

## Allergan plc Ordinary Shares

The fundamental financials of Allergan are strong; they show increasing revenue and earnings that are above analyst expectations. They have since looked to expand their Gastroenterology pipeline by acquiring Gastrointestinal (GI) Disease subsidiary of Rhythm Holdings Company LLC, Motus Therapeutics, a biopharma company developing peptide therapeutics for the treatment of GI disorders (27/10).

As a result of exercising its option to acquire Motus Therapeutics, Allergan will pay the exercise price of \$200 million at closing to Rhythm Holding. In addition, Rhythm Holding will be eligible for a contingent payment upon first commercial sale of relamorelin. Allergan previously made \$47 million in payments related to the option-to-acquire Motus and the relamorelin Phase 2b clinical trial. Completion of Allergan's acquisition of Motus Therapeutics is expected to occur by the end of 2016 subject to customary closing conditions (Source: Allergan Press Release).

This acquisition is in addition to the completion of the tender offer for Vitae (25/10) a clinical-stage BioPharma company focused on dermatological issues, where they purchased all outstanding shares for \$21 per share, for a total transaction value of approx. \$639 million. These are two of many acquisitions by the company in the last few weeks, Tobira Therapeutics (20/09) and Akarna Therapeutics (20/09) being some of the others.

The additional research, products and expertise that these companies will bring is a positive sign for the company, and one which adds to the positive recommendation.

There is also clear growth in the Medical Aesthetics area in products which are key to the company. If this growth continues, which I believe is indicated by the data, then there will be increased revenues in this area of the business. The acquisition of Topokine Therapeutics also helps bring in new products into this area which complement what they already offer.

We would look at the uptake of rival's products and how they would affect the sales of Allergan's products. An example of this would be Shire's Xiidra (lifitegrast) for dry eye and its impact on Restasis. Restasis is the second highest revenue generator for the firm, so if market share is lost it could impact the performance of Allergan. Shire's product was launched in August so the full extent may not be fully known until the end of the year, however analysts estimate sales of \$1b or more. The products are priced the same, so we would expect to see an increase in marketing spend as the head-to-head battle starts. It could also be argued that Restasis could benefit from the increased awareness of dry-eye related diseases (source: pmlive.com).

In addition to strong fundamentals, the stock also shows promise from a technical perspective. We can see that an uptrend is forming which I believe will continue to the post-Pfizer era high of around 260.

## Allergan plc Ordinary Shares

**Opinion:** Positive

**Target:** 260

**CEO:** Brenton Saunders (also President and Chairman)

**Ticker:** AGN

**Primary Exchange:** NYSE

**Sector:** Health Care

**Industry:** Med-Generic Drug

**Market Cap (B USD):** 87.140

**52WK Range:** 195.50-322.68

**Current Stock Price\*:** 221.52

**Next Earnings Report Date:** 2<sup>nd</sup> November 2016

*\*As at 27<sup>th</sup> October 2016*

*Source: Bloomberg*

The logo for Empirah, featuring the word "Empirah" in a stylized, handwritten-style font with a small "iii" above the "i".

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## Company Review

Allergan is a speciality pharmaceutical company headquartered in Dublin, Ireland. It focuses on developing and commercialising pharmaceuticals, biologics, medical devices and over-the-counter products for the ophthalmic, neurological, medical aesthetics, medical dermatology, breast aesthetics, urological and other specialty markets. Allergan plc, formerly known as Actavis plc. The structure of the company can be seen above.

Allergan has many well-known brands in its portfolio, including products in Dermatology and Aesthetics; Central Nervous System; Eye Care; Women's Health and Urology; Gastroenterology; and Cardiovascular disease and Infectious disease. These include Botox®, Juvederm® and Restasis®.

## Financials

### Fundamental Ratios

P/E		EPS Growth		Sales Growth	
P/E (F1)	15.32	vs. Previous Year	-24.04%	vs. Previous Year	-35.97%
Trailing 12 Months	16.07	vs. Previous Quarter	10.20%	vs. Previous Quarter	-2.93%
PEG Ratio	1.20				
Price Ratios		ROE		ROA	
Price/Book	1.18	9/30/16	NA	9/30/16	NA
Price/Cash Flow	6.64	6/30/16	7.67	6/30/16	4.04
Price / Sales	5.36	3/31/16	8.26	3/31/16	4.31
Current Ratio		Quick Ratio		Operating Margin	
9/30/16	NA	9/30/16	NA	9/30/16	NA
6/30/16	0.99	6/30/16	0.91	6/30/16	35.10
3/31/16	0.99	3/31/16	0.89	3/31/16	33.42
Net Margin		Pre-Tax Margin		Book Value	
9/30/16	NA	9/30/16	NA	9/30/16	NA
6/30/16	28.06	6/30/16	-23.43	6/30/16	181.29
3/31/16	26.25	3/31/16	-21.68	3/31/16	183.53
Inventory Turnover		Debt-to-Equity		Debt to Capital	
9/30/16	NA	9/30/16	NA	9/30/16	NA
6/30/16	4.08	6/30/16	0.52	6/30/16	32.60
3/31/16	3.02	3/31/16	0.53	3/31/16	33.23

