Research Report - 31st October 2016

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'sacquisition 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: Biotech and Pharma

Market Cap (B USD): 83.467

52WK Range: 195.50-322.68

Current Stock Price: 213.44

Next Earnings Report Date: 2nd

November 2016

Source: Bloomberg



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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

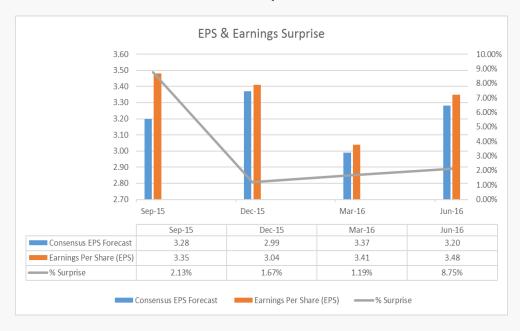
FISCAL QUARTER	2016 (FISCAL YEAR)	2015 (FISCAL YEAR)
MARCH	\$3,795(m)	\$2,562(m)
JUNE	\$3,288(m)	\$3,049(m)
SEPTEMBER		\$5,261(m)
DECEMBER (FYE)		\$4,197(m)
TOTALS	\$7,084(m)	\$15,071(m)

FYE = Fiscal Year End

Source: NASDAQ

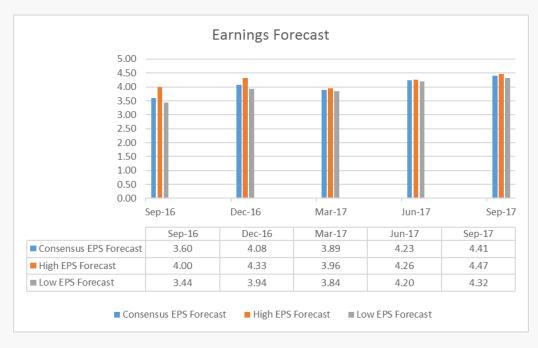
EPS & Earnings Surprise

The dates on the chart below show Fiscal Quarter Ends.



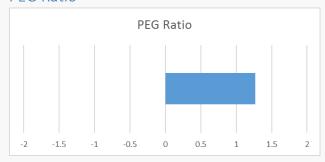
Earnings Forecast

The dates on the chart below show Fiscal Quarter Ends.



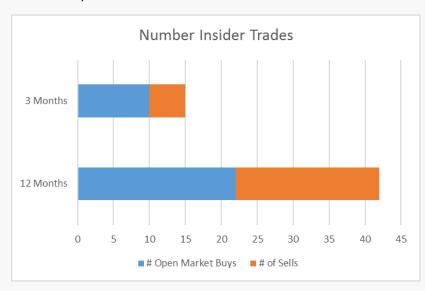


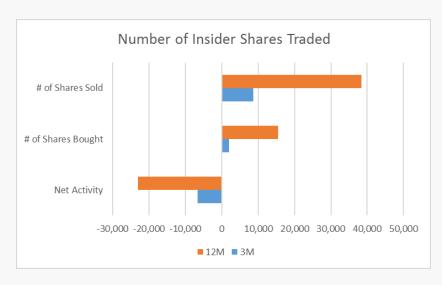
PEG Ratio



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 26th 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 3rd:

GLOBAL NET REVENUES (UNAUDITED; IN MILLIONS)

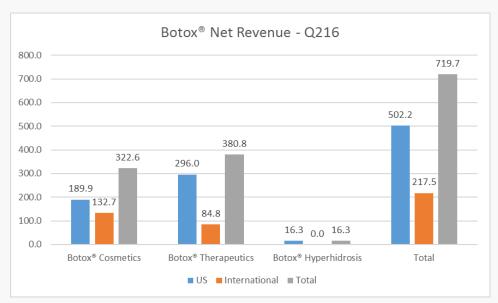
PRODUCT	2016 (Q2)	2015 (Q2)	\$ Change	% Change
BOTOX®	\$719.7	\$631.4	\$88.3	14.0
RESTASIS®	\$390.6	\$325.0	\$65.6	20.2
FILLERS	\$224.9	\$196.0	\$28.9	14.7

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 30th. 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.

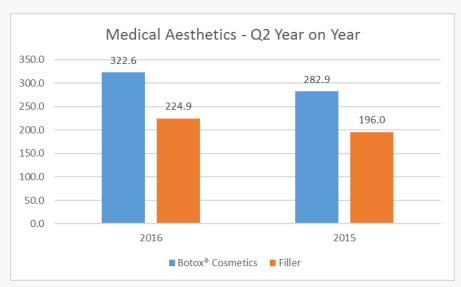
The Botox® Cosmetic revenue was generated by continued market share expansion, enhanced promotional focus and overall strong demand. The continued market share is a positive and indicates that the product has continued demand among consumers.

