio</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	0.54	0.56	0.61	0.64	0.65	0.8
<b>American Eagle</b>	0.35	0.39	0.38	0.44	0.45	0.49
<b>Aeropostale</b>	0.82	0.79	0.8	0.81	1.31	4.47
<b>Gap</b>	0.63	0.73	1.69	1.58	1.56	1.58
<b>Average</b>	0.59	0.62	0.87	0.87	0.99	1.84



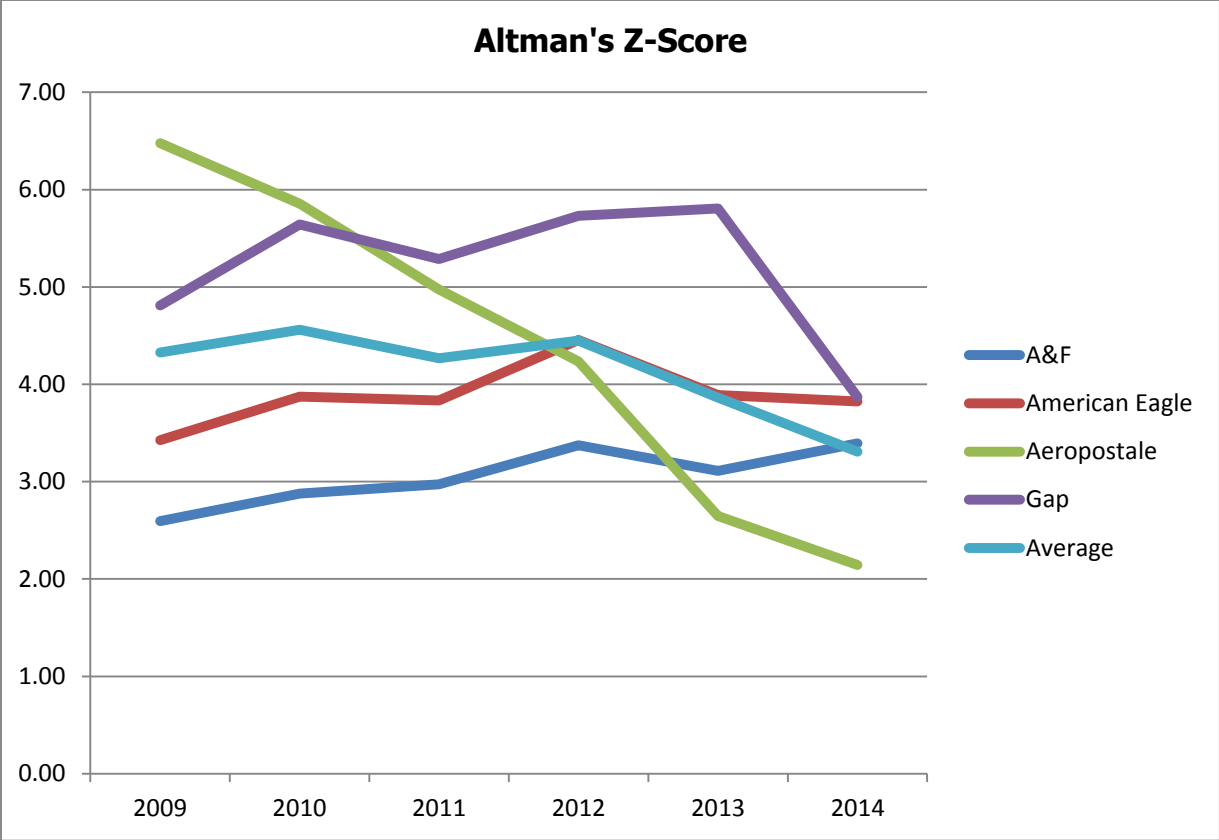
As shown above, Abercrombie leverages its business at an average debt to equity ratio of about 0.65 which is a little less the industry’s average of about 0.9. American Eagle is even less leveraged at about an average of 0.4 while the other two companies are highly leveraged. A lower debt to equity ratio of Abercrombie implies a more financially stable business than its competitors. Since debt financing also requires regular interest payments, Abercrombie is less likely to fail to make these payments. Furthermore, although debt financing is costly, it would be relatively easy for Abercrombie to borrow money at a lower interest rates with this debt to equity ratio compared to its competitors except American Eagle.

### Altman's Z-score

Altman's Z-score is a composed of five different financial ratios that predicts the probability of a company going bankrupt. It is measured using the formula:

$$\text{Altman Z - score} = 1.2 * \frac{\text{working capital}}{\text{total assets}} + 1.4 * \frac{\text{retained earnings}}{\text{total assets}} + 3.3 * \frac{\text{EBIT}}{\text{total assets}} + 0.6 * \frac{\text{market value of equity}}{\text{total liabilities}} + 1.0 * \frac{\text{sales}}{\text{total assets}}$$

<b>Altman's Z-Score</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	2.59	2.88	2.97	3.37	3.11	3.39
<b>American Eagle</b>	3.43	3.87	3.83	4.46	3.89	3.82
<b>Aeropostale</b>	6.48	5.85	4.98	4.23	2.65	2.15
<b>Gap</b>	4.81	5.64	5.29	5.73	5.81	3.87
<b>Average</b>	4.33	4.56	4.27	4.45	3.86	3.31



<b>Restated Altman's Z-Score</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>A&amp;F</b>	1.68	1.67	1.96	1.85	2.05

A score below 1.8 means the company is probably headed for bankruptcy, while companies with scores above 3.0 are not likely to go bankrupt. Companies want a higher Z-score because it means that they are less likely to go bankrupt. For Abercrombie, Altman Z-score is around 3 which means Abercrombie is less likely to go bankrupt. Overall industry average is more than 3 in recent years, which implies that the industry is far from going bankrupt. However, the industry average has been slowly decreasing while ANF's has been slowly increasing, and in 2014, Abercrombie's Z-score is higher than the

industry average, which is a good sign. However, if we look at the restated Z-score, this is not the case. A&F was in the distress zone in 2010 and 2011. Recently A&F is in the grey zone, which means they are more likely to go bankrupt. Although the most recent z-score is 2.05, it is still in very close to the distress zone. So, the overall condition of the firm is not very good from the distress point of view, if we look at the restated statements rather than the disclosed one.

