

UNLOCKING THE POTENTIAL OF ALTERNATIVE DATA FOR
CORPORATES
EDITION 1 (JULY 2019)



Eagle Alpha

INTRODUCTION

“Alternative” data is non-traditional data that is increasingly utilized by corporates. There are thousands of alternative datasets spread across 24 categories including social media, satellite, consumer transactions, geo-location and employment. The purpose of this white paper is to discuss the data revolution, outline how companies can unlock the potential of alternative data, give case studies, discuss the challenges encountered and outline Eagle Alpha’s solutions for corporate use. This white paper is the first in a series published by Eagle Alpha. We welcome any feedback and suggestions.

Section 1 (page 3) discusses what Goldman Sachs Asset Management call the “Data Revolution”, that the world entered in 2010. This data revolution is being driven by developments in cloud computing, advances in data science and new datasets. As further evidence for the importance of data will have, in a recent speech, the CEO of Nasdaq, Adena Friedman, highlighted the potential of alternative data for corporates: new alternative datasets are a big part of this revolution. “I think corporates can use it for competitive analysis. They could use it for researching the next thing that they want to try to build or create”.

In Section 2 (page 8), we outline several insights that can be gleaned using alternative data and for which departments they could be useful. For example, insights can be obtained regarding competitive analysis, manufacturing, revenue, customers, people, mobile strategy and R&D analysis.

Section 3 (page 12) demonstrates the effectiveness of alternative data through five case studies:

1. Analyzing consumer trends and sentiment with online and social media content;
2. Employment data pre-empted Microsoft’s changing retail strategy;
3. Web crawled data on luxury goods provided an early signal of strong momentum for Burberry in early 2018;
4. Online search data used to predict Under Armour revenue;
5. Insights into revenue and margin of consumer electronics companies in 2018.

Section 4 (page 24) shows several challenges that corporates can encounter when working with alternative data, including the difficulties of dataset discovery and prioritization.

In Section 5 (page 26), we present the solutions Eagle Alpha has for companies. The first is we have mapped over a thousand alternative datasets worldwide therefore solving the dataset discovery, quality screening and prioritization problems. A new Search Management Tool helps clients to source data from online search in an efficient way. The second is we offer a range of bespoke projects and therefore can be your outsourced data science team or complement your internal team. Thirdly, by building dashboards on a variety of alternative datasets, we can organize the data into forms which are easy to interpret.

EMMETT KILDUFF | CEO, EAGLE ALPHA

SECTION I

The Data Revolution

The Data Revolution is creating thousands of new “alternative” datasets that can be leveraged by all types of companies and organizations.

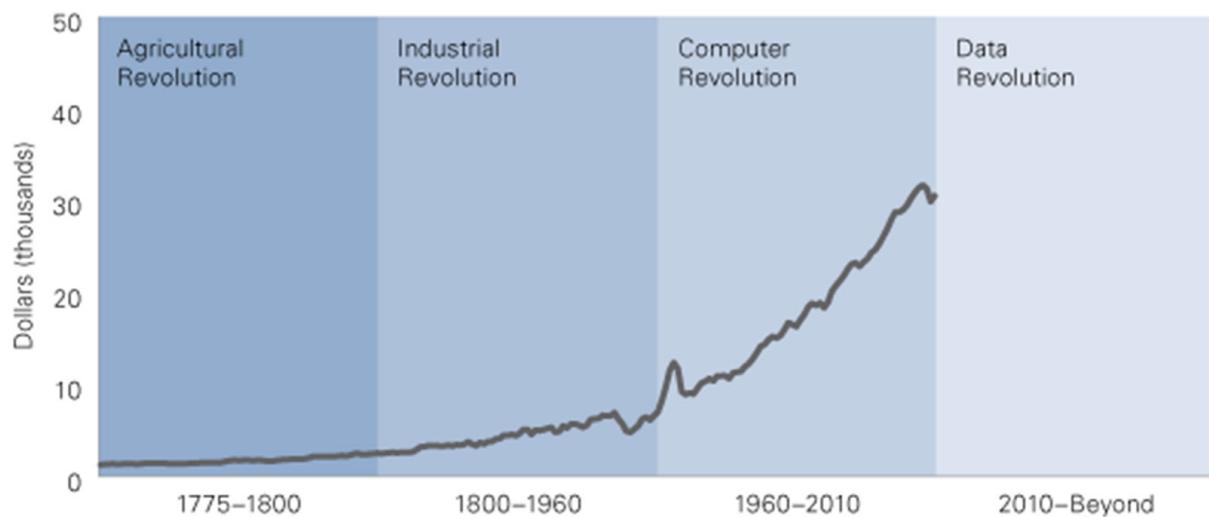
The Data Revolution

In 2010 we entered the Data Revolution. According to J.P. Morgan the data revolution is being driven by three factors: developments in cloud computing, advances in data science and new datasets.

According To Goldman Sachs Asset Management in 2010 The World Entered The “Data Revolution”

The first major technological shift formed was the Agricultural Revolution. Next, in the Industrial Revolution of the eighteenth and early nineteenth centuries, economic productivity doubled in about 150-200 years. Productivity skyrocketed in the Computer Revolution with three-fold gain in the half century starting in the 1960s. Now the world may be entering a period of even more rapid productivity gains thanks to the remarkable power which can be gained from data.

UNITED STATES GDP PER CAPITA: 1775-2010



There are already thousands of “alternative” datasets that are relevant to corporates. Datasets are split into 24 different categories including social media, satellite, consumer transactions, geo-location and employment. These datasets are from two primary sources: data companies that are set up to monetize data, and companies that have ‘exhaust’ data to monetize. Regarding the latter, Boards are increasingly exploring data monetization opportunities. To obtain a 70-page white paper regarding data monetization please email enquiries@eaglealpha.com