Source: Zacks Investment Research

## Revenue

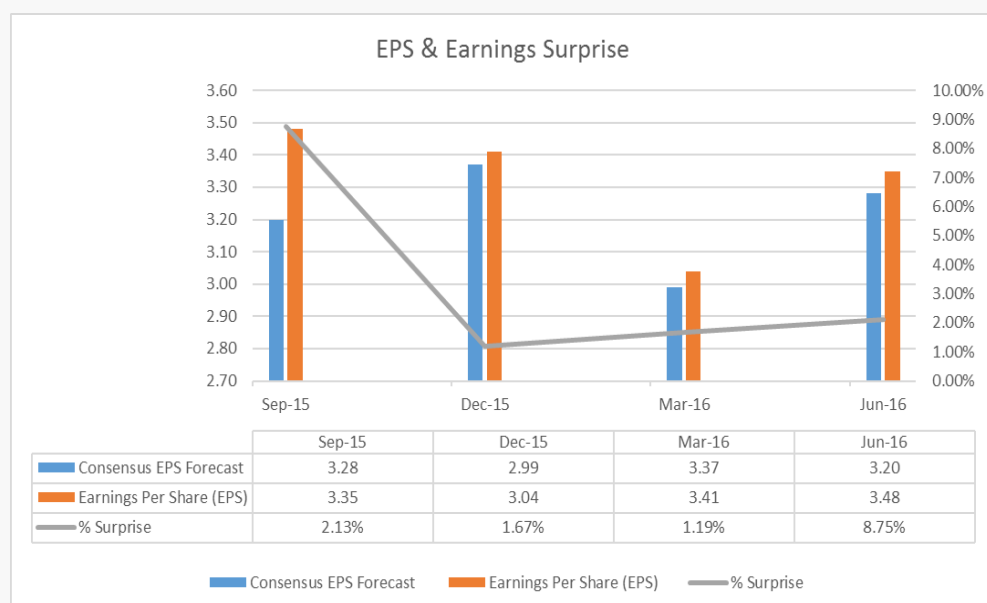
FISCAL QUARTER	2016 (FISCAL YEAR)	2015 (FISCAL YEAR)
MARCH	\$3,795(m)	\$2,562(m)
JUNE	\$3,288(m)	\$3,049(m)
SEPTEMBER		\$5,261(m)
DECEMBER (FYE)		\$4,197(m)
TOTALS	\$7,084(m)	\$15,071(m)

FYE = Fiscal Year End

Source: NASDAQ

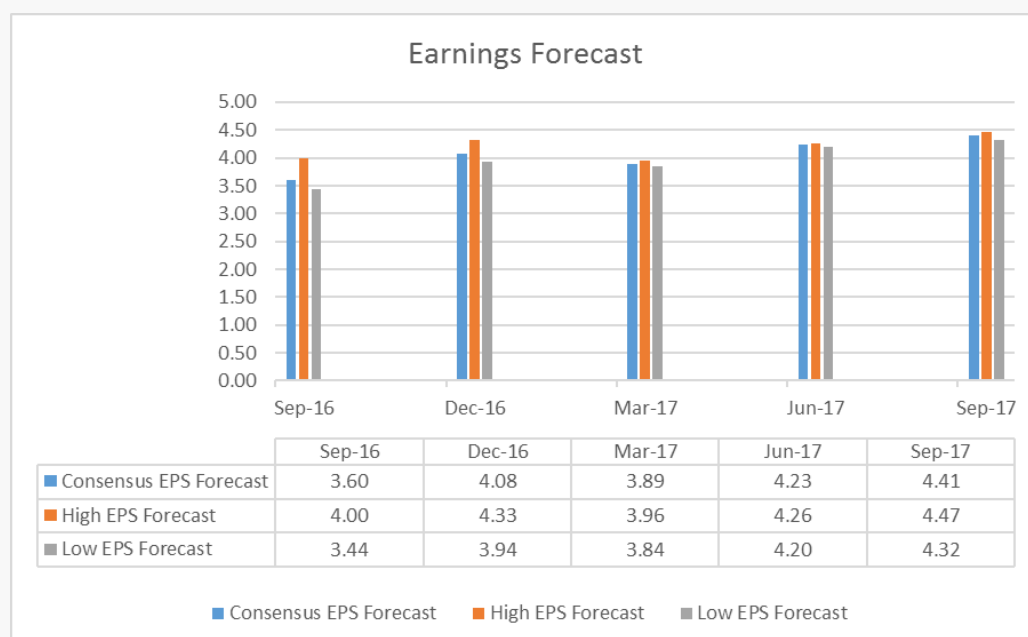
## EPS & Earnings Surprise

The dates on the chart below show Fiscal Quarter Ends.

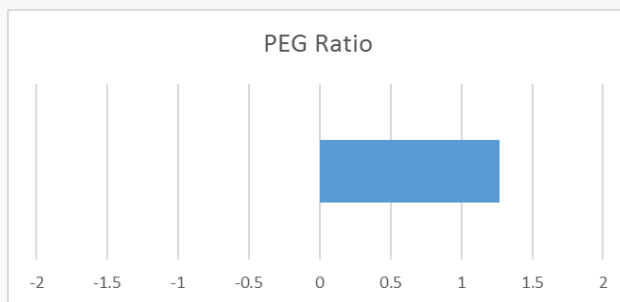


## Earnings Forecast

The dates on the chart below show Fiscal Quarter Ends.