### Conclusion

A&F is facing strong hurdle from the financial ratios viewpoint. It is struggling in most of the ratios compared to its competitors and for recent years it is getting worse. A&F is in a moderate situation in terms of liquidity ratios, in particular, current ratios and quick asset ratios. Nevertheless, it is in very substandard condition relative to its competitors in ratios such as efficiency ratios, profitability ratios, financial leverage ratios and Altman Z-score. Restated ratios make the condition even worse. Therefore, we can conclude that A&F is facing difficulties to keeping its business and maintaining market shares whereas investors are considering A&F as a risky investment.

## Financial Statement Forecasting

In this section, we will be forecasting the financial statements for Abercrombie and Fitch. Forecasting the financial statements for the firm is an important part of our analysis because investors are concerned with the future value of the company. Our forecast is based on the historical performance, future predictions, and base assumptions of the firm, industry and market as a whole. These assumptions and predictions must be both logical and reasonable for them to be reliable. Forecasting accurately can be difficult and becomes more uncertain the further into the future we forecast. Several models and methods exist to help provide structure to the forecasting. In this analysis, we use a quantitative model called the Time Series Method. In the Time Series Method, past data and performance is used to create a forecast. When using this method, we give more weight to recent data and give less to outliers.

As technology advances, retail stores like Abercrombie are having trouble bringing customers in. As previously seen in the 5 Forces section, most apparel companies are closing stores and their online sales are increasing. One of Abercrombie's key success factors is their shopping experience. As less business is done in their stores, this value driver has less of an effect on sales. If Abercrombie wants to keep their sales up, they will need to adapt to these changes and find a new key success factor that will have greater impact in the future.

### Assumptions

Abercrombie and Fitch is currently transitioning between management. The former CEO, Mike Jefferies, was fired at the beginning of 2015. Abercrombie is now in the process of appointing a new CEO in hopes to change the direction of the company. We are making a base assumption in this forecast that Abercrombie will have roughly two more years until they pick a new one.

The company's revenues are down 10.85% for the first two quarters this year. Based on this data and historical data, we estimate a total year-over-year sales decline of 19.567%. We are making the assumption that the company will show positive growth going into the future with a year-over-year growth rate of 1% based on the assumption that the company's new CEO will improve their situation. Our next assumption is that both the operating profit margin and the net profit margin will decrease for this year based on the numbers currently released, and then both will grow at a constant rate of one-half of a percent over our forecast window. Another assumption we make applies to the gross profit margin, asset turnover ratio, current assets to total assets ratio, current ratio, days' supply inventory, and days' sales outstanding. This assumption is that these ratios and margins will all remain constant over our forecast window. This assumption is based on the low fluctuation of these ratios over the last five years for Abercrombie and its competitors as previously shown in the ratios section of this analysis. The last assumption we make is for forecasting the dividends per share. Abercrombie paid its first dividends on March 5, 2004, with the amount of \$0.50 per share for the year. Abercrombie has increased its dividend payout twice since then, once to \$0.70 then to \$0.80 in 2013. Since the dividends history for Abercrombie is so short, and there is no distinguishable pattern, we will assume that the dividends per share will remain constant at \$0.80 for our forecast. The following table summarizes our assumptions for our forecast:

<b>Forecasting Assumptions</b>	
Sales Growth	Current year = -19.567%, constant growth of 1% thereafter
Gross Profit Margin	Constant rate of 62%
Operating Profit Margin	Current year = 2%, constant growth of .5% thereafter
Net Profit Margin	Current year = 1.1%, constant growth of 0.5% thereafter
Asset Turnover	Constant at 1.356
Current Assets/Total Assets	Constant at 0.46

Current Ratio	Constant at 2.3
Days' Supply Inventory	Constant at 115
Days' Sales Outstanding	Constant at 6.5
Dividend per Share	Constant at \$0.80 per share

These predictions do not include any major movements caused by possible future random information. In the next few sections, we will describe our process and reasoning for our forecast. Below is our Key Ratios forecast that incorporates our assumptions:



### Forecasted Ratios

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Sales Growth	18.444%	19.871%	8.483%	-8.733%	-9.057%	-19.567%	1.000%	2.00%	3.00%	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%
Gross Profit Margin	63.925%	61.332%	62.444%	62.558%	61.794%	62.000%	62.000%	62.000%	62.000%	62.000%	62.000%	62.000%	62.000%	62.000%	62.000%
Operating Profit Margin	6.838%	5.324%	8.296%	1.963%	3.032%	2.000%	2.500%	3.000%	3.500%	4.000%	4.500%	5.000%	5.500%	6.000%	6.500%
Net Profit Margin	4.489%	3.442%	5.254%	1.327%	1.384%	1.100%	1.600%	2.100%	2.600%	3.100%	3.600%	4.100%	4.600%	5.100%	5.600%
Dividend per Share	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Dividend Payout Ratio	0.396	0.426	0.243	1.134	5.500	1.841	1.253	0.936	0.734	0.592	0.486	0.402	0.335	0.280	0.234
Asset Turnover	1.229	1.411	1.447	1.378	1.313	1.356	1.356	1.356	1.356	1.356	1.356	1.356	1.356	1.356	1.356
Current Assets/Total Assets	0.486	0.500	0.438	0.463	0.465	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
Current Ratio	2.565	2.227	1.893	2.324	2.397	2.300	2.300	2.300	2.300	2.300	2.300	2.300	2.300	2.300	2.300
Days Supply Inventory	112.549	154.354	91.991	125.543	117.577	115.000	115.000	115.000	115.000	115.000	115.000	115.000	115.000	115.000	115.000
Days Sales Outstanding	8.551	7.843	8.061	6.026	5.158	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500
Restated Asset Turnover	0.711	0.826	0.813	0.800	0.779	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800
Restated CA/TA	0.253	0.285	0.281	0.254	0.275	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270

## Restated Forecast

Our analysis here is given on a restated basis. Therefore our forecast must also be given on a restated basis. However, Abercrombie does not report any research and development or goodwill on their financial statements. Because of this, the only restatements we can show in our analysis is for the operating leases. Since operating leases do not have any effect on the income statement, we do not need to restate it. For the statement of cash flows, leases will only be involved in CFFO so we do not need to restate CFFI or CFFF.