“ALTERNATIVE DATA” IS A BIG PART OF THIS REVOLUTION. THERE ARE 000S OF DATASETS ACROSS 24 CATEGORIES



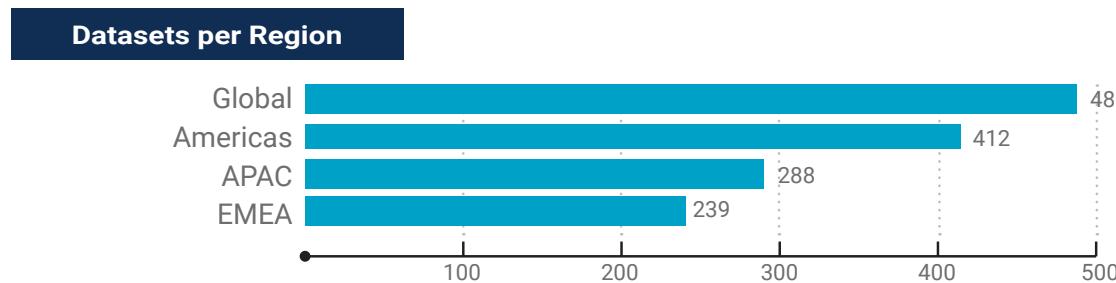
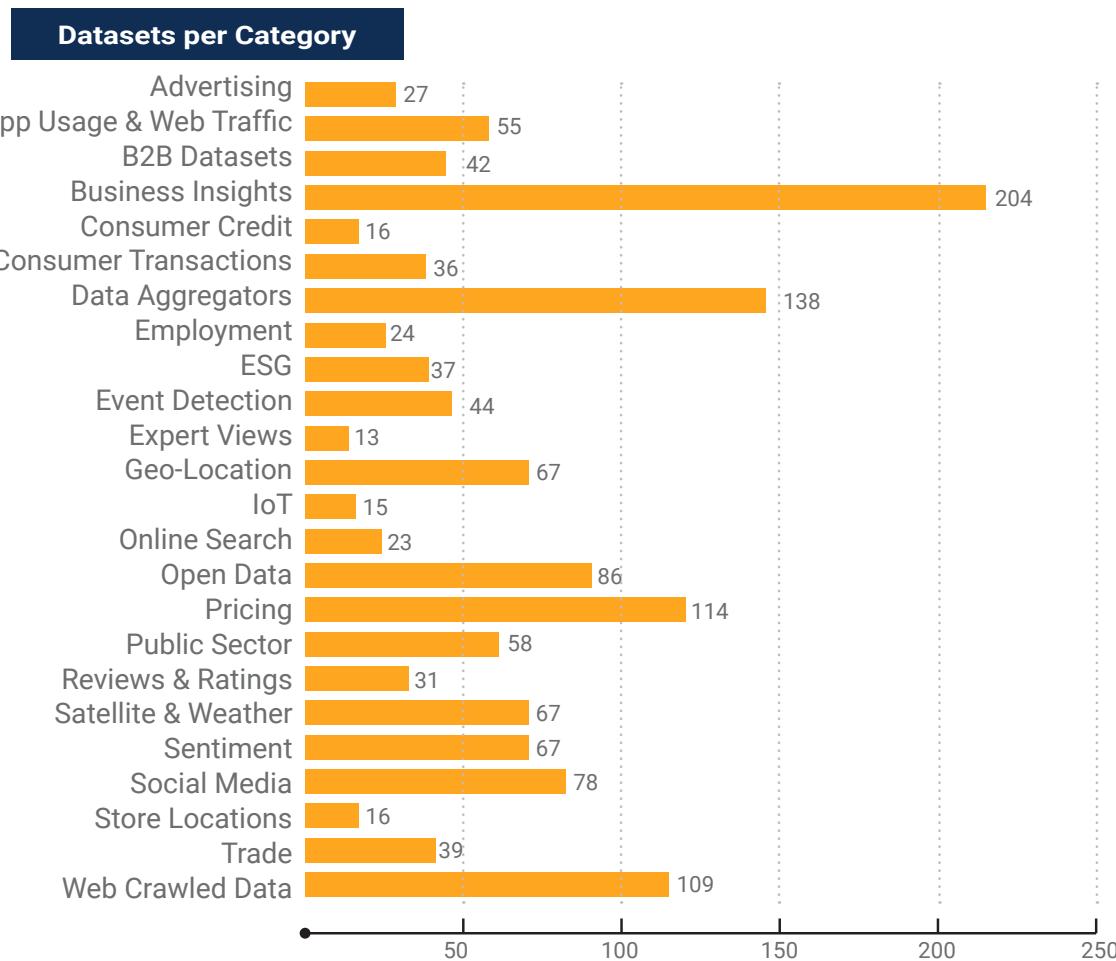
- There are already 1,010 alternative datasets in Eagle Alpha’s database (as of July 2019).

1,010
ALTERNATIVE DATASETS

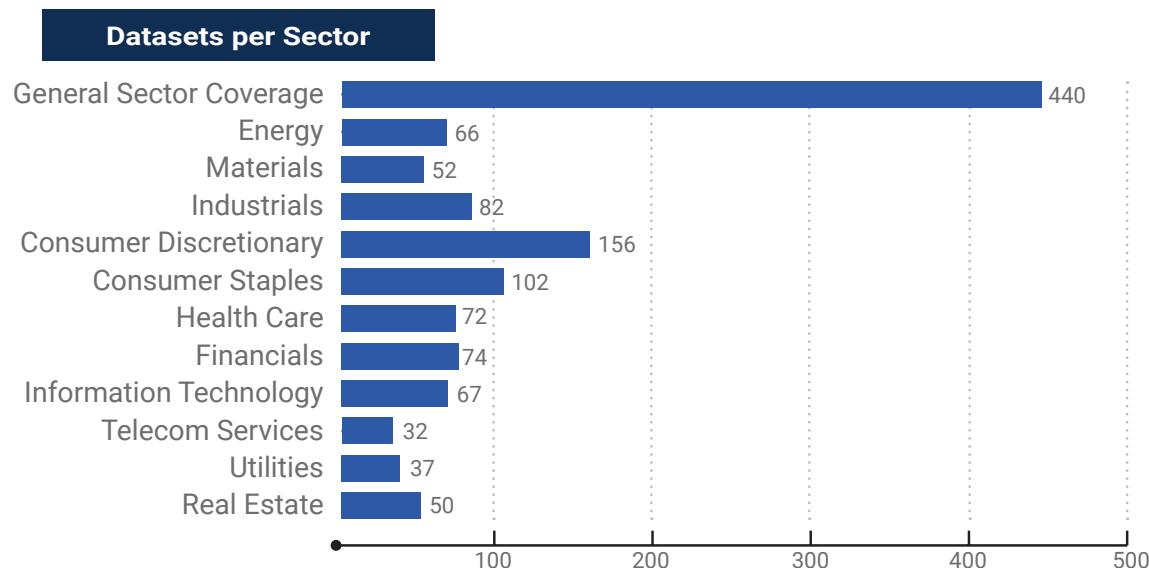
- There will be >5,000 alternative datasets worldwide by the end of 2020.

5,000
ALTERNATIVE DATASETS

Analysis of Eagle Alpha's database of 1,010 datasets highlights that the Business Insights, Data Aggregators and Pricing categories are the most populated. Business Insights refers to datasets which give unique insights into companies. Data Aggregators means aggregating data from disparate sources into helpful formats. Pricing categories provides insights into corporate revenues and industry competition. From a geographical perspective many datasets have global coverage with the Americas region having the most.



From a sector perspective many datasets apply to multiple sectors with consumer discretionary being the most requested and utilized.



SECTION 2

Unlocking the potential of alternative data

Alternative datasets can be leveraged by several departments within corporates.

Unlocking the potential of alternative data

There are several ways that corporates can use alternative data:



At a recent conference the CEO of Nasdaq highlighted a few in the following quote:

"I think corporates can use it for competitive analysis. They could use it for researching the next thing that they want to try to build or create".¹

Demand forecasting is another application of big data. For example, retailers like Walmart and Walgreens regularly analyze changes in weather to see any patterns in product demand.²

"By integrating data analytics, we can gain even deeper insights to help improve patient care and, ultimately, outcomes," said Heather Helle, divisional vice president, Healthcare Clinic.³

Another example is Starbucks. It uses alternative data for product development.

The coffeehouse behemoth uses big data to determine the potential success of each new location, taking information on location, traffic, area demographic and customer behaviour into account.