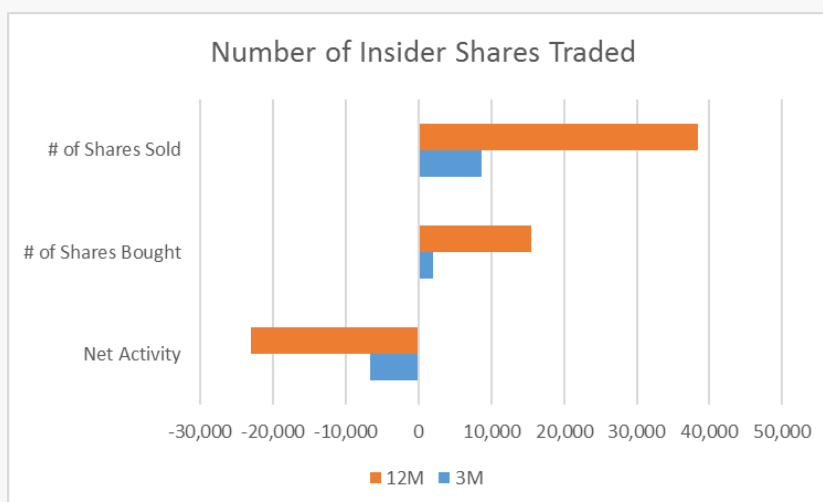
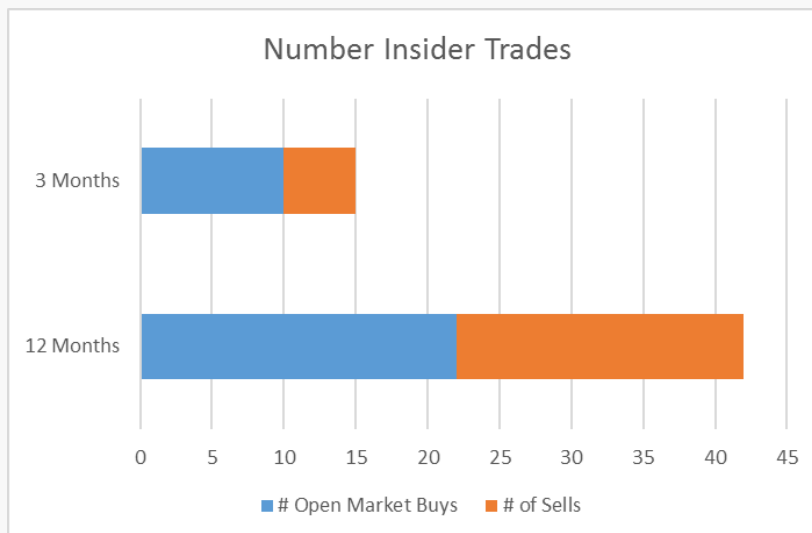


## PEG Ratio



## Insider Trades

This data is per the SEC Form 4.



Source of all the above charts: NASDAQ

## Industry Comparison

Industry: Med-Generic Drug

	ALLERGAN	INDUSTRY	S&P500
HIST. EPS GROWTH (3-5 YRS)	34.81%	2.11%	7.57%
PROJ. SALES GROWTH (F1/F10)	-19.26%	0.36%	2.63%
NET MARGIN	28.06%	-34.46%	9.70%
RETURN ON EQUITY	7.67%	-17.54%	15.84%
DEBT/CAPITAL	32.60%	11.31%	42.35%
P/E (F1)	15.90	22.88	17.84
PRICE/SALES	5.56	3.74	2.26
PRICE/BOOK	1.22	2.38	2.92
PRICE/CASH FLOW	6.89	8.74	12.24
YTD % PRICE CHANGES	-29.11%	19.92%	6.02%

Source: Zacks Investment Research

## Financials Review

Looking at the revenue we can see that there have been improvements in Q1 and Q2 when you compare 2015 to 2016. This is a positive sign and shows that there is growth within the company.

The EPS data is consistent, growing from the start of 2015 up to the results announced in June. This is a positive indication for the stock.

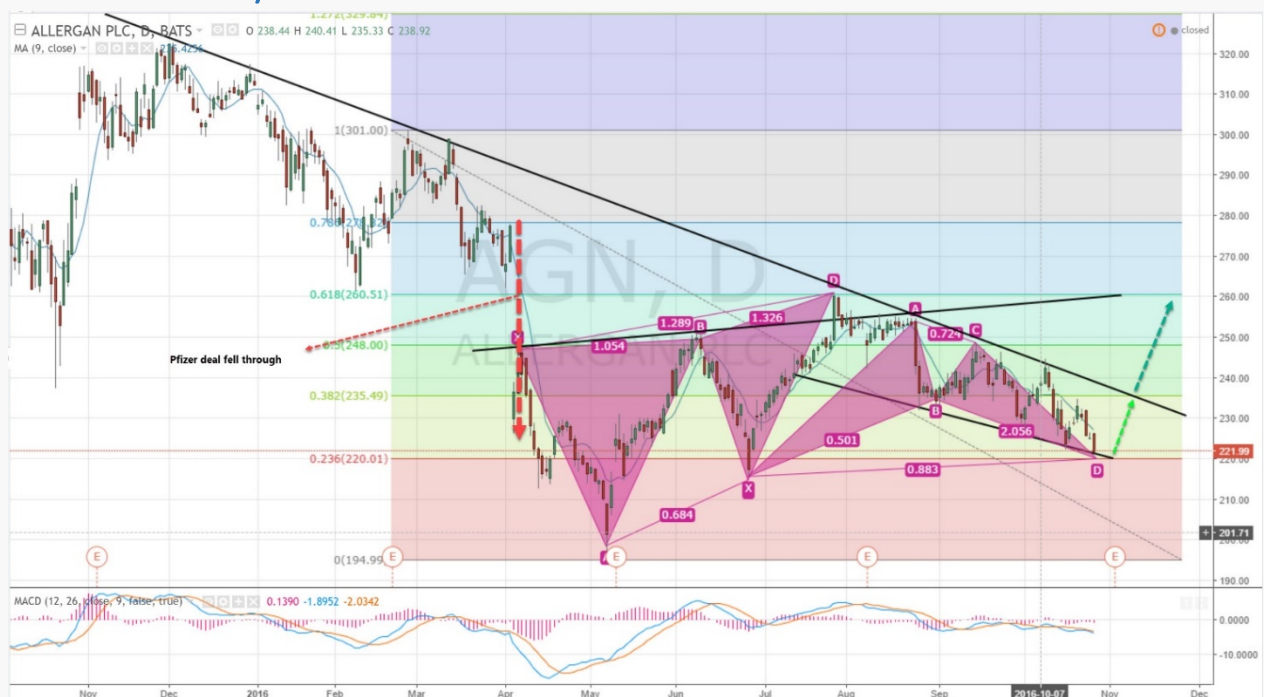
We can also see from the data that there has always been a positive earnings surprise going back to Q3 2015. This is a positive sign for the stock and indicates that the company is beating the expectations of the market.

This data also shows that overall, the EPS forecast for Allergan is positive. Although there is a predicted drop in Mar-17 the overall trend shows a forecast for increased EPS.

The data is showing that there have been more Buys than Sells, however when we look at volumes the net activity shows more shares being sold than bought.