Now, we must consider how operating leases affect CFFO. We know that operating leases are paid on a pre-set schedule over the life of the lease. Because of this, the firm must make the payment on the lease at the time it is due. We know the cash flow must occur no matter what it is labeled as, so from this logic we know that CFFO will be the same on both an as stated and restated basis. The last statement we must examine for restatement is the balance sheet. We can see from our restated operating leases that the values affected are long-term assets and long-term liabilities. These adjustments will not affect our forecast of equity, but they will affect our asset turnover and current-asset-to-total-asset ratios that are included in the key ratios investors use to value a firm across time and the market. So we will show our balance sheet on both an as stated and restated basis.

## Income Statement Forecast

The Income Statement is the first financial statement forecasted because it has the most stable forecasting properties. The forecast for the Income Statement will then be used to forecast the other parts of the financial statements. The first item we forecast is net sales. To do this, we simply multiply the sales of the previous year by the sales growth we have already forecasted. Next is gross profit. We multiply the forecasted net sales by the forecasted gross profit margin to get the forecasted value of

gross profit. Then to get the cost of goods sold for our forecasted years, we subtract gross profit from net sales.

The next two items we must forecast are operating income and net income. We follow a similar process as we did for forecasting gross profit. First multiply the forecasted net sales by the forecasted operating profit margin to get the operating income. Then we multiply the forecasted net sales by the forecasted net profit margin to get net income. The last item on the income statement that we must forecast is dividends declared per share. As we stated in our assumptions, dividends per share will remain constant throughout our forecast. With the income statement forecast complete we move to the balance sheet.

## Forecasted Income Statement

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>NET SALES</b>	3,468,777	4,158,058	4,510,805	4,116,897	3,744,030	3,011,436	3,041,550	3,102,381	3,195,452	3,323,271	3,489,434	3,698,800	3,957,716	4,274,333	4,659,023
<b>COGS</b>	1,251,348	1,607,834	1,694,096	1,541,462	1,430,460	1,144,346	1,155,789	1,178,905	1,214,272	1,262,843	1,325,985	1,405,544	1,503,932	1,624,247	1,770,429
<b>GROSS PROFIT</b>	2,217,429	2,550,224	2,816,709	2,575,435	2,313,570	1,867,090	1,885,761	1,923,476	1,981,181	2,060,428	2,163,449	2,293,256	2,453,784	2,650,087	2,888,595
<b>OPERATING INCOME</b>	237,180	221,384	374,233	80,823	113,519	60,229	76,039	93,071	111,841	132,931	157,025	184,940	217,674	256,460	302,837
<b>NET INCOME</b>	155,709	143,138	237,011	54,628	51,821	33,126	48,665	65,150	83,082	103,021	125,620	151,651	182,055	217,991	260,905
<b>NET SALES</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>YOY SALES GROWTH</b>	18.44%	19.87%	8.48%	-8.73%	-9.06%	-19.57%	1.00%	2.00%	3.00%	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%
<b>COGS</b>	36.07%	38.67%	37.56%	37.44%	38.21%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%
<b>GROSS PROFIT</b>	63.93%	61.33%	62.44%	62.56%	61.79%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%	62.00%
<b>OPERATING INCOME</b>	6.84%	5.32%	8.30%	1.96%	3.03%	2.00%	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
<b>NET INCOME</b>	4.49%	3.44%	5.25%	1.33%	1.38%	1.10%	1.60%	2.10%	2.60%	3.10%	3.60%	4.10%	4.60%	5.10%	5.60%

\*Dollar amounts in thousands

## Balance Sheet Forecast

The asset section of the Balance Sheet will be the next item addressed in forecasting. The first factor we need is asset turnover, which we have already stated in our assumptions will remain constant at 1.356 throughout our forecast. We will also use asset turnover and sales from the forecasted Income Statement to forecast the total assets. Next we use the forecasted Current Assets to Total Assets Ratio to find our current assets forecast. Once we have our forecasted current assets, we will divide them by our forecasted Current Ratio of 2.3 to find the current liabilities forecast. then we will use our forecasted Days' Supply Inventory and Days' Sales Outstanding to forecast inventory and receivables. Lastly, we will forecast property, plant, and equipment. Abercrombie is focusing on expanding its online shopping presence and closing stores that are not performing. They are opening new stores in strategic locations and trying to expand overseas, especially in Asia, where they have had strong numbers this year. However, they are planning on shrinking their overall physical present. Based on this we are forecasting PPE for Abercrombie to decline steadily over our forecasting window.

Before we can forecast the liabilities and equity side of the Balance Sheet, we need to forecast the Statement of Cash Flows.

## Statement of Cash Flows Forecast

The Statement of Cash Flows consist of three sections we wish to forecast: Net Cash Provided by Operating Activities, Net Cash Used for Investing Activities, and Net Cash Used for Financing Activities. Forecasting these sections is difficult because cash flows can be erratic.

First we will forecast cash flows from operations. From the data for the last five years we calculate four ratios. These ratios are CFFO/Sales, CFFO/OpInc, CFFO/NI, and CFFO/GP. We will examine these ratios to determine a pattern or number that seems most reasonable to forecast out the cash flows. We have decided that the CFFO/Sales

Ratio will be the most appropriate to use because it is the least volatile. We will use a constant value of 11% for our CFFO/Sales Ratio to best reflect past performance, and we will multiply this value by the forecasted net sales from the income statement to get our forecast for CFFO.

The next item to be forecasted on our Statement of Cash Flows is cash flows from investing activities. Because most items in the CFFI section of the balance sheet have no reliable pattern, they have very low forecasting power. However, we do want to forecast out capital expenditures. By definition, capital expenditures are money spent by a business on acquiring or maintaining fixed assets. We want to know future capital expenditures to tell us how a company will be investing in itself. To make this forecast, we need to do a similar process as we did for CFFO. We must find a ratio relating the past capital expenditures to the performance of the company. We decided that a ratio of capital expenditures to net sales will be the most stable. This is because if sales are growing (or declining), the company should want to reinvest in itself accordingly to fuel future growth. Looking at Abercrombie's ratio of capex/sales over the last five years, we determined that 4.6% is an appropriate value. Now, by multiplying our forecasted sales by this ratio we can forecast out capital expenditures for the firm.