Making this kind of assessment before opening a store means Starbucks can make a fairly accurate estimation of what the success rate will be and choose locations based on the propensity toward revenue growth.⁴

On the following page we outline how several different departments can utilize alternative data:

1 Source: <https://businessinsider.com/nasdaq-ceo-says-corporates-should-use-alternative-data-2019-2>

2 Source: G2 <https://learn.g2.com/big-data-examples>

3 Source: <https://www.marketwatch.com/press-release/walgreens-brings-big-data-analytics-to-healthcare-clinics-through-expanded-relationship-with-inovalon-2014-01-30>

4 Source: <https://www.icas.com/ca-today-news/10-companies-using-big-data>

Purpose	Relevant Department	Example Categories & Use Cases
Customer Insights	Marketing	<ul style="list-style-type: none"> • Social media data – analyze brand perception. • Online search data – analysis into customer behavior.
Market / Competitive Intelligence	Product, Sales	<ul style="list-style-type: none"> • Satellite – analyze activity at a competitor manufacturing plant. • Web crawling – crawl competitor websites for pricing data.
Product Development	Product	<ul style="list-style-type: none"> • Patent data – how much should we be investing in R&D? • Geo-location data – where should we launch new stores?
Merchandising	Marketing, Product & Retail	<ul style="list-style-type: none"> • Web Traffic - Analyze web traffic to understand where consumers are coming from.

Purpose	Relevant Department/ team	Example Categories & Use Cases
Supply Chain Management	Procurement	<ul style="list-style-type: none"> • Shipping data – monitor output of supplier using HS (Harmonized Shipping) codes. • Credit data – track account receivables of supplier.
Macro Environment	Board, Finance / Treasury	<ul style="list-style-type: none"> • Shipping data – insights into FX by analyzing shipping between countries. • Credit data – track credit levels by sector, state and country.
People Insights	Human Resources	<ul style="list-style-type: none"> • Employment data – Natural Language Processing (NLP) analysis of employee comments. • Employment data – analysis of employment and hiring trends at competitors.
Acquisitions	Board / M&A Team	<ul style="list-style-type: none"> • Web traffic data –track visitors to ‘order page’ of e-commerce company. • Employment data – analyze sentiment of staff at target.
See What Investors See	Investor Relations	<ul style="list-style-type: none"> • Consumer transaction data – understand revenue predictions. • Pricing data – obtain data that give insights into price points and trends.

SECTION 3

Case Studies



Alternative data can be used for several purposes. In section 3 we provide five case studies based on work Eagle Alpha has carried out.

CASE STUDY #1:

Analyzing Consumer Trends And Sentiment With Online & Social Media Content

■ KEY TAKEAWAY

Online and social media content can be used to analyse consumer trends and sentiment. This data can be used to examine fundamental issues that may impact consumer attitudes to a company or brand.

■ DATASET

Web Queries is a social media listening tool we use to monitor unstructured text from 90 million web sources including blogs, forums, news sites and social media. Output is in a structured format and is used to analyse potential changes in consumer trends and sentiment.

■ CASE STUDY

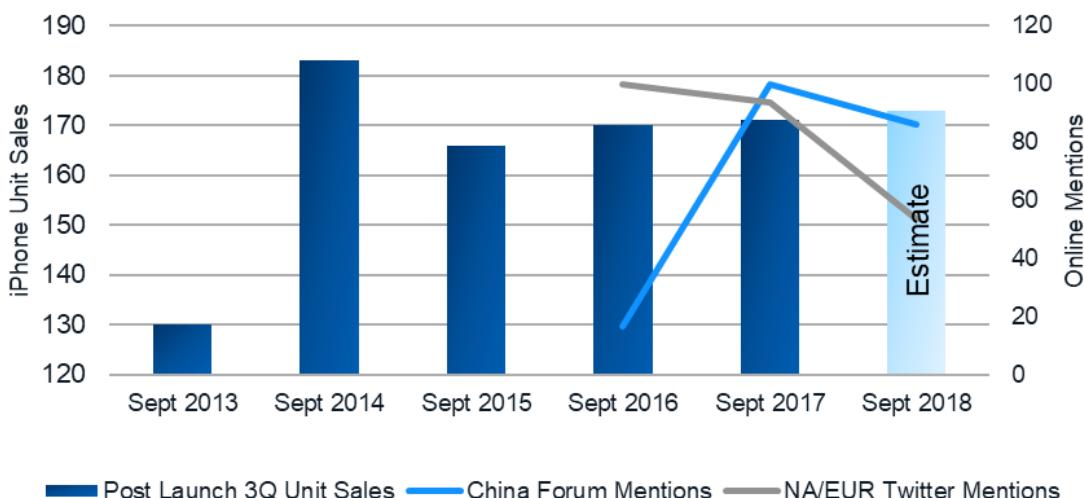
In this case study we examine three distinct use cases for online and social media data:

1. new product launch;
2. competitive analysis between two brands;
3. analysis of an individual company or brand positioning.

Analysing new product launches – Apple and Samsung

In the first use case, Web Queries was used around the release of new handsets from both Samsung and Apple in 2018.

Figure 1: Apple Online and Social Media Data at the iPhone launch in 2018



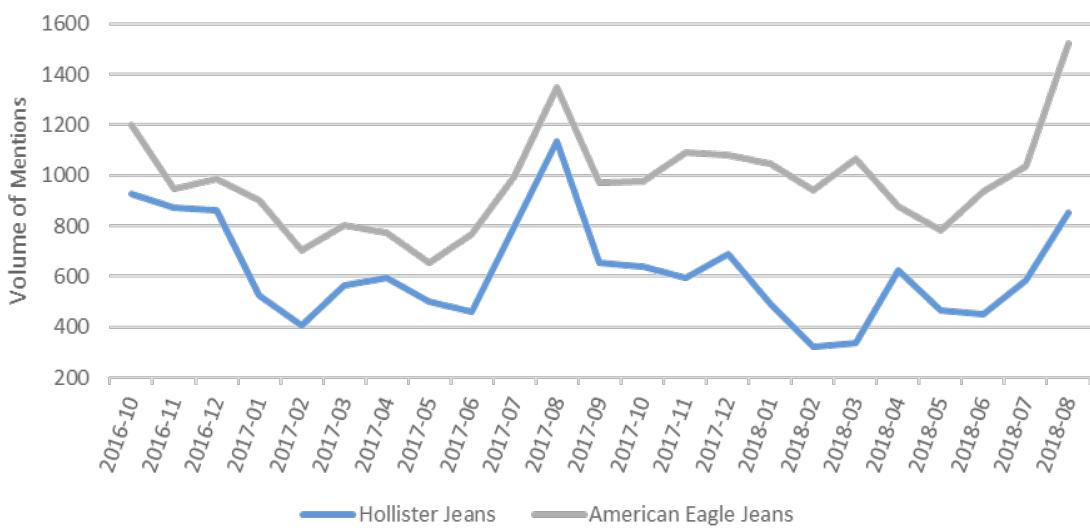
Source: Eagle Alpha, Web Queries, Factset

In both instances data gathered online and from social media platforms showed poor consumer acceptance of the new phone launches. Over time the data proved to be accurate. Samsung reported poor Galaxy S9 sales and Apple also reported weak sales of the iPhone series that was launched in September 2018. Figure 1 shows North America and Europe Twitter mentions, and also China blogs and forum mentions, over the 2016, 2017 and 2018 iPhone cycles. Lower mentions in 2018 compared to 2017 was an early indication that consumers were less than enthusiastic about the new iPhone offerings.