We can also see that when compared to the industry it has a lower P/B and P/CF when compared to both the Industry and the S&P500. This may signal that the company is undervalued, this is the opposite of what is suggested when we look at the P/S which is slightly elevated in comparison. None of these ratios are dramatic in difference.

## Technical Analysis



Allergan stock has been volatile since the merger with Pfizer was abandoned due to Tax Inversion laws back in April 2016. After a April-August Pattern was successful in predicting a downtrend, there has been an emergence of a bullish pattern. Looking purely at technicals I see the stock hitting the 0.236 fib retracement before the earnings call scheduled for 2nd November. I would then look for a rebound up towards the trend line to the 0.382 fib retracement; and if that is broken then I would look for it to test the July highs at fib 0.618. When you consider the fundamentals, and the companies trend of positive earnings surprises I believe this stock shows potential.

<https://uk.tradingview.com/chart/AGN/64gjnACP/>

Data Source: TradingView – as at 26<sup>th</sup> October

## Product Research

### Botox® and Fillers- Plastic Surgery on the Rise

#### Medical Aesthetics Revenue

Looking at the Second Quarter earnings report we can see that BOTOX® generates the most revenue for Allergan, with Fillers coming in 3<sup>rd</sup>:

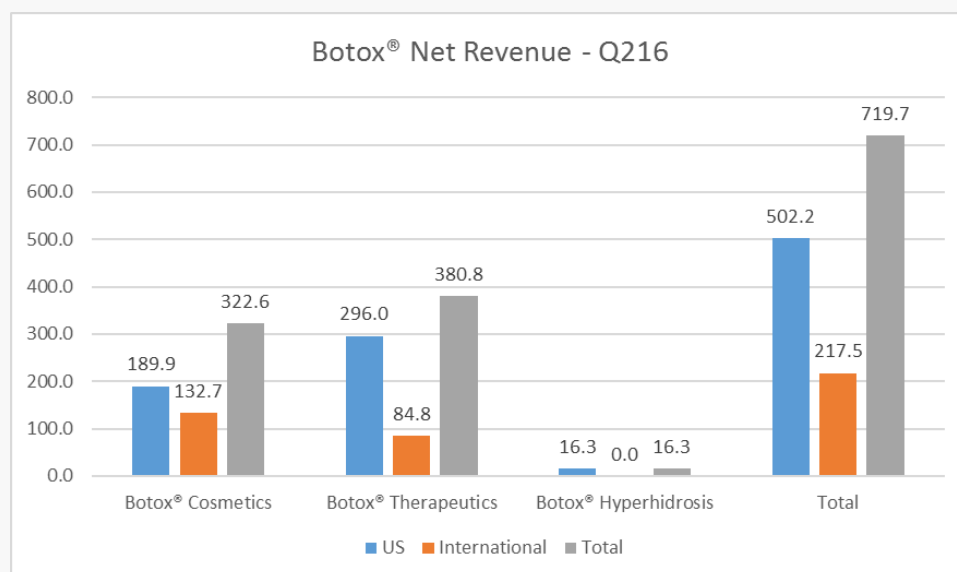
GLOBAL NET REVENUES (UNAUDITED; IN MILLIONS)				
PRODUCT	2016 (Q2)	2015 (Q2)	\$ Change	% Change
<b>BOTOX®</b>	\$719.7	\$631.4	\$88.3	14.0
<b>RESTASIS®</b>	\$390.6	\$325.0	\$65.6	20.2
<b>FILLERS</b>	\$224.9	\$196.0	\$28.9	14.7

Source: Allergan Second Quarter Earnings Report

#### Botox® Revenue Breakdown

We can see that Botox® and Fillers constitute of two of the top 3 revenue generators for Allergan Globally for the 3 months ending June 30<sup>th</sup>. These are both Medical Aesthetics.

Botox® of course has multiple uses, detailed below:



Source: Allergan Second Quarter Earnings Report – Numbers are USD Millions

Botox® Cosmetics (44.8% of total) are associated with Medical Aesthetics whilst the others are related to Medical Dermatology (55.2% of total). Whilst this shows that the majority of Botox® is used for Dermatology, if you couple this with the fact that Fillers are the third biggest net revenue generator for the firm, it is clear that Aesthetics plays a huge part in Allergan's revenue generating capabilities.

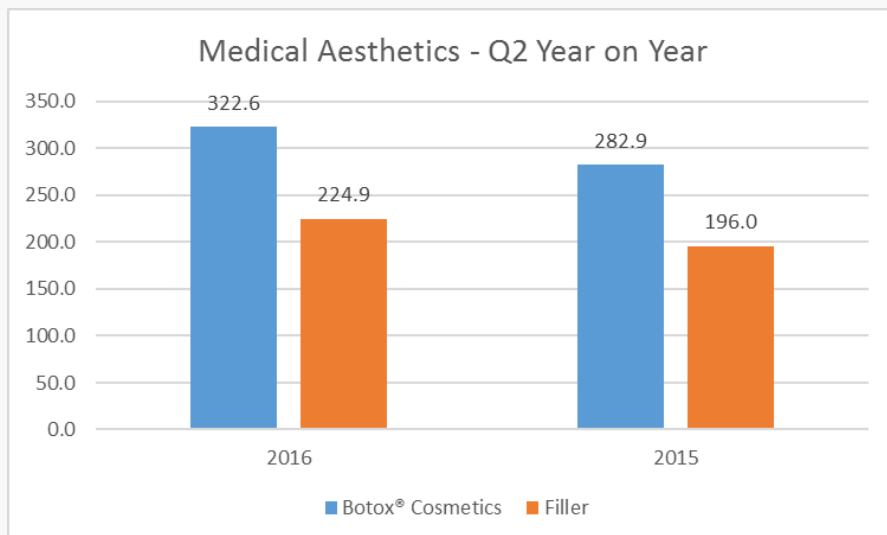
The Botox® Cosmetic revenue was generated by continued market share expansion, enhanced promotional focus and overall strong demand. The continued market share is a positive and indicates that the product has continued demand among consumers.