The last item of the Statement of Cash Flows is the cash flows from financing activities. Similar to CFFI, items from the CFFF can be very "noisy" and have little forecasting value. However, we do want to forecast out dividends paid from this section. From examining the past five years of dividends paid, we can see that there is a consistent value of around \$61,000,000 except for 2014 which has a value of \$285,000,000. Looking more closely, we found that this large value is attributed to an attempt by Abercrombie to attract more investors. This large amount of declared dividends is not expected to continue in the future, so we will label this year as an outlier. Without this large value in 2014, we decided that an appropriate constant value forecast for dividends paid to be \$61,000,000. Since this is the only value we forecast for CFFF, our forecasted CFFF is also \$61,000,000 throughout our forecast.

### Forecasted Statement of Cash Flows

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>NET CASH PROVIDED BY OA</b>	391,789	365,219	684,171	175,493	312,480	331,258	334,571	341,262	351,500	365,560	383,838	406,868	435,349	470,177	512,493
<b>FFO/sales</b>	11.29%	8.78%	15.17%	4.26%	8.35%	Used 11%									
<b>FFO/operating income</b>	165.19%	164.97%	182.82%	217.13%	275.27%										
<b>FFO/NI</b>	251.62%	255.15%	288.67%	321.25%	603.00%										
<b>FFO/GP</b>	17.67%	14.32%	24.29%	6.81%	13.51%										
<b>NET CASH USED FOR IA</b>	(92,976)	(340,689)	(247,238)	(173,861)	(175,074)	(138,526)	(139,911)	(142,710)	(146,991)	(152,870)	(160,514)	(170,145)	(182,055)	(196,619)	(214,315)
<b>CapEx/sales</b>	-4.64%	-7.66%	-7.53%	-3.98%	-4.66%	Used -4.6%									
<b>NET CASH USED FOR FA</b>	(145,333)	(265,329)	(380,071)	(40,831)	(181,453)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)
<b>Dividends Paid</b>	(61,656)	(60,956)	(57,634)	(61,923)	(285,038)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)

\*Dollar amounts in thousands

## Finishing the Balance Sheet Forecast

Now that we have the forecasted dividends paid from the Statement of Cash Flows, we can finish the liabilities and equity side of the forecasted Balance Sheet. The first step is to forecast retained earnings. We know that for retained earnings that  $BB + NI - DIV = EB$ . We already have net income and dividends forecasted out so now we can forecast retained earnings. We are assuming a modified internal growth rate meaning there will not be any issuance or repurchase of shares during the forecast time frame. This being the case, the change in retained earnings will be the only forecasted item changing total equity so we can forecast equity based on the change in retained earnings.

Once we have total equity, we can subtract the already forecasted values of total assets to find total liabilities because balance sheets must balance. Then we will subtract forecasted current liabilities from total liabilities to get long-term liabilities, which completes the forecast.



## Forecasted Balance Sheet

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Receivables</b>	81,264	89,350	99,622	67,965	52,910	53,628	54,165	55,248	56,905	59,182	62,141	65,869	70,480	76,118	82,969
<b>Inventories</b>	385,857	679,935	426,962	530,192	460,794	360,547	364,153	371,436	382,579	397,882	417,776	442,843	473,842	511,749	557,806
<b>TOTAL CURRENT ASSETS</b>	1,433,268	1,557,654	1,307,824	1,320,566	1,164,972	1,031,794	1,052,430	1,084,003	1,127,363	1,183,731	1,254,755	1,342,588	1,449,995	1,580,495	1,738,544
<b>PP&amp;E</b>	1,149,583	1,197,271	1,308,232	1,131,341	967,001	900,000	860,000	850,000	865,000	865,000	865,000	865,000	865,000	865,000	865,000
<b>TOTAL ASSETS</b>	2,947,902	3,117,032	2,987,401	2,850,997	2,505,167	2,243,031	2,287,892	2,356,528	2,450,789	2,573,329	2,727,729	2,918,670	3,152,163	3,435,858	3,779,444
<b>TOTAL CURRENT LIABILITIES</b>	558,851	699,406	690,801	568,222	485,956	448,606	457,578	471,306	490,158	514,666	545,546	583,734	630,433	687,172	755,889
<b>TOTAL LONG-TERM LIABILITIES</b>	498,267	486,291	478,332	553,282	629,510	432,598	480,822	531,581	584,908	640,918	699,819	761,921	827,661	897,625	911,589
<b>Total Liabilities</b>	1,057,118	1,185,697	1,169,133	1,121,504	1,115,466	881,204	938,400	1,002,887	1,075,066	1,155,584	1,245,364	1,345,655	1,458,093	1,584,797	1,667,477
<b>Retained Earnings</b>	2,272,317	2,389,614	2,567,261	2,556,270	2,550,673	2,522,799	2,510,464	2,514,614	2,536,695	2,578,717	2,643,336	2,733,987	2,855,042	3,012,033	3,272,938
<b>Change in RE</b>	88,627	117,297	177,647	(10,991)	(5,597)	(27,874)	(12,335)	4,150	22,082	42,021	64,620	90,651	121,055	156,991	260,905
<b>TOTAL STOCKHOLDERS EQUITY</b>	1,890,784	1,931,335	1,818,268	1,729,493	1,389,701	1,361,827	1,349,492	1,353,642	1,375,723	1,417,745	1,482,364	1,573,015	1,694,070	1,851,061	2,111,966
<b>TOTAL L&amp;SE</b>	2,947,902	3,117,032	2,987,401	2,850,997	2,505,167	2,243,031	2,287,892	2,356,528	2,450,789	2,573,329	2,727,729	2,918,670	3,152,163	3,435,858	3,779,444
<b>Receivables</b>	2.76%	2.87%	3.33%	2.38%	2.11%	2.39%	2.37%	2.34%	2.32%	2.30%	2.28%	2.26%	2.24%	2.22%	2.20%
<b>Inventories</b>	13.09%	21.81%	14.29%	18.60%	18.39%	16.07%	15.92%	15.76%	15.61%	15.46%	15.32%	15.17%	15.03%	14.89%	14.76%
<b>TOTAL CURRENT ASSETS</b>	48.62%	49.97%	43.78%	46.32%	46.50%	46.00%	46.00%	46.00%	46.00%	46.00%	46.00%	46.00%	46.00%	46.00%	46.00%
<b>PP&amp;E</b>	39.00%	38.41%	43.79%	39.68%	38.60%	40.12%	37.59%	36.07%	35.29%	33.61%	31.71%	29.64%	27.44%	25.18%	22.89%
<b>TOTAL ASSETS</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>TOTAL CURRENT LIABILITIES</b>	52.87%	58.99%	59.09%	50.67%	43.57%	50.91%	48.76%	46.99%	45.59%	44.54%	43.81%	43.38%	43.24%	43.36%	45.33%
<b>TOTAL LONG-TERM LIABILITIES</b>	47.13%	41.01%	40.91%	49.33%	56.43%	49.09%	51.24%	53.01%	54.41%	55.46%	56.19%	56.62%	56.76%	56.64%	54.67%
<b>Total Liabilities</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>Retained Earnings</b>	214.95%	201.54%	219.59%	227.93%	228.66%	286.29%	267.53%	250.74%	235.96%	223.15%	212.25%	203.17%	195.81%	190.06%	196.28%
<b>TOTAL STOCKHOLDERS EQUITY</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>TOTAL L&amp;SE</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