Competitive analysis – Abercrombie & Fitch vs. American Eagle

Another use case is to analyze content to compare two brands or products. We performed an analysis of content from news sites, blogs, forums and social media for Abercrombie and Hollister brands, for parent Abercrombie & Fitch (ANF), and American Eagle Outfitters (AEO). The data revealed similar trends for ANF and AEO across most product offerings. In the key jeans category, the data showed (Fig 2) that American Eagle was performing better than Hollister. During the next reporting period both companies performed well fundamentally. However, American Eagle stated that “jeans continue to set record volumes” and the company had the “best ever sales in both men’s and women’s bottoms” in the quarter.

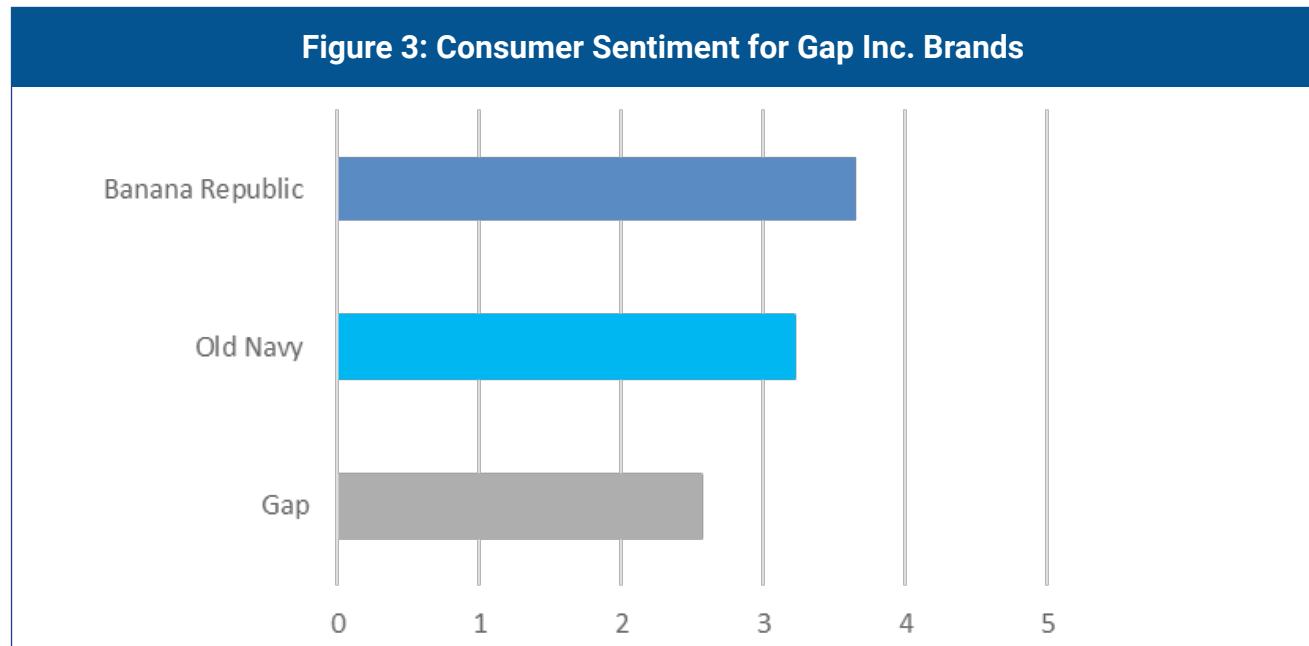
Figure 2: ANF and AEO: Comparing Consumer Mentions of Jeans



Source: Eagle Alpha, Web Queries

Brand Sentiment – The Gap Inc.

In July of 2018 we performed analysis on The Gap Inc. At the time the company was struggling with the Gap brand. As can be seen in Figure 3, sentiment for the Gap brand is the lowest of the three Gap Inc. brands, but on a scale of -5 to +5 sentiment overall was still quite positive. The analysis also revealed that sentiment for Gap had been stable over the course of 2017 and 2018. Product and inventory issues at Gap did not appear to be impacting consumer sentiment for the brand. We viewed this as a positive as long as the company resolved its internal execution issues. The sentiment indicator is longer term in nature but on the FYQ3 2018 conference call, management did note that: "we expect an improvement from Q3 2018 trends in both comp and margin and the early reads of our Q4 2018 product flows are encouraging".



Source: Eagle Alpha, Web Queries

■ POTENTIAL USE CASE FOR YOUR FIRM

The Web Queries tool can be a powerful way for corporates to monitor consumer trends and sentiment. The analysis can be applied across several consumer use cases. The cases detailed above are good examples where corporates could obtain valuable insights into their own company or competitors.

CASE STUDY #2:

Employment Data Pre-empted Microsoft's Changing Retail Strategy

■ KEY TAKEAWAY

The LinkUp Employment dashboards built by Eagle Alpha can provide an early read into changing corporate strategies. As early as Q1 2018 there was evidence of Microsoft hiring fewer retail sales workers. It wasn't until 4th June this year (2019) that Microsoft announced the closure of its mall kiosks in the US.

■ DATASET

The LinkUp employment dashboards we built enable users to effortlessly explore the LinkUp Job Search Engine dataset; the largest, highest-quality index of global job listings.

LinkUp's proprietary technology indexes millions of jobs every day from employer websites. Their sophisticated technology has enabled them to create the largest, highest-quality index of global job listings consisting of over 50,000 companies and 150 million jobs.

■ CASE STUDY

On 4th June (2019) Microsoft announced that they are closing their smaller "specialty stores" in the US. It appears as if Microsoft is shifting its (offline) retail focus to its full-size retail stores.

However, analysis of job listing's data through the Linkup Employment dashboard on the Eagle Alpha platform had shown evidence of this shifting strategy as early as Q1 2018. In Q3 and Q4 of 2017 retail sales workers accounted for over 4% of Microsoft's job listings in the US. This number fell to 3% in Q1 2018, 2% by Q4 2018 and is now hovering around 1% of job listings in the US. (see chart below)

Users monitoring the Eagle Alpha dashboards could have gotten ahead of this strategic shift for Microsoft.

Figure 4: LinkUp Employment Dashboard – Microsoft Retail Hiring in the US



Source: *Eagle Edge platform, LinkUp*

■ POTENTIAL USE CASE FOR YOUR FIRM

Utilize these dashboards to observe changes in employment at your competitors.

CASE STUDY #3:

Luxury Goods Crawled Data Provided An Early Signal Of Strong Momentum For Burberry In Early 2018

KEY TAKEAWAY

Using RE-Analytics Luxury Goods dashboards built by Eagle Alpha brands and retailers can monitor pricing trends by channel and by geography for luxury goods companies.