The Filler's net revenue derives from strong sales of Juvederm® and the continued benefit of new product introductions from the Vycross line.



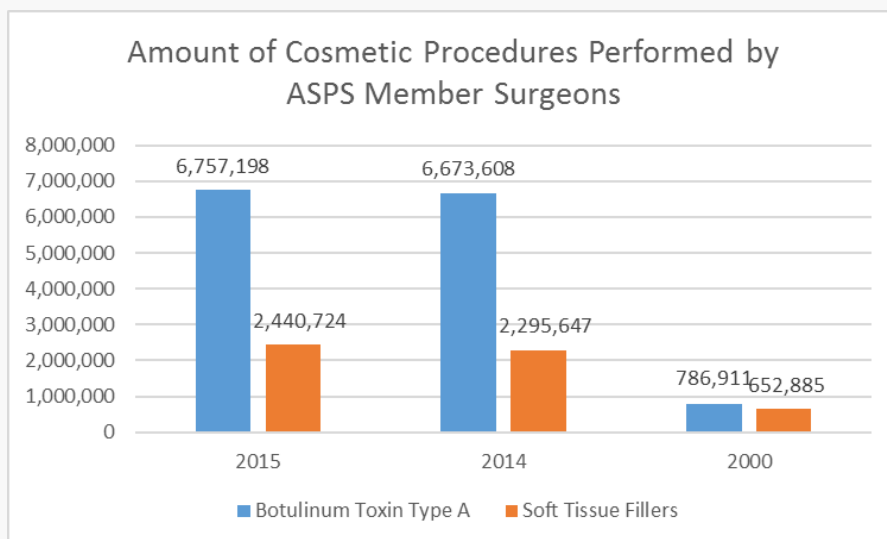
## Medical Aesthetics Revenue Year on Year

We can see from the chart below that the Net Revenue for Aesthetics is increasing year on year, showing that there is an uptrend in demand for the products Allergan have to offer:



*Source: Allergan Second Quarter Earnings Report – Numbers are USD Millions*

This data is supported by the numbers from the American Society of Plastic Surgeons:

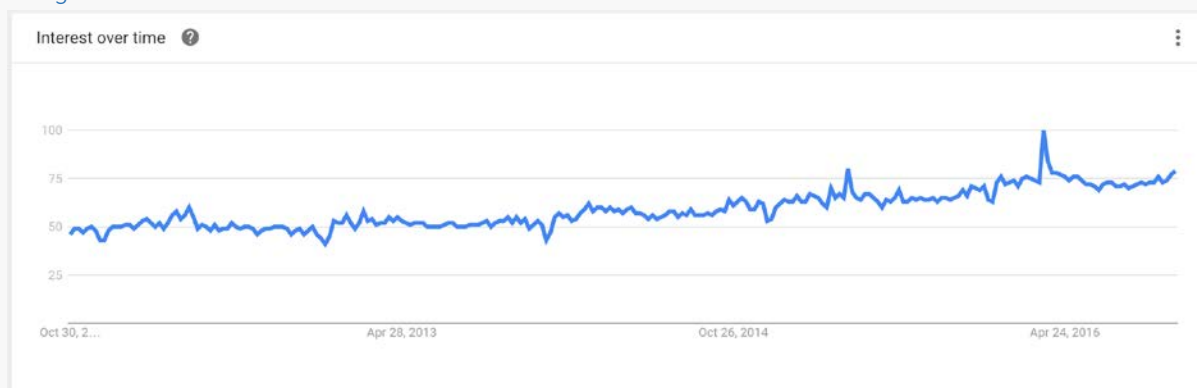


*Note that the numbers above are not exclusive to Allergan products*

These numbers show that there has been a steep incline in the amount of procedures carried out since 2000 by ASPS member surgeons, 759% increase and 274% increase respectively. This could be attributed with pop culture, with celebrities such as Kylie Jenner constantly in the public eye after receiving similar, if not identical procedures. Because the treatments are non-permanent and typically lasts around 3 months for Botox® and 6-9 for fillers, getting more people to use the product can cause a compounding affect for Sales.

## Consumer Trends

### Google Mentions – Botox®



Source: Google Trends

This data shows that there has been an overall upward trend in the amount of times that 'Botox' has been searched for in Google – this would indicate that there has been an increase in interest.

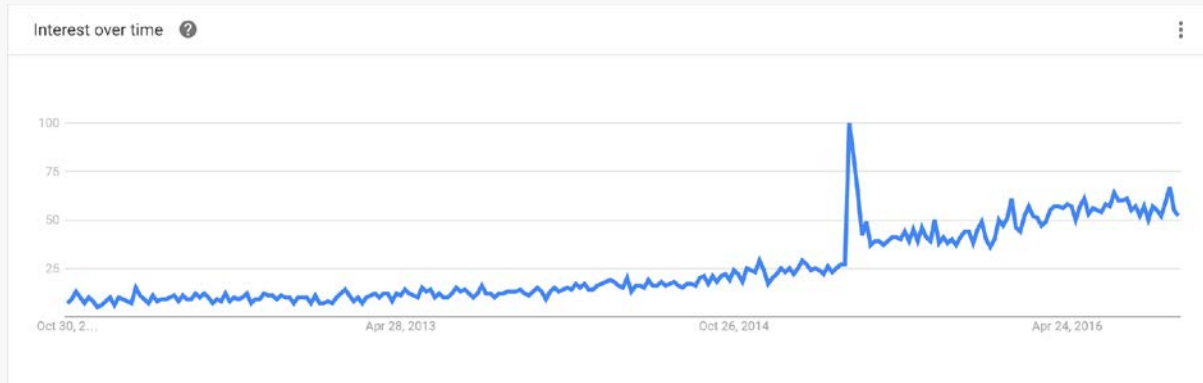
### Google Mentions by Region – Botox®



Source: Google Trends - Values are calculated on a scale from 0 to 100, where 100 is the location with the most popularity as a fraction of total searches in that location, a value of 50 indicates a location which is half as popular, and a value of 0 indicates a location where the term was less than 1% as popular as the peak. **Note:** A higher value means a higher proportion of all queries, not a higher absolute query count. So a tiny country where 80% of the queries are for "bananas" will get twice the score of a giant country where only 40% of the queries are for "bananas"

The concentration of mentions are outside the US, the main global market for Botox®, this could indicate a potential expansion area for the product. This could be attributed to an increase in Social Media, where celebrity's pictures are shared all throughout the world meaning an increase in people wanting to achieve the same look. As more people try out the product there can be an element of Peer Group Encouragement, where others look to achieve the same look as those around them.