\*Dollar amounts in thousands

## Restated Balance Sheet Forecast

As previously discussed, we must restate our balance sheet to give an accurate forecast. The first step is to find our restated key ratios for the past five years from our restated balance sheets. The only two ratios that will change are asset turnover and current-asset-to-total-asset. Next we must forecast out these ratios. We will use the same logic and assumptions as used for the as-stated ratios. Once we have our restated ratios, we follow the same process as for our as-stated balance sheet forecast.

## Restated Ratio Forecasts

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Restated Asset Turnover</b>	0.711	0.826	0.813	0.800	0.779	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800
<b>Restated CA/TA</b>	0.253	0.285	0.281	0.254	0.275	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270	0.270

## Restated Balance Sheet Forecasts

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Receivables</b>	81,264	89,350	99,622	67,965	52,910	53,628	54,165	55,248	56,905	59,182	62,141	65,869	70,480	76,118	82,969
<b>Inventories</b>	385,857	679,935	426,962	530,192	460,794	360,547	364,153	371,436	382,579	397,882	417,776	442,843	473,842	511,749	557,806
<b>TOTAL CURRENT ASSETS</b>	1,433,268	1,557,654	1,307,824	1,320,566	1,164,972	1,026,523	1,047,054	1,078,465	1,121,604	1,177,684	1,248,345	1,335,729	1,442,588	1,572,420	1,729,662
<b>PROPERTY AND EQUIPMENT, NET</b>	1,149,583	1,197,271	1,308,232	1,131,341	967,001	900,000	860,000	850,000	865,000	865,000	865,000	865,000	865,000	865,000	865,000
<b>TOTAL ASSETS</b>	5,035,113	5,551,035	5,149,045	4,803,207	4,142,750	3,801,938	3,877,976	3,994,316	4,154,088	4,361,793	4,623,500	4,947,145	5,342,917	5,823,779	6,406,157
<b>TOTAL CURRENT LIABILITIES</b>	558,851	699,406	690,801	568,222	485,956	446,314	455,241	468,898	487,654	512,037	542,759	580,752	627,212	683,661	752,027
<b>TOTAL LONG-TERM LIABILITIES</b>	2,585,478	2,920,294	2,639,976	2,505,492	2,267,093	1,993,796	2,073,244	2,171,776	2,290,711	2,432,011	2,598,377	2,793,378	3,021,635	3,289,057	3,542,164
<b>Total Liabilities</b>	3,144,329	3,619,700	3,330,777	3,073,714	2,753,049	2,440,111	2,528,485	2,640,674	2,778,365	2,944,048	3,141,136	3,374,130	3,648,847	3,972,718	4,294,191
<b>Retained Earnings</b>	2,272,317	2,389,614	2,567,261	2,556,270	2,550,673	2,522,799	2,510,464	2,514,614	2,536,695	2,578,717	2,643,336	2,733,987	2,855,042	3,012,033	3,272,938
<b>Change in RE</b>	88,627	117,297	177,647	(10,991)	(5,597)	(27,874)	(12,335)	4,150	22,082	42,021	64,620	90,651	121,055	156,991	260,905
<b>TOTAL STOCKHOLDERS EQUITY</b>	1,890,784	1,931,335	1,818,268	1,729,493	1,389,701	1,361,827	1,349,492	1,353,642	1,375,723	1,417,745	1,482,364	1,573,015	1,694,070	1,851,061	2,111,966
<b>TOTAL L&amp;SE</b>	5,035,113	5,551,035	5,149,045	4,803,207	4,142,750	3,801,938	3,877,976	3,994,316	4,154,088	4,361,793	4,623,500	4,947,145	5,342,917	5,823,779	6,406,157
<b>Receivables</b>	1.61%	1.61%	1.93%	1.41%	1.28%	1.41%	1.40%	1.38%	1.37%	1.36%	1.34%	1.33%	1.32%	1.31%	1.30%
<b>Inventories</b>	7.66%	12.25%	8.29%	11.04%	11.12%	9.48%	9.39%	9.30%	9.21%	9.12%	9.04%	8.95%	8.87%	8.79%	8.71%
<b>TOTAL CURRENT ASSETS</b>	28.47%	28.06%	25.40%	27.49%	28.12%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%
<b>PROPERTY AND EQUIPMENT, NET</b>	22.83%	21.57%	25.41%	23.55%	23.34%	23.67%	22.18%	21.28%	20.82%	19.83%	18.71%	17.48%	16.19%	14.85%	13.50%
<b>TOTAL ASSETS</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>TOTAL CURRENT LIABILITIES</b>	17.77%	19.32%	20.74%	18.49%	17.65%	18.29%	18.00%	17.76%	17.55%	17.39%	17.28%	17.21%	17.19%	17.21%	17.51%
<b>TOTAL LONG-TERM LIABILITIES</b>	82.23%	80.68%	79.26%	81.51%	82.35%	81.71%	82.00%	82.24%	82.45%	82.61%	82.72%	82.79%	82.81%	82.79%	82.49%
<b>Total Liabilities</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>Retained Earnings</b>	72.27%	66.02%	77.08%	83.17%	92.65%	103.39%	99.29%	95.23%	91.30%	87.59%	84.15%	81.03%	78.25%	75.82%	76.22%
<b>TOTAL STOCKHOLDERS EQUITY</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>TOTAL L&amp;SE</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

\*Dollar Amounts in thousands (excluding percentages)

From our restatements, we can see that asset turnover decreased significantly. This suggests that the performance and efficiency of the company are lower than they seem. We also see that the Current Assets-to-Total Assets Ratio is lower for the restated financials. This tells us that the liquidity of the firm is lower than originally stated. It is also important to point out that on the common sized restated balance sheet, the retained earnings are less than 100% for all years except 2015. This value represents the ability of the firm to cover its debt with retained earnings, which is a stability indicator for a firm. The fact that the Retained Earnings-to-Total Liabilities Ratios are all greater than 1 for the as-stated balance sheet, but they are all less than 1 (with the exception on 2015) for the restated balance sheet. This is a bad indicator to investors because it says that Abercrombie is not likely to increase their dividends paid over the next ten years. This is because the more dividends paid out, the less retained earnings for the company which would drop the ratio even lower.