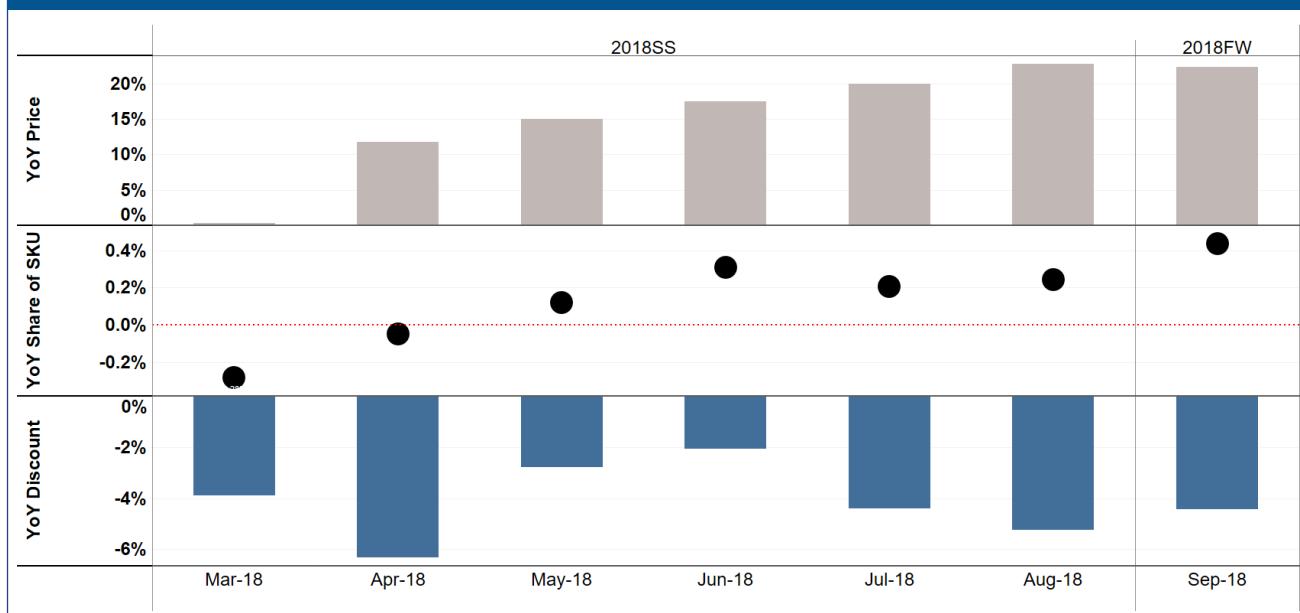
DATASET

RE-Analytics collects, cleans and transforms publicly available online data related to luxury goods companies. The data is hosted on an Eagle Alpha visualization platform, for use by both brands and retailers.

CASE STUDY

In the first half of 2018 Burberry management discussed better pricing trends and the addition of Farfetch as an online channel partner. In the June quarter the company singled out the US as seeing better pricing trends. We use the RE Analytics Luxury Goods dashboards to see evidence of these trends, prior to managements disclosures.

Figure 5: US price, discount and SKU data (All channels)

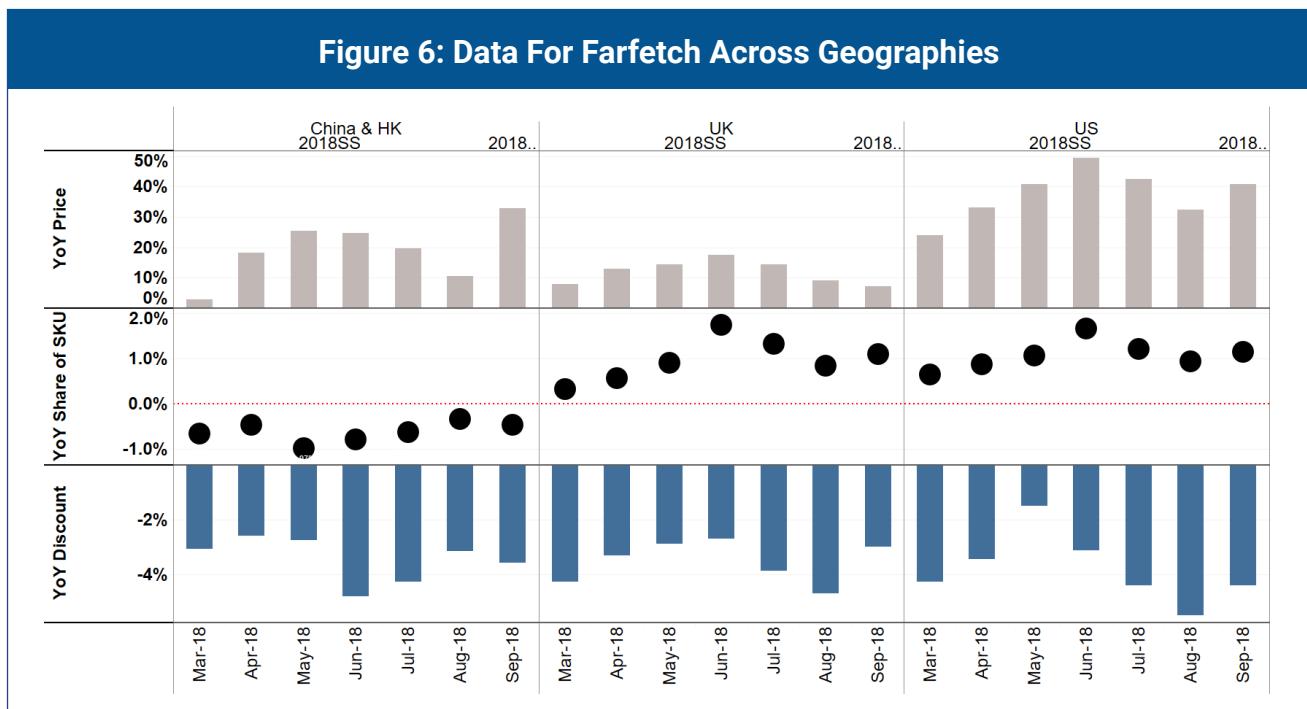


Source: Re-Analytics, Eagle Edge

The chart above shows the monthly YoY change in price, discount and SKU data in the US for Burberry across all monitored channels. These channels include department stores, full price eTailers (e.g. Net-a-Porter), market place (e.g. Farfetch) and off price eTailers (e.g. Yoox). Across these channels Burberry

displayed strong YoY pricing trends and growth in share of SKU's. Share of SKU's is a measure of a company's SKU count against total SKU count in the dataset. As such, it is a proxy of increasing or decreasing market share. Discounting over the months in question was also lower. These trends were later confirmed by management on the June quarter conference call, held in July. Management noted "*a considerable uptick in performance in America, and that's seen the benefit of traffic and an improvement in AUR*".

In February of 2018 Burberry announced that it was partnering with Farfetch as a digital distribution partnering. Over the course of the year the company discussed how Farfetch was performing strongly. Regional traction of Farfetch can be seen in figure 6 below. Growth in SKU and pricing was strong in the US and UK during the year. In China & Hong Kong pricing trends were positive and SKU count improved. It should be noted that share of SKU in the Asia region is impacted by very strong growth of some peers in the region.



