

Business Insight of Annual Report - 2020
Columbia Sportswear Company, Starbucks Corporation, Under Armour, INC.

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Introduction

An investor is looking to make an investment in a top company that is based out of the United States.

I have been assigned to submit a report analyzing and evaluating only the textual content in the 10-K reports of three companies. The objective of this analysis is to recommend one company to invest. For ease of understanding, I will be presenting my analysis company-wise and then a comparison followed by my recommendations based on the findings. The analysis has been done using R.

Please note: This report only analyses the text data and not the exact financial position of the company.

Frameworks Used:

Correlograms

I have made a graphical representation comparing the proportion of frequent words used in the report of all the three companies.

TF-IDF: Term Frequency – Inverse document Frequency

This framework uses a numerical statistic to analyze how important a word is to a document in comparison to other documents. A higher value indicates the word is more important. I have filtered the top fifteen words with the highest tf-idf index for each of the three companies to help us determine the words used in their reports.

N-grams (Bi-grams)

The Management Discussion & analysis section contains a lot of information about the financial status, historical performance and future plans. As a lot of business and financial terms comprise of 2 words, I decided to use bigrams to understand any issues or topics that are being discussed in their reports which could help us get some more insights about the company. The bi-grams framework has helped extract a lot of terms that could most likely be a part of this section of the 10-K report.

Sentiment Analysis

I have used the sentiment analysis to understand and determine the tone and mood of the reports – positive and negative by plotting the most frequent words and also calculating a sentiment score.

Correlograms

Below is a plot showing the frequent words mentioned in each of the companies with respect to one another. The reason for choosing Under Armour as the common y-axis is because I wanted to know if the words used in two companies of the same industry differ from those of different industries. Unfortunately, we are unable to obtain a lot of insight from this graph, as these being 10-K reports, with a lot of common terms positioned near the diagonals. This is justified by the Pearson's correlation coefficient being the same for the three companies. (0.983 for both Under Armour / Columbia and Under Armour / Starbucks.)



However, some interesting findings from the correlogram are:

Under Armour –

- Restructuring – This may indicate some restructuring plans
- Covenant – they probably have a lot of legally binding contracts

Columbia Sportswear –

- Canada is mentioned in small proportion with respect to Under Armour – this could indicate probably a business opportunity or target segment in Canada.

Starbucks –

- China is one of the target markets for Starbucks

TF-IDF, Bi-grams & Sentiment Analysis

I am comparing the outputs from TF-IDF and bi-grams together as there are some similarities and the results can be connected to each other. This makes it easier to use both outputs while doing the analysis. For the bi-grams, I have selected the word combinations which have been mentioned at least 15-20 times in their reports.

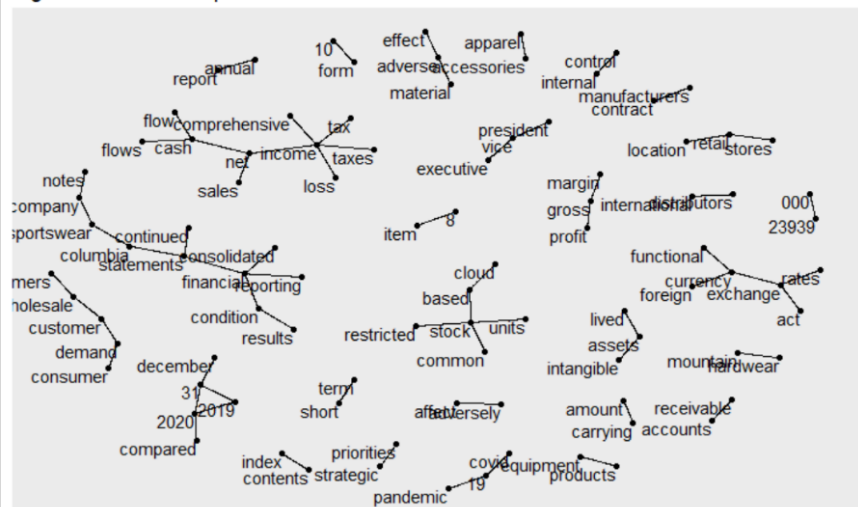
Appended below are the above-mentioned analyses company wise. The TF-IDF bar chart is the chart on the left and to the right is a contribution to sentiment chart indicating the most common positive and negative words used in their reports.

Columbia Sportswear Company

By analyzing the outputs, we can make the following observations about unique terms associated with Columbia Sportswear.