### Google Mentions – Lip Filler



Source: Google Trends

There is an even more predominant rise in the number of searches for Lip Filler – this could indicate an even more pronounced interest in treatments giving rise to a larger potential consumer base. This could of course help Allergan increase revenues in this area.

### Google Mentions by Region – Lip Filler



Source: Google Trends (See notes above)

The regions that have searched for this term are from more economically developed countries, with perhaps more disposable income, and with more chance of using the products on a regular basis.

### Summary

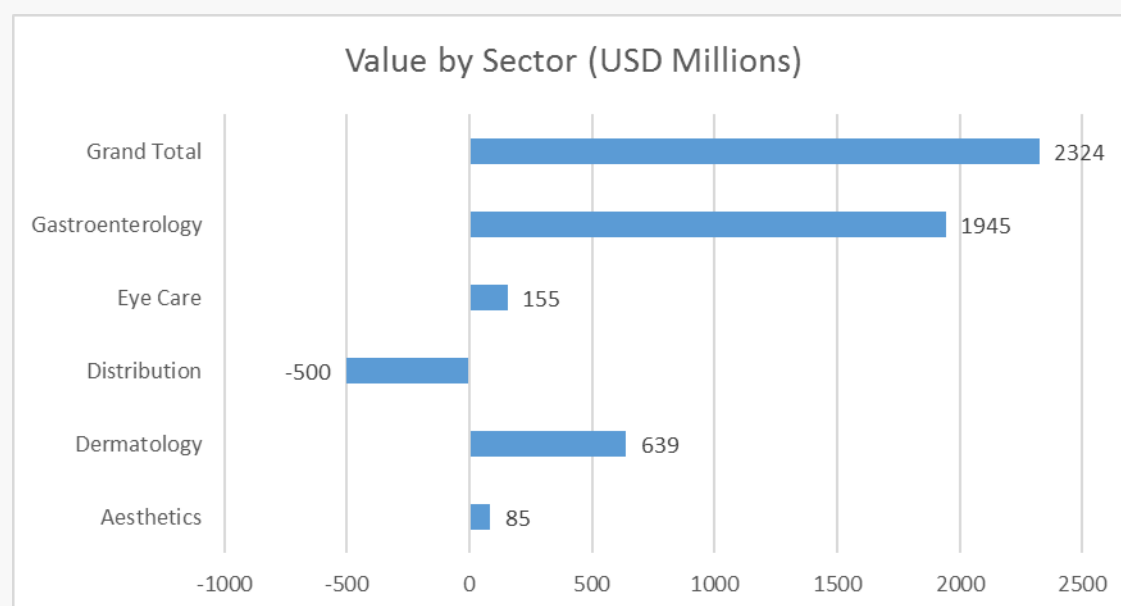
Taking the above data into consideration I would believe that there will be a continued growth in the aesthetics area which will continue to drive the net revenues for Allergan.

## Acquisition Season

Allergan have been incredibly active in acquiring companies in 2016, since the break-up of the Pfizer merger after the Obama administration looked at the deal. The break-up of this deal led to a payment of \$150 million from Pfizer to Allergan, and whilst this is a small amount compared to the \$200 billion plus market capitalisation of Pfizer it is at least something. Please see below for the acquisitions that have taken place since the start of the 2016, bear in mind that the Pfizer deal was terminated in April.

ACQUISITION/SALE	DATE	COMPANY	COST (USD)	MAIN AREA OF STUDY
ACQUISITION	Apr-16	Topokine Therapeutics	85 Million	Aesthetics
SALE	Aug-16	Anda	500 Million	Distribution
ACQUISITION	Aug-16	ForSIGHT VISION5	95 Million	Eye Care
ACQUISITION	Sep-16	RetroSense Thera.	60 Million	Eye Care
ACQUISITION	Sep-16	Vitae Pharmaceuticals	639 Million	Dermatology
ACQUISITION	Sep-16	Tobira Therapeutics	1,695 Million	Gastroenterology
ACQUISITION	Sep-16	Akarna Thera.	50 Million	Gastroenterology
ACQUISITION	Oct-16	Motus Thera.	200 Million	Gastroenterology
<b>Total</b>			<b>2,324 Million</b>	

Source: Allergan Press Release – classified into main areas of study by Empiah Analysis



The Sale we can see above for Anda was to Teva Pharmaceutical – which was the same company that bought the Actavis Generics unit in 2015.

These acquisitions vary in sector, with the highest spend coming in for the Gastroenterology sector. Tobira and Akarna are primarily focused in targeting Non-Alcoholic Steatohepatitis (NASH) – the fastest growing cause of Liver Cancer and therefore Liver Transplant in the US. The Tobira acquisition is a strategic R&D move from Allergan and “gives an opportunity to advance the developments of novel treatments for NASH” says the CEO and President of Allergan Brent Saunders.

The acquisition of Topokine brings further products to the Aesthetic division for Allergan – which as mentioned earlier is a key revenue generator. The company adds a non-invasive fat reduction development programme.