Source: Google Data, Eagle Alpha Analysis

A strong performance by Farfetch along with strong ASP trends and lower discounting were evidenced by the RE-Analytics dashboards for Burberry over the course of 2018. As the dataset is updated weekly investors would have seen these trends well before any company reporting, or management commentary. From the March to September quarters Burberry stock price appreciated sharply. RE-Analytics data on the Eagle Edge platform would have helped inform investors of the positive fundamentals for Burberry over the period.

■ POTENTIAL USE CASE FOR YOUR FIRM

- Consider acquiring a crawled dataset for competitive intelligence purposes.
- Better selection of potential strategic partners.

CASE STUDY #4:

Online Search Data Used To Predict Under Armour Revenue

■ KEY TAKEAWAY

Using online search data, Eagle Alpha correctly predicted the Under Armour revenue direction.

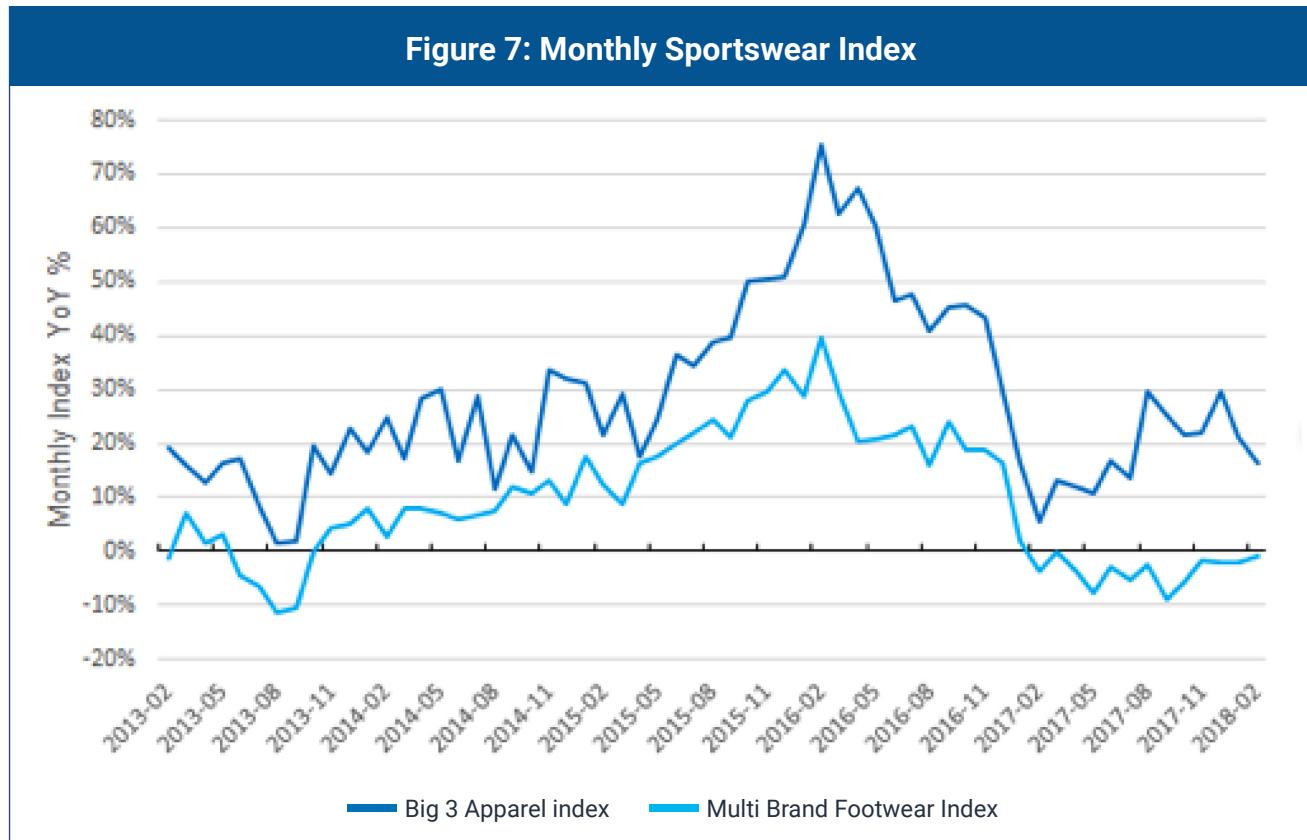
■ DATASET

Google Trends is a public web facility based on Google Search that shows how often a particular search-term is entered relative to the total search-volume over time across various regions of the world.

■ CASE STUDY

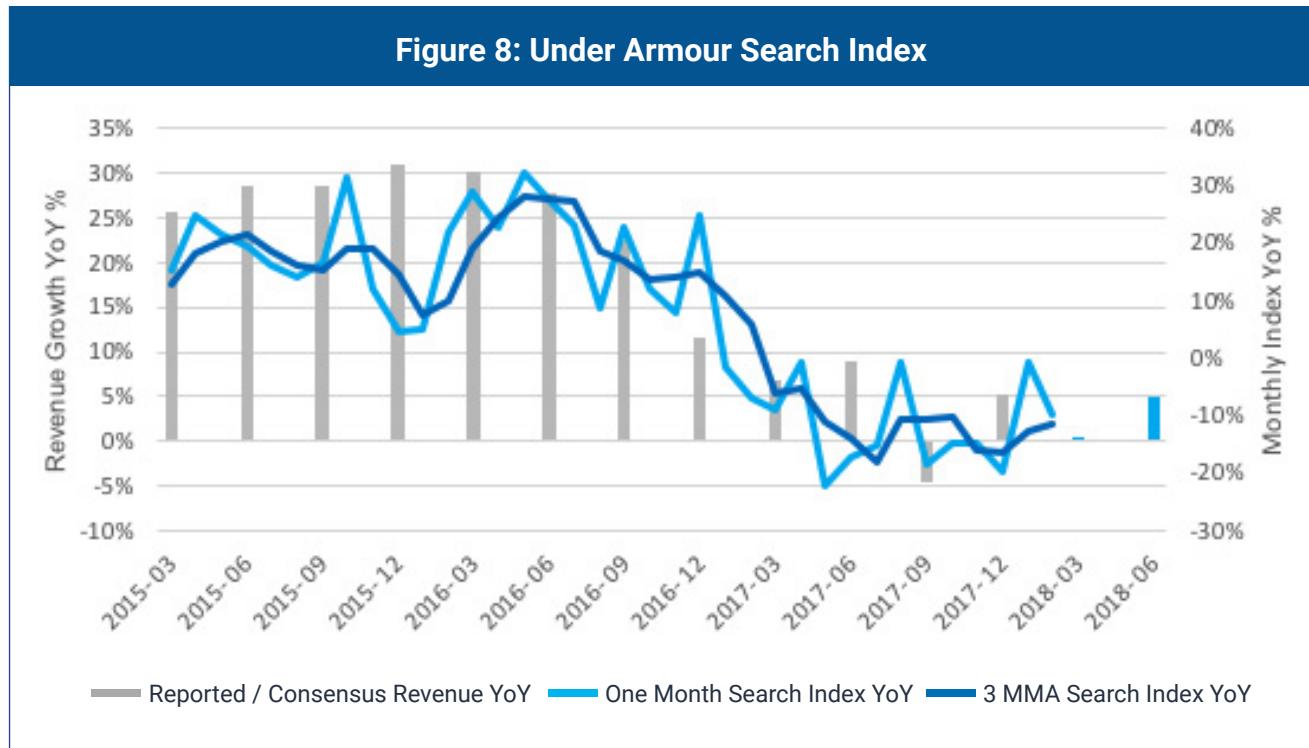
On March 6th, 2018, Eagle Alpha's published a report analyzing trends in apparel and footwear categories. We noted: "Google Search data is pointing to a recovery in consumer interest in sports apparel since bottoming in February of 2017. In contrast, data on consumer interest in related footwear continues to struggle. From a brand perspective prospects for Under Armour have recovered since mid-2017."

