

March 10, 2017

GW Pharmaceuticals plc: GWPH

Edward Stumm

Sector: Healthcare

Industry: Pharmaceuticals

Current Price: \$125.07

Target Price: \$155.63

Company Description: GW Pharmaceuticals plc is a biopharmaceutical company who researches, develops, and commercializes cannabinoid prescription medications based off of the cannabis plant. They operate in the United States, Canada, Asia, and Europe. GW Pharmaceuticals was founded in 1998 and is based out of Cambridge, United Kingdom.

BUY

Current Price: \$125.07

Target Price: \$155.63

Market Cap: 3.15B

Beta: 2.59

SP debt Rating: ccc+

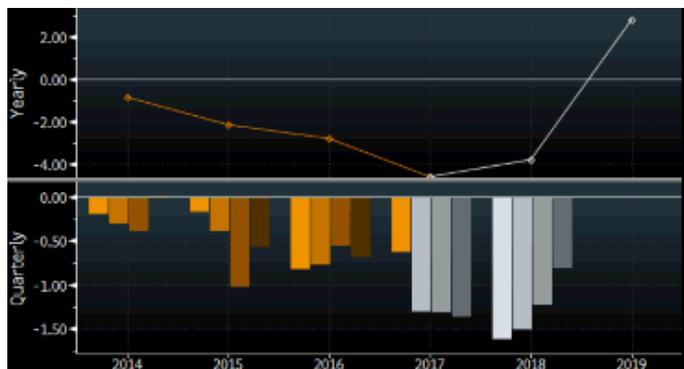


Thesis: The approval of Epidiolex will help GW Pharmaceuticals expand into the international market becoming the first company with a cannabis-based FDA approved drug. The addition of new CFO, Scott Giacobello, will shift this company to becoming a serious competitor under USGAAP and in US dollars. Although there is much risk involved with the addition of GW Pharmaceuticals, the outlook is positive for the new drug's effectiveness on the treatment of Epilepsy. The approval of Trump for the use of medicinal marijuana will allow companies to succeed in marketing cannabis-based drugs.

Catalysts: Forward looking projections that call for positive/negative outlook that will strengthen your thesis. Example:

- Appointment of new CFO
- Potential legalization of marijuana in Canada
- Approval of Epidiolex by FDA

Earnings Performance:



The earnings per share have been consistently decreasing from year to year as a result of the extensive research and development that GW Pharmaceuticals has been investing in. This is projected to continue as they look to invest in the commercialization of Epidiolex in Europe and in America. The appointment of the new CFO, Scott Giacobello will help GW Pharmaceuticals become an international institution due to his expertise in finance and accounting. Another catalyst that will

change the outlook on the industry is the potential legalization of marijuana in Canada, which is one of the segments that GW Pharmaceuticals operates in. The last catalyst that will play into the upcoming year's performance will be the potential approval of Epidiolex which will be submitted to the FDA within the upcoming year.

Ownership:

As of march of 2017 71.38% of the ownership is made up by investment advisors which is down 16.53% from the previous year. However, the hedge fund managers went up 14.81% to a total percentage of 23.14% which indicates that they are optimistic in realizing a large gain over the period ahead of us. The current CEO of GW

Ownership Type	03/05/17↑	Curr	Change
11) Investment Advisor	71.38	71.38	0.00
12) Hedge Fund Manager	23.14	23.14	0.00
13) Bank	2.76	2.76	0.00
14) Private Equity	1.61	1.61	0.00
15) Brokerage	0.54	0.54	0.00
16) Venture Capital	0.48	0.48	0.00
17) Holding Company	0.04	0.04	0.00
18) Insurance Company	0.03	0.03	0.00
19) Pension Fund	0.01	0.01	0.00
20) Individual	0.00	0.00	0.00

Pharmaceuticals plc is Justin Gover, he served as CEO since January of 1999. Previously before become CEO of GW Pharmaceuticals he served as the head of corporate affairs at Ethical Holdings plc. Recently, GW Pharmaceuticals appointed a new Chief Financial Officer, Scott Giacobello. Mr. Giacobello brings over 25 years of finance and operational experience to the company. Before working for GW Pharmaceuticals, Scott Giacobello worked for Chase Pharmaceuticals as their CFO after the merger with Allergan Inc. Mr. Giacobello served with Allergan Inc. as the Vice President of Finance. GW Pharmaceuticals is looking to transition from “being a foreign private issuer reporting under IFRS to becoming a domestic registrant reporting under USGAAP and in US dollars” (McKee). The appointment of new CFO, Scott Giacobello will help achieve this because he brings financial and accounting expertise to the table.