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



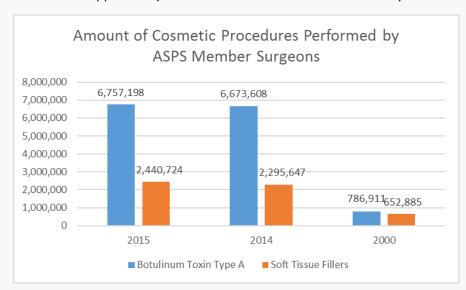
Medical Aesthetics Revenue Year on Year

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:



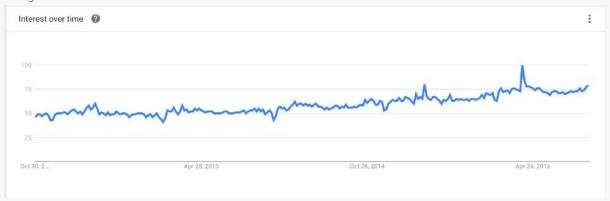
Note that the numbers above are not exclusive to Allergan products

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®

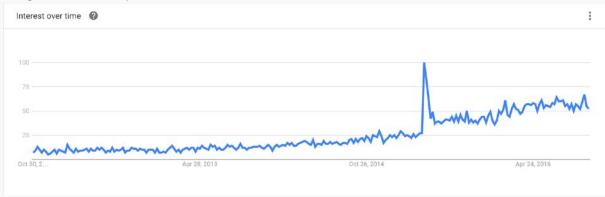


Source: Google Trends - Values are Values are calculated on a scale from 0 to 100, where 100 is the location with the most popularity as a fraction of total searches in that location, a value of 50 indicates a location which is half as popular, and a value of 0 indicates a location where the term was 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.

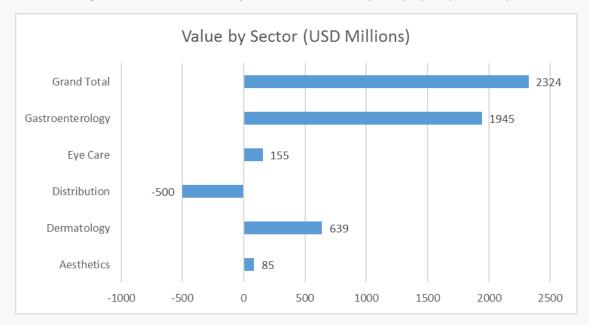


Acquisition Season

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 lead to a payment of \$150 million from Pfizer to Allegan, 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
		Total	2,324 Million	

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



The Sale we can see above for Anda was to Teva Pharmeceutical – 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 30th June to 31st 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	A Study of Rapastinel as Adjunctive Therapy in Major Depressive Disorder (RAP-MD-03)		
	recruiting	Condition:	Depressive Disorder, Major	
		Interventions:	Drug: Rapastinel; Drug: Placebo	
2	Not yet	A Study of Rapastinel as A	djunctive Therapy in Major Depressive Disorder (RAP-MD-02)	
	recruiting	Condition:	Depressive Disorder, Major	
		Interventions:	Drug: Rapastinel; Drug: Placebo	
3	Recruiting	A Study of Rapastinel as A	djunctive Therapy in Major Depressive Disorder (RAP-MD-01)	
		Condition:	Depressive Disorder, Major	
		Interventions:	Drug: Rapastinel; Drug: Placebo	
4	Recruiting	Efficacy, Safety, and Tolerability of Oral Ubrogepant in the Acute Treatment of Migraine		
		Condition:	Migraine, With or Without Aura	
		Interventions:	Drug: Ubrogepant; Drug: Placebo-matching Ubrogepant	
5	Recruiting	Efficacy, Safety, and Tolera	ibility of Multiple Dosing Regimens of Oral AGN-241689 in Episodic Migraine Prevention	
		Condition:	Migraine, With or Without Aura	
		Interventions:	Drug: AGN-241689; Drug: Placebo-matching AGN-241689	
6	Recruiting	Efficacy, Safety, and Tolera	bility Study of Oral Ubrogepant in the Acute Treatment of Migraine	
		Condition:	Migraine, With or Without Aura	
		Interventions:	Drug: Ubrogepant; Drug: Placebo-matching Ubrogepant	
7	Recruiting	Topical Ophthalmic AGN-195263 for the Treatment of Evaporative Dry Eye		
		Condition:	Dry Eye Syndromes	
		Interventions:	Drug: AGN-195263; Drug: Vehicle	
8	Recruiting	A Comparison of Bimatopr	ost SR to Selective Laser Trabeculoplasty in Patients With Open-Angle Glaucoma or	
		Ocular Hypertension		
			Glaucoma; Open-Angle Ocular Hypertension	
		Interventions:	Drug: Bimatoprost SR; Drug: Sham Bimatoprost SR; Procedure: Selective Laser Trabeculoplasty;	
			Procedure: Sham Selective Laser Trabeculoplasty	
9	Recruiting	A Safety and Efficacy Stud	y of Abicipar Pegol in Patients With Neovascular Age-related Macular Degeneration	
	Recruiting		Macular Degeneration	
			Drug: abicipar pegol; Drug: ranibizumab; Other: sham procedure	
10	Recruiting	Safety and Efficacy of Ahio	cipar Pegol in Patients With Neovascular Age-related Macular Degeneration	
			Macular Degeneration	
			Drug: abicipar pegol; Drug: ranibizumab; Other: sham procedure	