Figure 7: Monthly Sportswear Index



Source: Google Data, Eagle Alpha Analysis

The Signal for Under Armour formed a bottom (Fig 7). As Under Armour is heavily weighted to consumer apparel, rather than footwear, we noted that a renewed consumer interest in sports apparel could see the company show an improvement in fundamentals in coming quarters.



On April 30th 2018, Under Armour reported with revenue of \$1.19Bn beating estimates by \$70m. In the quarter apparel revenue increased 7% and footwear increased 1% Y/Y.

POTENTIAL USE CASE FOR YOUR FIRM

We could work with your firm to use online search data to predict the traction and revenues of your competitors.

CASE STUDY #5:

Insights Into Revenue And Margin Of Consumer Electronics Companies In 2018

KEY TAKEAWAY

Eagle Alpha's Consumer Electronics dataset can provide a valuable insight into revenue and margin momentum for consumer electronics companies. Pricing and product share of bestsellers can be strong predictors of company performance in a given quarter and for potential future quarter revenue revisions.

DATASET

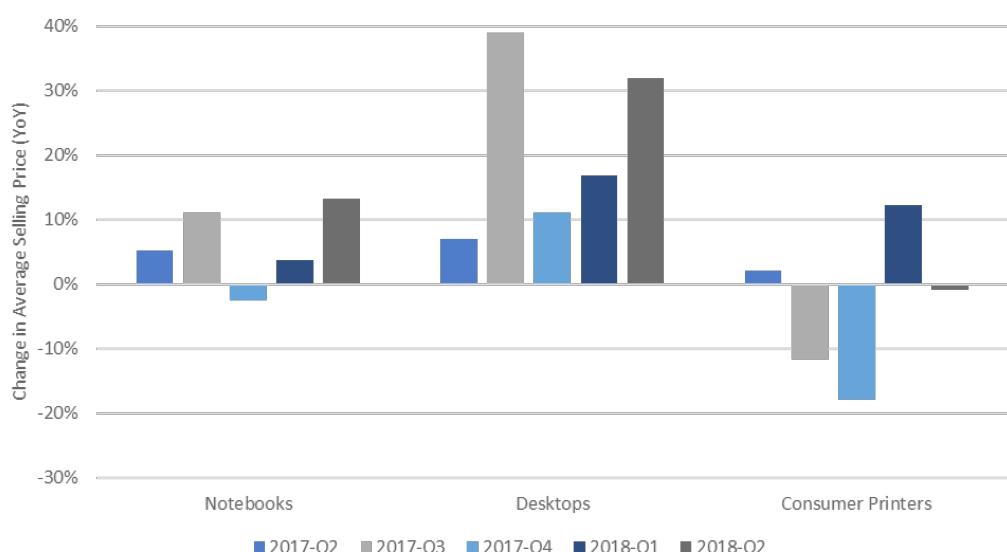
The Consumer Electronics (CE) dataset used in this analysis is an Eagle Alpha proprietary dataset created through crawling of the web. The dataset contains pricing and discounting data for consumer electronics products, as well as the share of bestselling items in a category.

CASE STUDY

We examine three companies where Eagle Alpha published reports using the CE dataset and highlight examples where pricing, discounting and share of bestsellers were used as part of the analysis.

In the first half of 2018 the CE dataset was pointing to positive fundamentals for HP Inc. Of note at that time HP was seeing strong pricing trends across the key categories of Notebooks and Desktops (Fig 9). While ASP trends were strong it was not having any negative impact on share of category bestsellers. Our conclusion was that this would be positive for revenue growth and management strategy to sustain or improve margins. HP reported upside in revenue and margin improvement during that period.

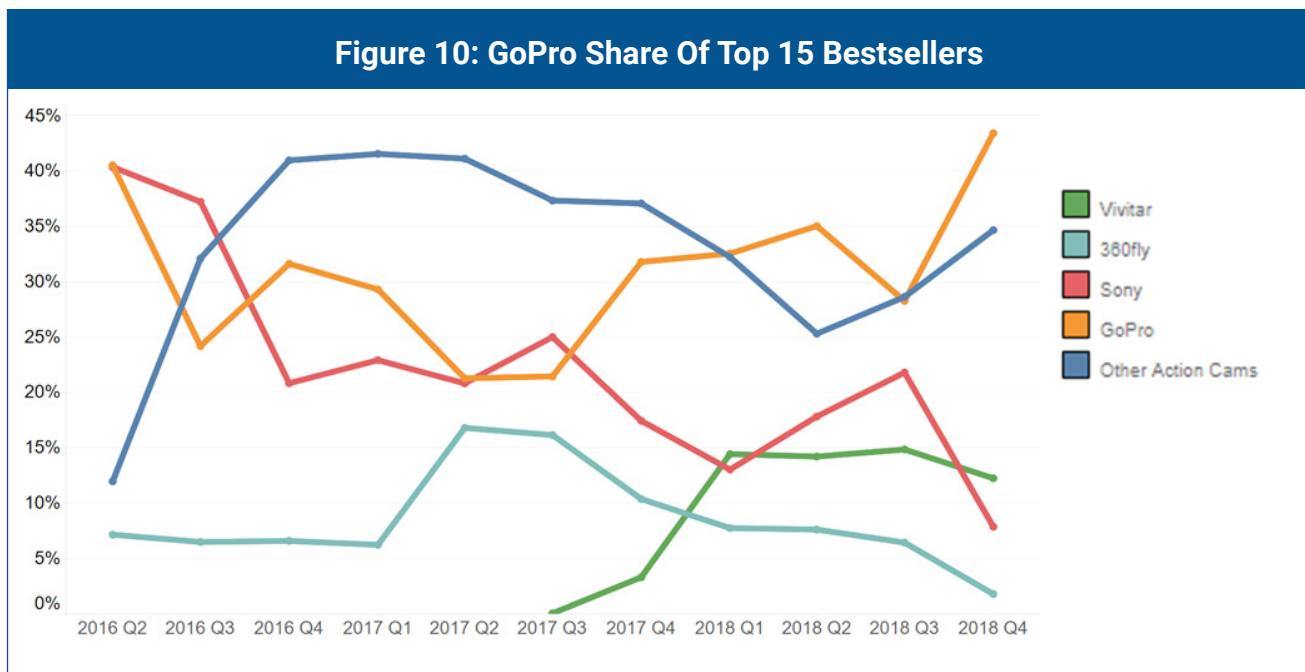
Figure 9: HPQ Change in product ASP year over year



Source: Eagle Alpha, CE Dataset

Later in the year, in fiscal year Q3 2018 and Q4 2018, the data was showing that market share and pricing gains began to wane. We published two reports that were less positive, pointing out that upside in the quarters was not likely to be as strong as the first two quarters of the fiscal year. While the company beat expectations, the upside was less than prior quarters. In the first two quarters of the year the company beat expectations by an average of 5.3% and in the remaining two quarter the company beat by an average of 2%. HPQ share price sold off in the later part of 2018 and into early 2019.