## Clinical Trials

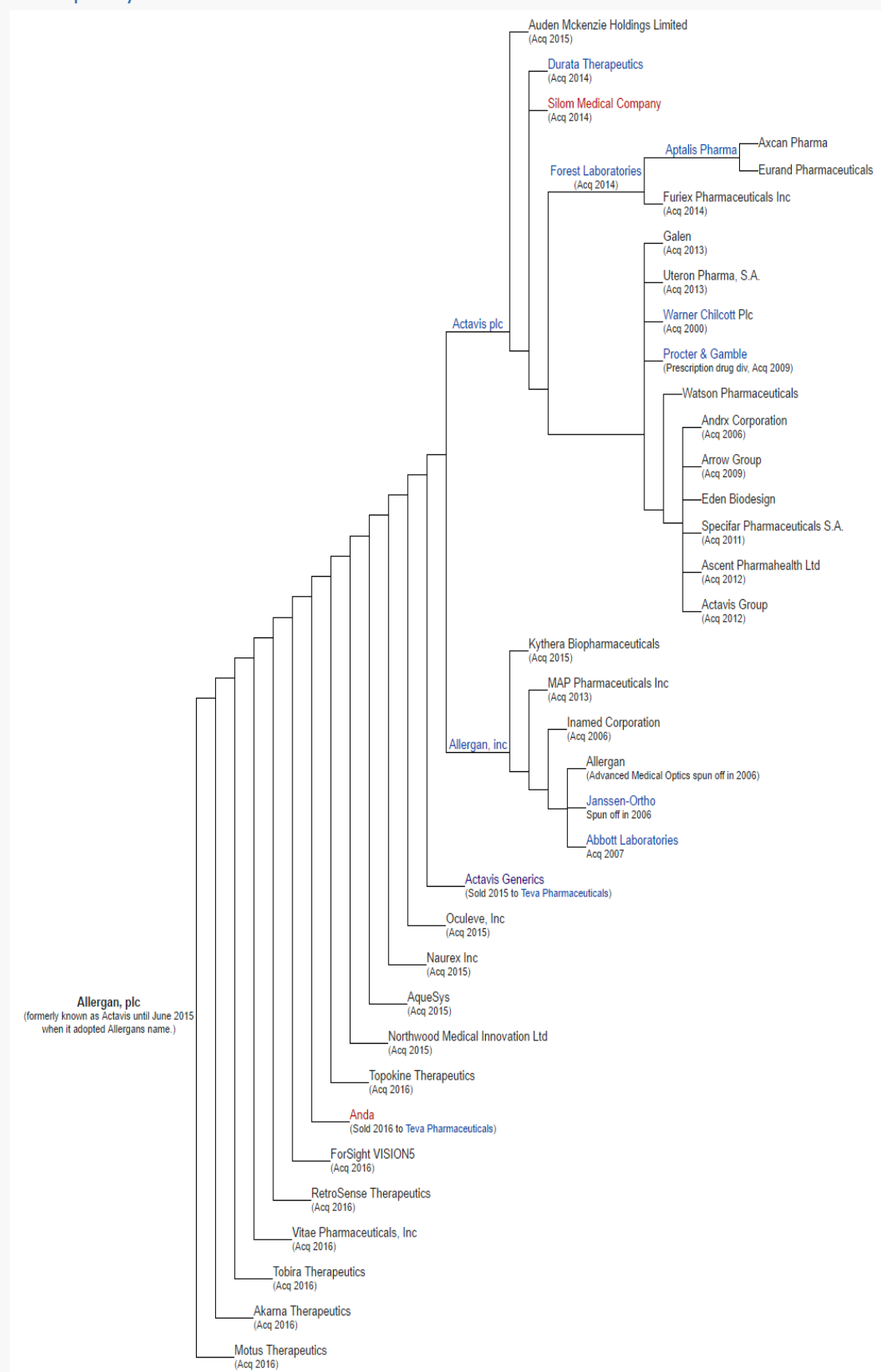
Part of being a company in the Health Care sector is releasing new drugs, which go through clinical trials. Below are a list of some the Phase 3 clinical trials taking place between 30<sup>th</sup> June to 31<sup>st</sup> October that haven't yet been completed. Phase 3 studies are when The drug or treatment is given to large groups of people to confirm its effectiveness, monitor side effects, compare it to commonly used treatments, and collect information that will allow the drug or treatment to be used safely.

Rank	Status	Study
1	Not yet recruiting	<a href="#">A Study of Rapastinel as Adjunctive Therapy in Major Depressive Disorder (RAP-MD-03)</a> <b>Condition:</b> Depressive Disorder, Major <b>Interventions:</b> Drug: Rapastinel; Drug: Placebo
2	Not yet recruiting	<a href="#">A Study of Rapastinel as Adjunctive Therapy in Major Depressive Disorder (RAP-MD-02)</a> <b>Condition:</b> Depressive Disorder, Major <b>Interventions:</b> Drug: Rapastinel; Drug: Placebo
3	Recruiting	<a href="#">A Study of Rapastinel as Adjunctive Therapy in Major Depressive Disorder (RAP-MD-01)</a> <b>Condition:</b> Depressive Disorder, Major <b>Interventions:</b> Drug: Rapastinel; Drug: Placebo
4	Recruiting	<a href="#">Efficacy, Safety, and Tolerability of Oral Ubrogepant in the Acute Treatment of Migraine</a> <b>Condition:</b> Migraine, With or Without Aura <b>Interventions:</b> Drug: Ubrogepant; Drug: Placebo-matching Ubrogepant
5	Recruiting	<a href="#">Efficacy, Safety, and Tolerability of Multiple Dosing Regimens of Oral AGN-241689 in Episodic Migraine Prevention</a> <b>Condition:</b> Migraine, With or Without Aura <b>Interventions:</b> Drug: AGN-241689; Drug: Placebo-matching AGN-241689
6	Recruiting	<a href="#">Efficacy, Safety, and Tolerability Study of Oral Ubrogepant in the Acute Treatment of Migraine</a> <b>Condition:</b> Migraine, With or Without Aura <b>Interventions:</b> Drug: Ubrogepant; Drug: Placebo-matching Ubrogepant
7	Recruiting	<a href="#">Topical Ophthalmic AGN-195263 for the Treatment of Evaporative Dry Eye</a> <b>Condition:</b> Dry Eye Syndromes <b>Interventions:</b> Drug: AGN-195263; Drug: Vehicle
8	Recruiting	<a href="#">A Comparison of Bimatoprost SR to Selective Laser Trabeculoplasty in Patients With Open-Angle Glaucoma or Ocular Hypertension</a> <b>Conditions:</b> Glaucoma; Open-Angle Ocular Hypertension <b>Interventions:</b> Drug: Bimatoprost SR; Drug: Sham Bimatoprost SR; Procedure: Selective Laser Trabeculoplasty; Procedure: Sham Selective Laser Trabeculoplasty
9	Recruiting	<a href="#">A Safety and Efficacy Study of Abicipar Pegol in Patients With Neovascular Age-related Macular Degeneration</a> <b>Condition:</b> Macular Degeneration <b>Interventions:</b> Drug: abicipar pegol; Drug: ranibizumab; Other: sham procedure
10	Recruiting	<a href="#">Safety and Efficacy of Abicipar Pegol in Patients With Neovascular Age-related Macular Degeneration</a> <b>Condition:</b> Macular Degeneration <b>Interventions:</b> Drug: abicipar pegol; Drug: ranibizumab; Other: sham procedure