Prana, Laap, Sorel, Mountain Hardwear are brands of Columbia Sportswear Company. There is frequent mention of retail, wholesale, international distributors, and contract manufacturers. This indicates that they have discussed their supply chain operations in detail. They may be

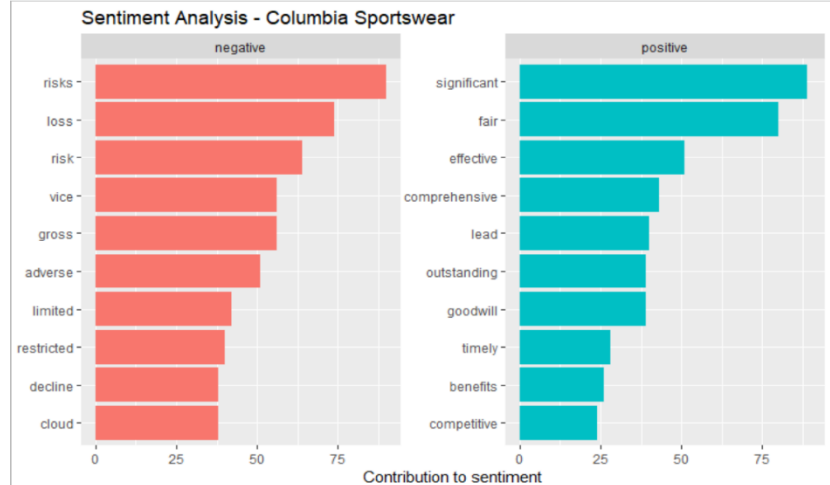
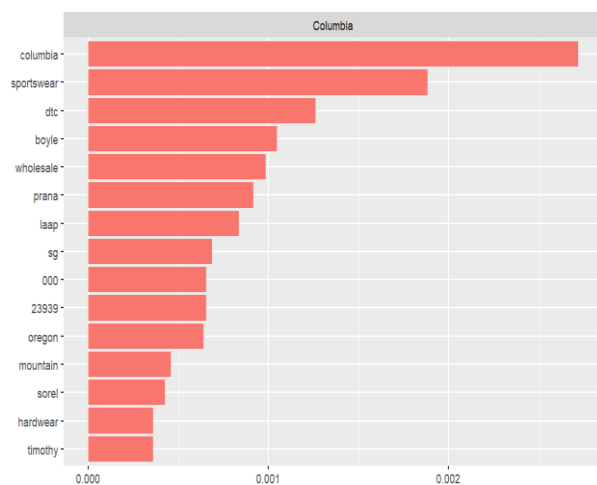
Bigrams - Columbia Sportswear



engaging in contract manufacturing and this helps them to offer well designed sportswear clothing by experienced and professional teams at affordable prices.

They use Depository Trust Company (DTC) for their record-keeping and clearing services. As it is an SEC registered custodian, it is a lower risk for the contract manufacturers and international distributors. Being an automated system, it also helps the company lower trading costs.

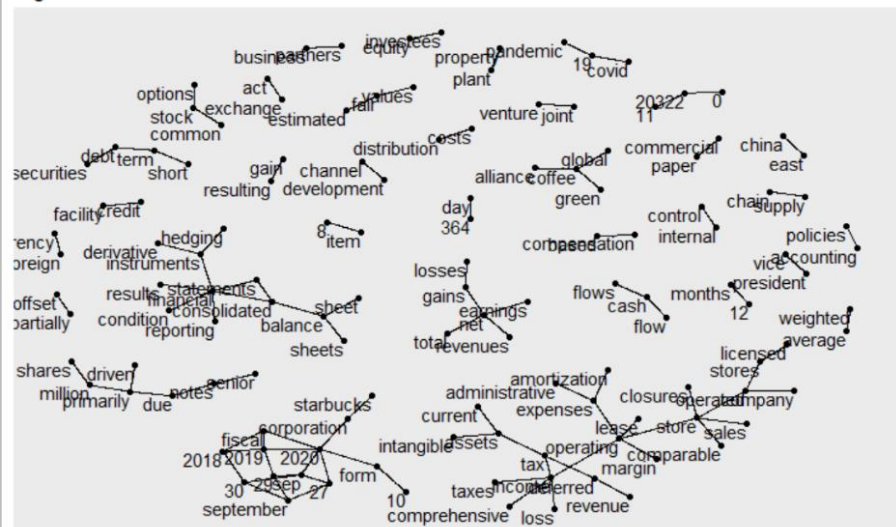
A negative aspect in my analysis would be the mention of the word material adverse effect. There has been some change or condition that has possibly had an impact on the assets, liabilities, financial conditions or business prospects of the company. That can be a negative point that needs consideration before investing.