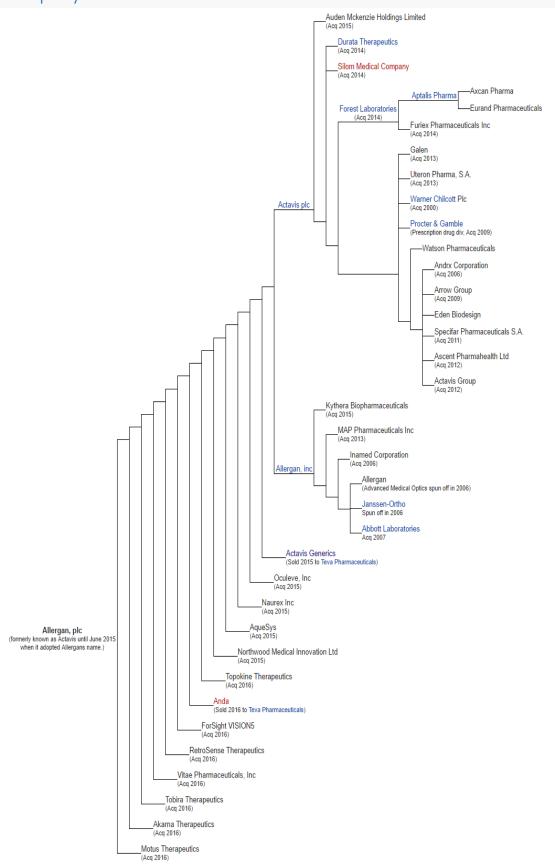


11	Recruiting	Safety and Efficacy of Bimatoprost Sustained-Release (SR) in Patients With Open-Angle Glaucoma or Ocular Hypertension		
		Conditions:	Glaucoma, Open-Angle; Ocular Hypertension	
		Interventions:	Drug: Bimatoprost sustained-release; Other: Sham; Drug: Timolol; Drug: Timolol Vehicle (placebo)	
12	Recruiting	Efficacy and Safety of Bimatoprost Sustained-Release (SR) in Patients With Open-angle Glaucoma or Ocular Hypertension		
		Conditions:	Glaucoma, Open-Angle; Ocular Hypertension	
		Interventions:	Drug: Bimatoprost sustained-release; Other: Sham; Drug: Timolol; Drug: Timolol Vehicle (placebo)	
13	Recruiting	A Safety and Efficacy Study of Dexamethasone Versus Laser Photocoagulation in Patients With Diabetic Macular		
		Condition:	Macular Edema	
		Interventions:	Drug: 700 µg dexamethasone; Procedure: Laser Photocoagulation	
14	Recruiting		e Treatment of Urinary Incontinence Due to Overactive Bladder in Pediatric Patients	
		Conditions:	Urinary Incontinence; Urinary Bladder, Overactive	
		Intervention:	Biological: OnabotulinumtoxinA	
15	Recruiting	A Long-Term Extension Str Overactivity	udy of OnabotulinumtoxinA for Urinary Incontinence Due to Neurogenic Detrusor	
		Condition:	Urinary Incontinence	
		Intervention:	Biological: OnabotulinumtoxinA	
16	Recruiting	Study of Onabotulinumtox	inA for Urinary Incontinence Due to Neurogenic Detrusor Overactivity in Pediatric Patients	
		Condition:	*	
		Intervention:	Biological: OnabotulinumtoxinA	
47	Desmiller	DOTOVO On an I abal Treat	Invent in Bedietele Leure Limb Greetleite	
17	Recruiting	Conditions:	Pediatrics; Muscle Spasticity; Cerebral Palsy	
		Intervention:		
		mortondon	Biological Bodinan (OAII) Type A	
18	Recruiting	BOTOX® Treatment in Ped	iatric Lower Limb Spasticity	
		Conditions:		
		Interventions:	Biological: botulinum toxin Type A; Drug: Normal Saline (Placebo)	
19	Recruiting	BOTOX® Open-Label Treatment in Pediatric Upper Limb Spasticity		
		Conditions:	Pediatrics; Muscle Spasticity; Cerebral Palsy; Stroke	
		Intervention:	Biological: botulinum toxin Type A	
20	Boorulting	POTOVO Treatment in David	intria Unnar Limb Spacticity	
20	Recruiting	Conditions:	latric Upper Limb Spasticity Pediatrics; Muscle Spasticity; Cerebral Palsy; Stroke	
			Biological: botulinum toxin Type A; Drug: Normal Saline (Placebo)	
		mitor vontions.	Diological Potalitati totili Type 11, Diag. Hollia dalile (i lacebo)	

Source: clinicaltrials.gov



Company Structure



Source: Wikipedia

Empiah

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.

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