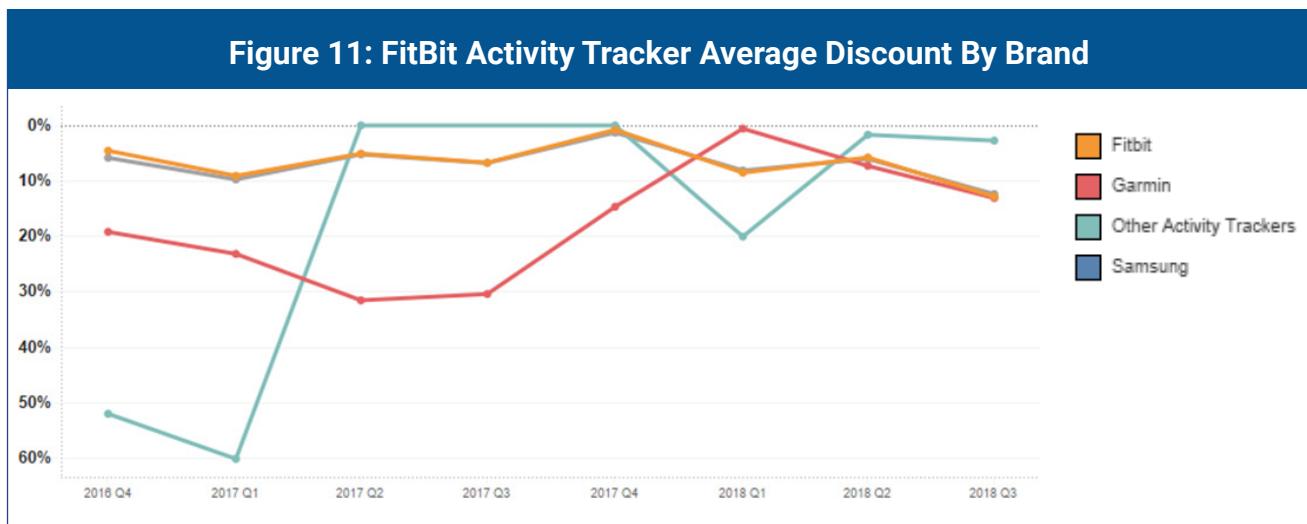
Over the course of 2018 the CE dataset for GoPro Action Cameras was consistently positive. The company was seeing gains in share of bestsellers (Fig 10). In addition, ASP trends were positive, and discounting was relatively benign. The company reported upside to quarterly revenue expectations during the year. In the September quarter the company beat expectations, but management gave details of a strategy to be more promotional over the holiday period of the December quarter and holiday. However, the data was pointing to relatively benign discounting over the Black Friday weekend and for the full quarter pricing and discounting also remained relatively benign. Furthermore, analysis of the data showed that discounting was not evident on recently released new camera offerings. Discounting on older products led to a sharp increase in share of bestsellers (Fig 11) in the quarter. The data proved to be a good indicator that fundamentals had not turned out to be as bad as investors may have feared.



Source: *Eagle Edge, CE Dataset*

The CE dataset has data on activity trackers and is useful to monitor fundamental trends for Fitbit. During 2018 we published three negative reports on Fitbit highlighting trends across tracker devices. Fitbit began to show deteriorating trends in pricing, discounting and share of bestsellers in early 2018.

Low levels of discounting in 2017 began to pick up over the course of 2018 (Fig 5). While the company reported upside to quarterly revenue during the year this was driven by new smartwatch products. Revenue segmentation and commentary by management validated weakness in tracker fundamentals. Fitbit share price exhibited volatility during 2018 and ended the year lower.



Source: *Eagle Edge, CE Dataset*

POTENTIAL USE CASE FOR YOUR FIRM

The US Consumer Electronics dataset has proven very useful to monitor trends on pricing, discounting and share of bestsellers for consumer electronics brands. Monitoring trends over multiple quarters can be particularly informative and catch shifts in product momentum. Pricing datasets can help inform company's and IR departments on revenue growth and changing pricing dynamics that could impact margins.



SECTION 4

Challenges companies face when working with Alternative Data

Section 4 summarizes the key challenges companies face when seeking to utilize alternative data.

Key Challenges Our Corporates Clients Encounter When Working With Alternative Data

The top challenges are dataset discovery and prioritization.

Dataset Discovery

"There are thousands of alternative datasets available, but we don't know which datasets are useful for each of our needs. And we don't have the time to keep track of new datasets".

Dataset Prioritization

"There are 70 providers of sentiment data. To analyze brand perception which providers should we prioritize?".

Quality Screening

"It is critical that we only work with high quality datasets. However, we don't have the capacity to test datasets for quality".

In-House Resources

"We don't have the appropriate skill-set in-house to analyze datasets".

People Cost

"The recruitment cost of data engineers and data scientists is significant. The salary of a good data scientist in New York is at least \$200,000 ".

Dataset Cost

"We have a limited budget for dataset spending. We don't know if we are getting the best deal for initial licenses and also renewals".

SECTION 5

Eagle Alpha's Solution for Corporates

Eagle Alpha was established in 2012 to provide alternative data solutions and datasets to buyers of alternative data.



EAGLE ALPHA'S SOLUTION FOR CORPORATES

1. DATA SOURCING

We have invested 60,000 hours in our Data Sourcing solution. It solves key challenges for corporates; dataset discovery, prioritization and quality screening. It enables clients to keep on top of all the alternative datasets worldwide.

Our proprietary Search Management Tool allows clients to monitor the online search trends of brands and products both during critical events such as product launches and over the long-term with a turn-key solution that overcomes the many of the usability challenges of raw search data.

Schedule a demo: enquiries@eaglealpha.com

2. BESPOKE PROJECTS

We have a dedicated team that can do bespoke projects for your firm. We can be your outsourced data science team or complement your existing team. There are a wide range of projects related to a range of different companies that we can execute.

Discuss your need with our Head of Bespoke Projects: enquiries@eaglealpha.com

3. DASHBOARD

We build dashboards on “alternative” datasets to make data easy to interpret and deliver across your organization. Corporates have the ability to work with a variety of datasets through one single platform.

Schedule a demo: enquiries@eaglealpha.com



Eagle Alpha

- USA: +1 646 843 6048
- UK: +44 (0) 20 7151 4880
- Email: enquiries@eaglealpha.com