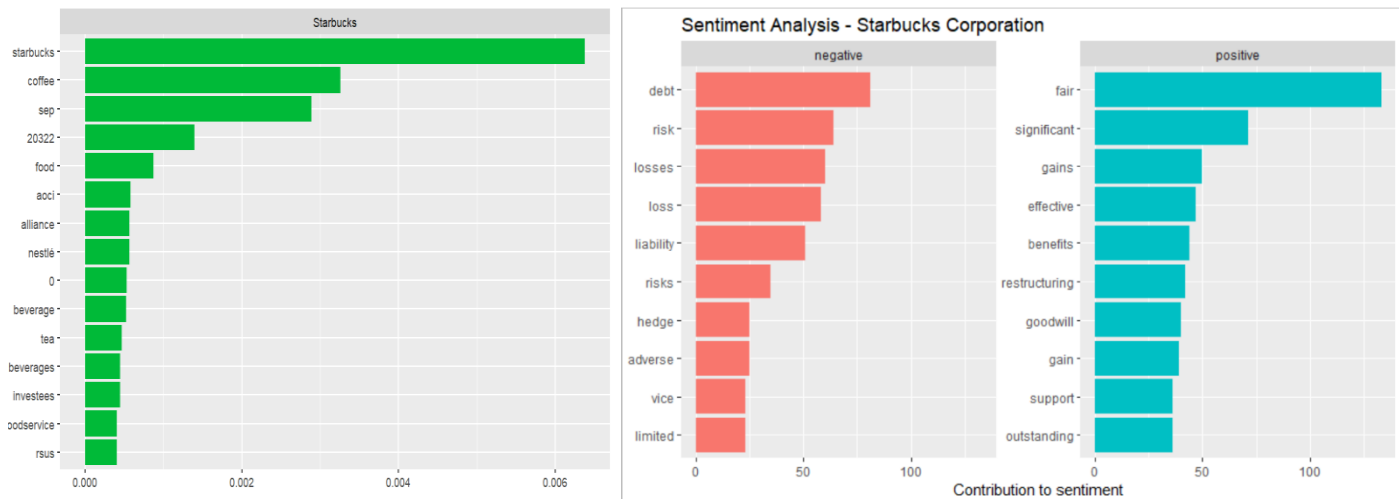
Starbucks Corporation

Important observation from the bar chart and the bi-gram network is that Starbucks is looking to expand globally because they talk about global coffee alliance (likely with Nestle) and joint venture. They probably have a presence in East China which could be a recent inclusion to their network as it seems to have been mentioned often. Internal controls are in place indicating compliance with local

Bigrams - Starbucks

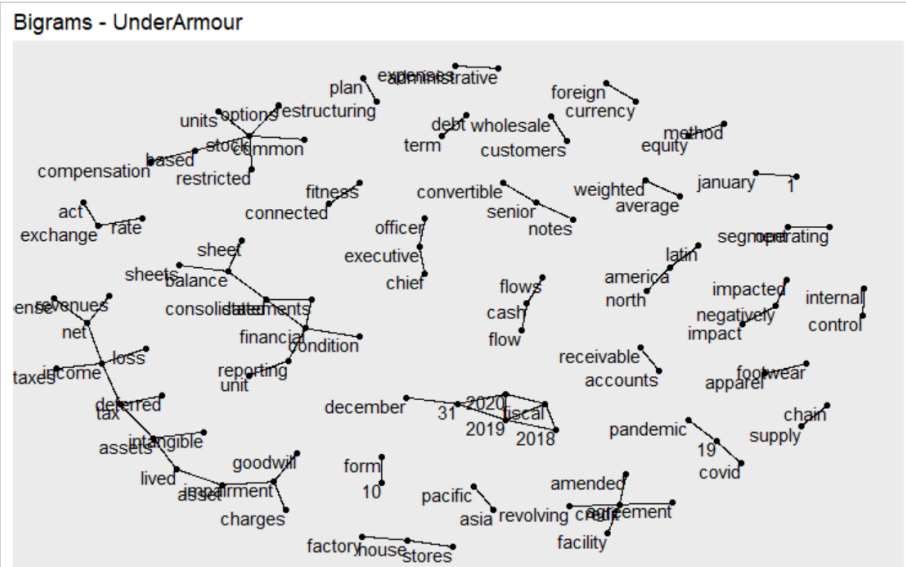


laws and regulations and efforts to ensure integrity of financial information and prevention of fraud. Starbucks is also looking at a strategy to increase their global sales actively which is evident from the word channel development. Senior notes is an important observation because it indicates a lower degree of risk for the investors. The company seems to have many short-term debts which they may be using to finance their working capital needs. There is also frequent mention of business partners (as observed from the bigrams), which may mean that place a lot of value on their business relationships.