11	Recruiting	<a href="#">Safety and Efficacy of Bimatoprost Sustained-Release (SR) in Patients With Open-Angle Glaucoma or Ocular Hypertension</a>	Conditions: Glaucoma, Open-Angle; Ocular Hypertension Interventions: Drug: Bimatoprost sustained-release; Other: Sham; Drug: Timolol; Drug: Timolol Vehicle (placebo)
12	Recruiting	<a href="#">Efficacy and Safety of Bimatoprost Sustained-Release (SR) in Patients With Open-angle Glaucoma or Ocular Hypertension</a>	Conditions: Glaucoma, Open-Angle; Ocular Hypertension Interventions: Drug: Bimatoprost sustained-release; Other: Sham; Drug: Timolol; Drug: Timolol Vehicle (placebo)
13	Recruiting	<a href="#">A Safety and Efficacy Study of Dexamethasone Versus Laser Photocoagulation in Patients With Diabetic Macular Edema</a>	Condition: Macular Edema Interventions: Drug: 700 µg dexamethasone; Procedure: Laser Photocoagulation
14	Recruiting	<a href="#">OnabotulinumtoxinA for the Treatment of Urinary Incontinence Due to Overactive Bladder in Pediatric Patients</a>	Conditions: Urinary Incontinence; Urinary Bladder, Overactive Intervention: Biological: OnabotulinumtoxinA
15	Recruiting	<a href="#">A Long-Term Extension Study of OnabotulinumtoxinA for Urinary Incontinence Due to Neurogenic Detrusor Overactivity</a>	Condition: Urinary Incontinence Intervention: Biological: OnabotulinumtoxinA
16	Recruiting	<a href="#">Study of OnabotulinumtoxinA for Urinary Incontinence Due to Neurogenic Detrusor Overactivity in Pediatric Patients</a>	Condition: Urinary Incontinence Intervention: Biological: OnabotulinumtoxinA
17	Recruiting	<a href="#">BOTOX® Open-Label Treatment in Pediatric Lower Limb Spasticity</a>	Conditions: Pediatrics; Muscle Spasticity; Cerebral Palsy Intervention: Biological: botulinum toxin Type A
18	Recruiting	<a href="#">BOTOX® Treatment in Pediatric Lower Limb Spasticity</a>	Conditions: Pediatrics; Muscle Spasticity; Cerebral Palsy Interventions: Biological: botulinum toxin Type A; Drug: Normal Saline (Placebo)
19	Recruiting	<a href="#">BOTOX® Open-Label Treatment in Pediatric Upper Limb Spasticity</a>	Conditions: Pediatrics; Muscle Spasticity; Cerebral Palsy; Stroke Intervention: Biological: botulinum toxin Type A
20	Recruiting	<a href="#">BOTOX® Treatment in Pediatric Upper Limb Spasticity</a>	Conditions: Pediatrics; Muscle Spasticity; Cerebral Palsy; Stroke Interventions: Biological: botulinum toxin Type A; Drug: Normal Saline (Placebo)

Source: [clinicaltrials.gov](https://clinicaltrials.gov)

## Company Structure



Source: Wikipedia

## Appendix

**Revenue** - Revenue is important as generating capital is essential for growth. Here I would look for steady revenue numbers, or numbers that are increasing.

**EPS & Earnings Surprise** - Earnings Per Share (EPS) tells us how much money is flowing down to stock holders, telling you how much profit is made per outstanding share of stock.

Before companies announce their earnings each quarter, analysts will make predictions as to what they think the EPS will be. These predictions are often used as a benchmark, and if the actual EPS comes in higher it is generally a good sign for the stock price. A company that has positive surprises would be seen to be beating its expectations.

**Earnings Forecast** - As mentioned previously, each quarter analysts will forecast what EPS will be. I would look for these numbers to stay constant or increase to show that expectation future profitability is strong.

**PEG Ratio** - Whilst reviewing Price to Earnings numbers is useful, the numbers do not consider growth. Although a low P/E may present a stock as attractive, if it is not growing the stock's value is unlikely to rise. The PEG Ratio is calculated by dividing the stocks P/E by its expected 12-month growth rate. A score of above 1 is considered positive.

**Insider Trades**- Insider trading provides a glimpse of how confident the managers of the company are for its prospects. If the management are buying stock it could indicate the smooth running of the company and this would be considered a positive sign. It is important to note that management could sell shares for reasons other than internal struggles within the company e.g. to meet personal liabilities.

**Industry Earnings** - Whilst it is useful to see data on the company, it is also important to have an idea of how it is performing relative to its peers. Numbers higher than peers would indicate outperformance of the market; however, it is important to note that sectors can be broad which leads to vastly different data.

## Disclaimer

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