## Conclusion

The purpose of this analysis is to answer the question "should investors invest in this company?" The point of forecasting the financial statements is to be able to examine the future equity of the firm because equity is what concerns investors. From our forecasts we can see a decline in equity for this year and the next, but a steady increase after that throughout our forecast. This reflects our base assumption that the firm will start to show positive growth soon as the changes they are currently making take effect. The biggest weakness of our forecast is that we cannot say with certainty how consumers will react over the next few years to the changes that Abercrombie will make. However, over the last few months stock prices for Abercrombie have been rising steadily which is a sign that investors are gaining confidence in Abercrombie which strengthens our assumptions. This forecast indicates that two years from now may be the better time to invest in this firm.

## Method of Comparable

### Trailing P/E

The trailing P/E ratio is used to value a firm based on its current price and previous earnings during the last year (four quarters). To calculate the price per share for Abercrombie and Fitch, we took the industry average from the competitors by dividing their November 1, 2015, share price by their current earnings per share. By doing so, the industry average was 16.81, which is much lower than that of A&F. Taking the average trailing P/E of 16.81 and multiplying by A&F's earnings per share of 0.32, we arrived at a price per share of \$5.38. Based on this comparable A&F is substantially overpriced.

Trailing P/E	PPS	EPS	P/E Trailing	Industry Avg.	ANF PPS
A&F	21.19	0.32	66.22	16.81	5.38
American Eagle	15.28	0.68	22.47		
Gap	27.22	2.44	11.16		
Aeropostale	0.62	-1.95	N/A		

### Forward P/E

Forward P/E is very similar to that of the trailing P/E, except instead of using the previous earnings, it uses the forecasted future earnings of the next year (four quarters). The earnings used in deriving this value are forecasted for 2016, which was 0.72 per share for A&F. After finding the industry average of the competitors forward P/E of 11.8, it was multiplied by A&F's forecasted earnings per share of 0.72 to arrive at a value of \$8.55 per share. Concluded from this valuation method, A&F is overvalued.

<b>Forward P/E</b>	PPS	EPS	P/E Forward	Industry Avg.	ANF PPS
A&F	21.19	0.72	22.19	11.8	8.55
American Eagle	15.28		13.32		
Gap	27.22		10.28		
Aeropostale	0.62		N/A		

### Dividend to Price

The Dividend to price comparable is used to value a share price based on its dividend yield relative to the industry average. Using this method can tell an investor how much of the share price is dependent on its dividends compared to its competitors. In finding the industry average of the dividend yield, we took the most recent dividends and divided by the current price (11/01/15). In finding A&F's calculated share price of \$37.32, we took the most recent dividend of \$0.80 and divided by the average dividend yield of 2.14%. Based on this valuation model, A&F exceeds its current price of \$21.19 and appears to be undervalued.

<b>Dividend to Price</b>	Dividend	PPS	Dividend yield	Industry Avg.	ANF PPS
A&F	0.800	21.19	3.78%	2.14%	37.32
American Eagle	0.500	15.28	3.27%		
Gap	0.860	27.22	3.16%		
Aeropostale	0.000	0.62	0.00%		

### Price to Book (P/B)

Price to book (P/B) is a unit of measure that compares the stock price (P) to the book value per share (B) of the company's assets. Using this method to derive a stock price for A&F compared to its competitors, the competitors price per share is divided by their book value to find the industry average of 4.14, and then multiplied by A&F's book value of 18.84. The result because of the high book value is \$77.93 per share, which would demonstrate the stock price is undervalued.

<b>Price to Book (P/B)</b>	PPS	BV per share	P/B	Industry Avg.	ANF PPS
A&F	21.19	18.84	1.12	4.14	77.93
American Eagle	15.28	5.97	2.56		
Gap	27.22	6.46	4.21		
Aeropostale	0.62	0.11	5.64		

### P.E.G.

The PEG ratio is similar to that of the P/E ratio, except it takes it one step further by factoring in a company's future earnings growth. The PEG ratio is found by taking the P/E ratio and dividing by the earnings growth. Since we used the five-year PEG when finding the industry average, the annual earnings growth over the next five years for A&F must be used when finding the share price. Concluded, the price per share of \$9.52 was found by multiplying the industry average of 2.02 by 14.73 (earnings growth) by the most recent earnings per share of 0.32. Although \$9.52 is higher than

the previously calculated trailing P/E of \$5.38, the price per share is still significantly less than the current share price, meaning A&F is overvalued.

<b>P.E.G.</b>	P.E.G. (5yr)	EPS	5yr ahead earnings growth (annual)	Industry Avg.	ANF PPS
A&F	1.11	0.32	14.73%	2.02	9.52
American Eagle	1.64	0.68			
Gap	2.4	2.44			
Aeropostale	N/A	-1.95			

### Price to EBITDA

Price (P) to earnings before interest, taxes, depreciation, and amortization (EBITDA) is found by dividing P by EBITDA. It is similar to the P/E ratio, except it excludes factors that help better compare companies with different levels of debt within the industry. The industry average was found by dividing the competitors price by their EBITDA, which concluded to be 5.93. This 5.93 industry average was multiplied by A&F's EBITDA per share of 5.09 and resulted in a share price of 30.21. This share price is higher than the current share price meaning it is undervalued when using this valuation metric.