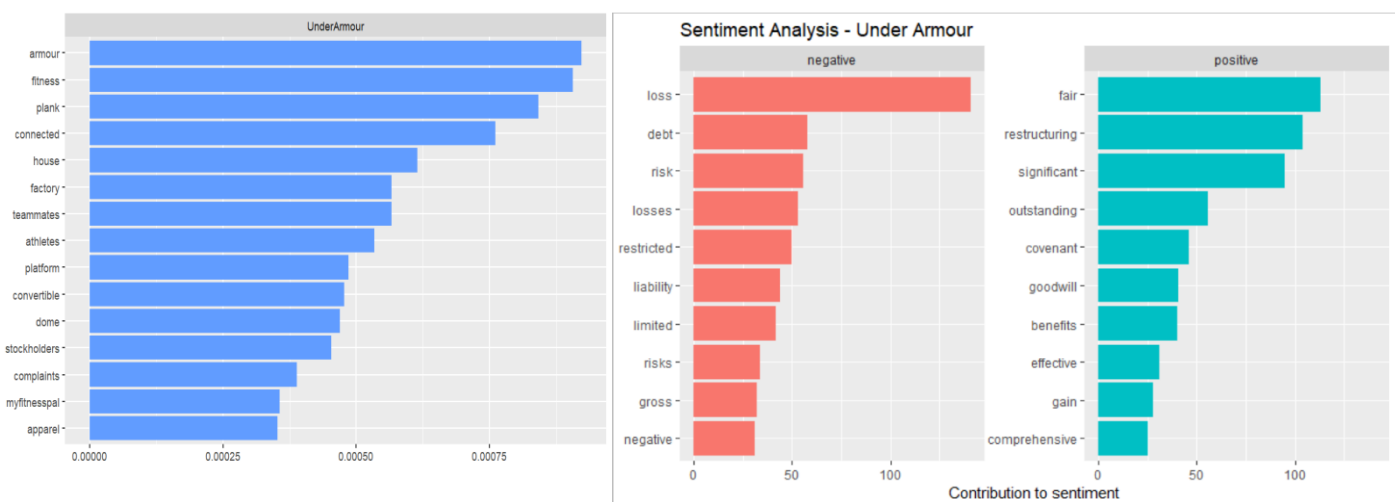


Under Armour

Some of the words mentioned in the TF IDF framework for Under Armour indicate that the company is focusing on various aspects related to fitness with use of words like plank, athletes, and the myfitnesspal app which helps users track diet and exercise. They are probably also working towards addressing complaints. There is discussion about income in foreign currency possibly from businesses in North America, Latin America,



Asia Pacific. The company is working on a restructuring plan possibly related to expansion of business outside the US and their supply chain. The absence of contract manufacturing as compared to Columbia could be an advantage for the company as it would reduce their dependency on third party – which could lead to issues in the supply chain especially during the COVID-19 pandemic. The company has amended some credit agreements to enable them to borrow easily as required to continue operations and ensuring payables are not left outstanding by way of revolving credit facility. Similar to Starbucks, Under Armour also has internal controls in place and convertible senior notes for the benefit of investors. The importance of goodwill has not been ignored in their reports. Overall, the company is focused on the value to all its stakeholders (including employees and customers).



Sentiment Score

Below is a table evaluating the sentiment score of all the three companies based on their annual reports. This score is calculated using a scale of -5 to +5 for certain words. Although it is not the perfect way to evaluate and come to a decision, significant irregularities can help us determine the overall sentiment in the report. The overall negative score is almost the same for all the 3 companies with respect to the total number of words. There is a comparable strong positive sentiment in Starbucks and Under Armour.

	Net Score (Positive + Negative)	Total Positive Score	Total Negative Score	Total Words in Report
Columbia Sportswear	1062	1944	-1872	67044
Starbucks Corporation	1584	2197	-1202	56703
Under Armour	1460	2434	-1850	67890

Conclusion & Recommendations

According to my analysis, Under Armour seems to be placed well to acquire a larger market. The important points to be considered are - the inclination towards welfare of customers, stakeholders, restructuring plan to expand their business globally, flexibility of a revolving credit facility. Based on the text analysis, I would strongly recommend Under Armour for the various reasons mentioned above.