Phase I trials:

Phase I trials usually consist of the first time the new experimental drug is given to people as a study. The purpose of Phase I trials is to determine the correct dosage that a patient can receive and discover any side effects that may have been missed in previous studies. GW Pharmaceuticals has previously been through two

GWP42006 (CBDV)	AUTISM SPECTRUM DISORDERS	
Other		
GWP42003 (IV)	NEONATAL HYPOXIC-ISCHEMIC ENCEPHALOPATHY	

Phase I trials including the drug GWP42006 for autism spectrum disorders (ASD). GW has been gaining clinical experience with ASD through the use of several types of Cannabinoids. This drug may be able to treat deficits in cognition, behavior, and communication for those

suffering from ASD. The other Phase I trial which is currently underway is the trial of the new drug GWP42003. This trial included patients who suffer from acute or sub-acute brain injuries due to asphyxia. GW Pharmaceuticals is currently developing a CBD formulation that can provide treatment for Neonatal Hypoxic-Ischemic Encephalopathy (NHIE). The trial of GWP42006 was successful in the phase I trial and GWP42003 received designation from the FDA which allows them to study the drug on sponsors.

Phase II trials:

EPIDIOLEX	INFANTILE SPASMS	
CBDV (GWP42006)		
GWP42006 (CBDV)	EPILEPSY	
GWP42002 / GWP42003	GLIOMA	
GWP42003	SCHIZOPHRENIA	

Phase II trials are used to determine if the drug works for the assigned disease. In the Phase II trials, patient sizes are increased from a few dozen up to 100 studies. Patients will be tested with the same dose which was determined to be the safest to analyze the effectiveness. Some patients may receive the drug in an alternative way and different dose to determine which is most effective and safe. GW Pharmaceuticals is

currently operating 4 phase II trials, Epidiolex in infantile spasm, GWP42006 in Epilepsy, GWP42002/GWP42003 for Glioma, and GWP42003 for Schizophrenia. GWP42006 for epilepsy included the testing of 66 subjects and was well tolerated by the bodies at the highest tested dosage. This drug uses the primary cannabinoid, CBDV. The other Phase II trial which is currently underway is the trial of the new drug GWP42002/GWP42003. This trial included 20 patients who were being treated for recurrent GBM. The third phase II trial underway is GWP42003 for Schizophrenia. This is a disease that affects how a person may think, perceive things, and emotionally react to things. This drug was tested on 88 patients who suffered from Schizophrenia who failed to respond effectively to other types of anti-psychotic medication. This drug has

been able to reduce the characteristic disorders that is currently available through medication. The last phase II trial is the use of Epidiolex in Infantile Spasms. This disease is rare in children under the age of 1.

Phase III trials:



Phase II trials are when new drugs pass the first two phases and now must determine if this drug is better than what is already available. This trial is usually done in larger groups and done at random so neither the patient or doctor know what drug

they are receiving. This trial is done over multiple locations globally and could last a while since patients are tested extensively. GW Pharmaceuticals currently have Epidiolex in phase II trials for several categories including Dravet syndrome, Lennox-Gastaut syndrome (LGS), and Tuberculosis Sclerosis TSC). In the phase III trial Alabama section, 58% of patients had a greater than 50% reduction in seizure frequency, 36% had a greater than 75% reduction, and nine patients were seizure free. These results remained consistent through the six month testing period, and also remained consistent from each study location. The drug tested to be more effective than the placebo. The next step for Epidiolex is to be submitted for approval by the FDA.