<b>P/EBITDA</b>	PPS	EBITDA(PS)	P/EBITDA	Industry Avg.	ANF PPS
A&F	21.19	5.09	4.16	5.93	30.21
American Eagle	15.28	2.18	6.99		
Gap	27.22	5.59	4.87		
Aeropostale	0.62	-0.99	N/A		



### EV to EBITDA

The enterprise value (EV) to EBITDA ratio is used to assess a company by how long it'd take an acquirer to pay off its costs. Taking a company's market price and adding its debt, minority interest, and preferred stock results in the Enterprise value. This enterprise value is then taken and divided by the company's EBITDA to find the EV/EBITDA ratio. The industry average of A&F's competitors was 5.73. This average was multiplied by A&F's EBITDA of 342.07 and then divided by its outstanding shares of 67.15 (in millions) to arrive at a stock price of \$29.21. This value method states the current stock price is undervalued when compared to its competitor's metrics.

EV to EBITDA	EV(millions)	EBITDA(millions)	EV/EBITDA	Industry Avg.	ANF PPS
A&F	1,630	342.07	4.77	5.73	29.21
American Eagle	2,760	426.94	6.46		
Gap	11,310	2260	5.00		
Aeropostale	103.14	-78.58	N/A		

### Price to Free Cash Flows

The Price to FCF ratio measures a firm's price in relation to its free cash flows. This ratio is found by dividing a company's market capitalization by its free cash flows. To find each company's Price/FCF, we first stated each company's market cap. Then we stated their Capital Expenditures and Cash Flow From Operating Activities. We then subtracted the Capital Expenditures from the CFFO to get the Free Cash Flows. Then we divided the Market Caps by the Free Cash Flows. Abercrombie's ratio is 10.51

whereas the industry's average ratio is 15.9. This industry ratio values Abercrombie's stock price at \$12.78 meaning it is overvalued in this measure.

<b>Price to FCF</b>	Market Cap (millions)	CAPEX (millions)	CFFO (millions)	FCF (millions)	Price/FCF	Industry Avg.	ANF PPS
A&F	1,450	175	313	138	10.51	15.9	12.78
American Eagle	3,090	236	338	102	30.29		
Gap	10,580	596	2,129	1,533	6.9		
Aeropostale	35	23	-55	-78	N/A		

## Conclusion

Concluded from these metrics, A&F's share price of \$21.19 on November 1, 2015, is considered to be somewhat fair. With the high variability in the valuation comparable, it is difficult to determine whether or not A&F is over or undervalued. To get a better picture with these metrics, more competitors would need to be taken into account.

<b>ANF</b>	<b>Results</b>
<b>Trailing P/E</b>	overvalued
<b>Forward P/E</b>	overvalued
<b>Dividend to Price</b>	undervalued
<b>Price to Book (P/B)</b>	undervalued
<b>P.E.G.</b>	overvalued
<b>Price/EBITDA</b>	undervalued
<b>EV to EBITDA</b>	undervalued

## Intrinsic Valuation Model

### Discounted Dividend Model

The discounted dividend model is a valuation model that values a company's share price based on its present value of its forecasted dividend payout. Although it does not take into account the full value of the company, this metric can be used to determine how much of the share price is based on its dividend payout. Typically when dividends are low about its share price, like A&F's, the resulting valuation prices would show the company is overvalued. The model displayed below, predicted share price based on a constant dividend payout of \$0.80 for the next ten years, and then with a perpetuity starting thereafter on the \$0.80.

		<b>(Ke)</b>				
		<b>10.7%</b>	<b>14.7%</b>	<b>18.7%</b>	<b>22.7%</b>	<b>26.7%</b>
<b>(g)</b>	<b>0.0%</b>	8.04	6.02	4.86	4.10	3.57
	<b>1.5%</b>	8.51	6.19	4.93	4.14	3.59
	<b>3.0%</b>	9.16	6.41	5.02	4.18	3.62
	<b>4.5%</b>	10.13	6.69	5.13	4.23	3.64
	<b>6.0%</b>	11.71	7.06	5.27	4.29	3.67
						<b>UB</b>
					<b>LB</b>	<b>19.07</b>

Using the derived cost of equity (Ke) for A&F of 18.74% with a deviation of 4% and a perpetuity growth rate between 0% and 6%, it resulted in time consistent share price values between \$3.67 and \$11.71 for November 1, 2015. With the resulting prices significantly below the current share price of \$21.19, it displays a small portion of A&F's price is derived from its dividend payout or its overvalued.

### Discounted Free Cash Flows

The discounted free cash flow model estimates a range of share prices based on forecasted cash flow from operations and investing activities added together and discounted back to time 0 (11/1/15). Unlike the discounted dividend model, their cash flows are discounted by the company's weighted average cost of capital (WACC). For the perpetuity beginning in time 11, we used the inverse cash flow from investing activities in time 10 and predicted it'd grow at a constant rate (g) for an infinite amount.

		<b>(WACC)</b>				
		<b>8%</b>	<b>10%</b>	<b>12%</b>	<b>14%</b>	<b>16%</b>
<b>(g)</b>	<b>0.0%</b>	27.32	18.76	12.86	8.52	4.61
	<b>1.5%</b>	31.69	21.03	14.17	9.31	5.67
	<b>3.0%</b>	38.64	24.26	15.90	10.33	6.30
	<b>4.5%</b>	51.40	29.23	18.31	11.66	7.09
	<b>6.0%</b>	82.47	37.83	21.91	13.48	8.12
		<b>UB</b>			<b>23.31</b>	
		<b>LB</b>			<b>19.07</b>	

To determine these values the forecasted cash flows and perpetuity were discounted at a WACC of 12.09% with a deviation of 4%, and, also, the perpetuity was discounted with a growth rate between 0% to 6%. After adding these two values together to obtain the market value of assets at time (01/31/15), the book value of debt and preferred stock for A&F is deducted to find the market value of equity. To arrive at a price per share, it was divided by the number of shares, 67.15 million, before finding its time consistent share price at 11/1/15. This model displays the stock price is more likely to be overpriced, but can be undervalued under the right conditions. Overall, this valuation model gives a better picture of the overall value of the company than the discounted dividend model but has higher variability when trying to determine a fair stock price.

## Residual Income

Of the three intrinsic valuation models, the residual income model is known to be the more accurate and less sensitive to forecasted net income and dividend values. It utilizes both returns on equity and book value of equity, so it has more explanatory power to investors than other models.

Starting with the book value at time 0 (book value per share multiplied by some shares), every year after that the forecasted net income is added, and the forecasted net income is subtracted to arrive at the new book value for years 1 through 10. Once the book values are derived, normal annual income is calculated by taking the book value of equity from the previous year and multiplying by the initial cost of equity ( $K_e$ ), this gives us a benchmark value. Using this benchmark value, we then subtract it from the company's net income to find its annual residual income.

Annual residual income is important because it tells us whether or not the company is meeting net income expectations that are sufficient enough to cover the cost of equity. Year 11 the residual income perpetuity starts, which grows at a negative

rate. The reason for the "decay rate" is that over time, a competitive advantage or disadvantage never everlasting, and eventually residual income will reach equilibrium. Once these values are discounted at the rate of initial cost of equity, they are added to the book value of equity to help arrive at the market value of equity. The market value of equity is then divided by the number of shares outstanding to arrive at the model price. Since the model price is valued on 01/31/15, it must be made time consistent by growing at the cost of equity for the next nine months (11/1/15).

For the model, the average cost of equity was 18.74% with a deviation of 4%, and a decay rate between -10% and -50% was used to discover the model price. With these inputs, the A&F share price of \$21.19 on 11/1/15 appears to overvalued by nearly double.

		<b>(Ke)</b>				
		<b>14.7%</b>	<b>16.7%</b>	<b>18.74%</b>	<b>20.7%</b>	<b>22.7%</b>
<b>(g)</b>	<b>-10.0%</b>	<b>12.90</b>	<b>11.51</b>	<b>10.20</b>	<b>9.06</b>	<b>8.09</b>
	<b>-20.0%</b>	<b>12.88</b>	<b>11.47</b>	<b>10.16</b>	<b>9.04</b>	<b>8.08</b>
	<b>-30.0%</b>	<b>12.87</b>	<b>11.44</b>	<b>10.14</b>	<b>9.03</b>	<b>8.07</b>
	<b>-40.0%</b>	<b>12.87</b>	<b>11.42</b>	<b>10.13</b>	<b>9.02</b>	<b>8.07</b>
	<b>-50.0%</b>	<b>12.86</b>	<b>11.41</b>	<b>10.12</b>	<b>9.01</b>	<b>8.07</b>
		<b>UB</b>			<b>23.31</b>	
		<b>LB</b>			<b>19.07</b>	

## Long-Run Residual Income

Similar to that of the residual income approach, the long-run residual income approach uses a decay and initial cost of equity (Ke) rate to discover the model prices. The difference is, it uses return on equity (ROE) in addition to discovering the market value of equity (MVE).

In the models presented below, there were three variables that were each separately held constant when calculating the MVE share price. In the first model the cost of equity (Ke) was held at a rate of 18.74%, in the second the decay rate (g) was the average of the rates previously used in the residual income model of -30%, and in the third the average return on equity (ROE) from the previous ten years of 8.68% was also used from the residual income model. The formula used to discover MVE per share (67.15 million shares) was:

$$BVE * (1 + ((ROE - Ke) / (Ke - G))) / 67.15$$

All three models concluded the current A&F share price of \$21.19 was overvalued.

hold (Ke) constant            19%

**ROE**

6.7%    7.7%    8.7%    9.7%    10.7%

(g)	-10%	10.94	11.59	12.25	12.9	13.56
	-20%	12.98	13.46	13.95	14.44	14.92
	-30%	14.18	14.57	14.95	15.34	15.73
	-40%	14.97	15.29	15.61	15.94	16.26
	-50%	15.54	15.81	16.08	16.36	16.63

**UB            23.31**

**LB            19.07**

hold (g)  
constant                            -30%

**ROE**

6.7%    7.7%    8.7%    9.7%    10.7%

(Ke)	14.74%	15.45	15.87	16.29	16.71	17.13
	16.74%	14.79	15.19	15.59	16.00	16.40
	18.74%	14.18	14.57	14.95	15.34	15.73
	20.74%	13.62	13.99	14.36	14.73	15.11
	22.74%	13.10	13.46	13.82	14.18	14.53



**UB            23.31**  
**LB            19.07**

**hold ROE constant            8.68%**

**(Ke)**

**14.74%   16.74%   18.74%   20.74%   22.74%**

-					
<b>10%</b>	<b>14.23</b>	<b>13.16</b>	<b>12.25</b>	<b>11.45</b>	<b>10.75</b>
-					
<b>20%</b>	<b>15.56</b>	<b>14.71</b>	<b>13.95</b>	<b>13.26</b>	<b>12.64</b>
-					
<b>30%</b>	<b>16.29</b>	<b>15.59</b>	<b>14.95</b>	<b>14.36</b>	<b>13.82</b>
-					
<b>40%</b>	<b>16.76</b>	<b>16.16</b>	<b>15.61</b>	<b>15.10</b>	<b>14.62</b>
-					
<b>50%</b>	<b>17.08</b>	<b>16.57</b>	<b>16.08</b>	<b>15.63</b>	<b>15.20</b>

**UB            23.31**  
**LB            19.07**

## Bibliography

*Financial Statements., Text and Cases.* 5<sup>th</sup> ed. Cengage,2013

Abercrombie 10-k, 2010-2015

Aeropostale 10-k, 2010-2015

American Eagle 10-k, 2010-2015

Gap Inc 10-k, 2010-2015

"Investopedia - Educating the World about Finance." *Investopedia*. N.p., n.d. Web. 10 Sept. 2015. <<http://www.investopedia.com/>>.

Welcome to the Economics Web Institute." *Welcome to the Economics Web Institute*. N.p., n.d. Web. 10 Sept. 2015. <<http://economicswebinstitute.org/>>.

"MarketWatch - Stock Market Quotes, Business News, Financial News." *MarketWatch - Stock Market Quotes, Business News, Financial News*. N.p., n.d. Web. 10 Sept. 2015. <<http://www.marketwatch.com/>>.

*CSIMarket*. N.p., n.d. Web. 10 Sept. 2015. <<http://csimarket.com/>>.

"Home - Guides at Texas Tech University." *Home - Guides at Texas Tech University*. N.p., n.d. Web. 10 Sept. 2015. <<http://guides.library.ttu.edu/>>.

## Appendix