Trump Administration:

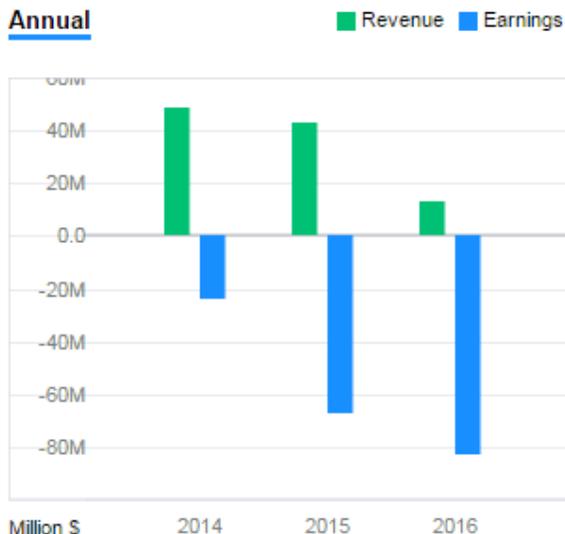
The Trump Administration has been busy at work since President Donald Trump came into office. One question that has yet to be answered is what will President Trump do about the legalization of Marijuana? Well, with Jeff Sessions being appointed as the Attorney General we can assume that the likelihood of the administration being in favor of the legalization of marijuana is slim to none. Donald Trump stated back in 2015 during his campaign that the use of recreational marijuana was bad and he strongly held that position. However, President Trump stated that the use of medicinal marijuana was great and that he was 100% in favor of this. This is a great sign for GW Pharmaceuticals who is hoping to get the first Cannabis based drug approved by the FDA. Trump previously stated to Bill O'Reilly that the legalization of marijuana should remain a state to state issue, which leads us to believe he won't be taking action within the near future on this matter.

Financials & Valuation:

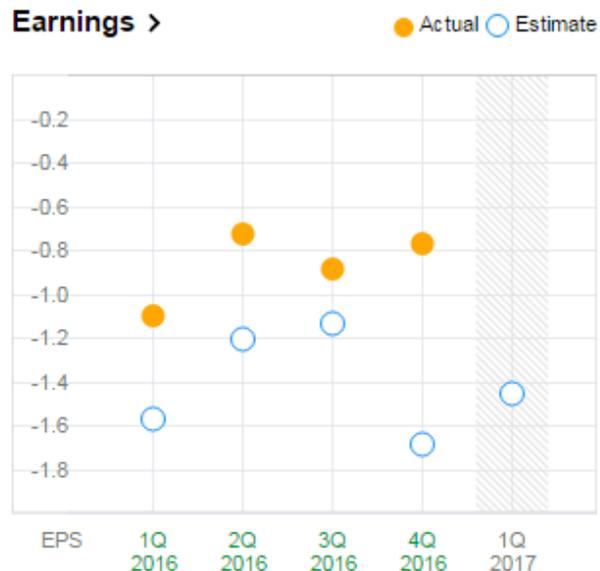
GW pharmaceuticals has reported revenues of 13.4 million in 2016 which is down 69% from the previous year reporting. This is due to the Research and Development fee charges to Otsuka, which is another pharmaceutical company. This number also reflects the extensive research of Epidiolex and the other pipeline studies. The Selling, general, and administrative costs to the company also increased by 6 million from 2015 because of the investments made to establish the commercial presence of GW Pharmaceuticals in Europe and America. There was a negative net cash flow because of the additional investment of a new 45-acre glass house growing facility. Although earnings have been going down over the past couple years, GW Pharmaceuticals is about ready to launch their new drug to the market and commercialize it which will drive the earnings per share back up. This slow rise can be seen in the forecasted EPS in the first quarter of 2017. GW Pharmaceuticals was difficult to value on the proforma due to several reasons which include the negative revenue performance in comparison to their competitors and high capital expenditure. The company may seem to have stagnant performance during this time due to the high capital expenditure for the phase III trials and the new addition of a glass house in Europe for the growth of cannabis. The stock target price reflects the pending approval of Epidiolex which would drive revenue up.

Financials >

Annual

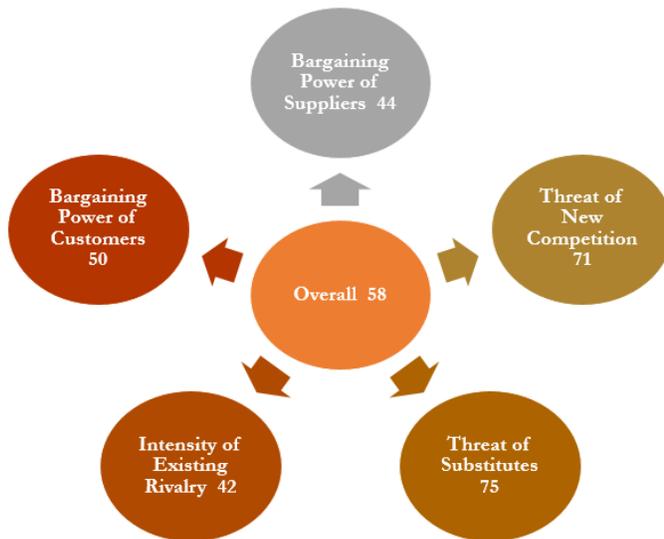


Earnings >



Porter's 5 forces:

Porter's 5 forces (scores are out of 100)



Bargaining Power of Suppliers- The bargaining power of suppliers is moderately low because there are multiple drugs out on the market and just because the drug is approved by the FDA doesn't mean that the DEA is going to schedule it. The cost of the product is also an issue because it is the only cannabis based drug out there right now and it is costly, so there's no guarantee that doctors will recommend this over other cost efficient drugs.

Bargaining Power of Customers- The bargaining power of customers is moderate because they have a say in what drug they take when they go to the doctor. When they are diagnosed with something the doctor will lay out options for the

patient. And although this drug may be more effective, the cost of it may sway the buyer to settle for a less costly medication.

Intensity of existing Rivalry- The intensity of existing rivalry is moderately low because there are few pharmaceutical companies that have created a cannabis based drug that is also a step away from being approved by the FDA. Soon GW Pharmaceuticals will have the upper hand in the market because they will be the first company potentially approved.

Threat of Substitutes- The threat of substitutes is high because there are multiple drugs out on the market that can treat the same thing. Although certain drugs may not be as effective as Epidiolex, they will be more cost efficient to the buyer.

Threat of New Competition- The threat of new competition is high because in this industry new companies can emerge with a great new drug that proves to work better than anything else out on the market. If this were to happen then GW Pharmaceuticals would lose an advantage over the market and have to find another way to maintain their competitiveness.

Conclusion:

With the approval of Epidiolex looking optimistic over the next couple years, this makes GW Pharmaceuticals a buy. This is a risky investment, as is most pharmaceutical companies due to the uncertainty of the drugs performance. GW Pharmaceuticals has proven to be a true titan in the industry though, and continues to perform. I expect this stock to rise to \$155.63 over the next year generating a 24% percent return.

http://www.pharmatimes.com/news/gw_pharma_unveils_new_financial_head_1188365#.WMWnQmY9zRc.email

GW Pharmaceuticals plc (GWPH)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by Edward Stumm
3/12/2017

Current Price:
Dividend Yield:

\$125.07
0.0%

Intrinsic Value
Target Price

-\$27.54
\$156.11

Target 1 year Return: 24.85%
Probability of Price Increase:



Description
GW Pharmaceuticals plc, a biopharmaceutical company, engages in discovering, developing, and commercializing cannabinoid prescription medicines using botanical extracts derived from the Cannabis plant.

General Information	
Sector	Healthcare
Industry	Pharmaceutical
Last Guidance	November 3, 2015
Next earnings date	May 2, 2017
Estimated Country Risk Premium	5.10%
Effective Tax rate	15%
Effective Operating Tax rate	17%

Market Data	
Market Capitalization	\$3,152.04
Daily volume (mil)	0.49
Shares outstanding (mil)	25.20
Diluted shares outstanding (mil)	23.39
% Shares held by institutions	74%
% Shares held by investment Managers	81%
% Shares held by hedge funds	16%
% Shares held by insiders	6.25%
Short interest	9.92%
Days to cover short interest	6.88
52-week high	\$137.88
52-week low	\$69.12
Levered Beta	2.76
Volatility	0.00%

Quarter ending	Part Earning Surprise	Revenue	EBITDA
12/31/2015	-30.81%	N/A	N/A
3/31/2016	-44.81%	N/A	N/A
6/30/2016	-43.32%	N/A	N/A
9/30/2016	-33.20%	N/A	N/A
12/31/2016	-10.61%	N/A	N/A
Mean	-32.55%	DIW01	DIW01
Standard error	6.1%		

Peers	
MyoKardia, Inc.	
Acorda Therapeutic, Inc.	
Ocular Therapeutic, Inc.	
Tetraphase Pharmaceutical, Inc.	
Pacira Pharmaceutical, Inc.	
Theravance Biopharma, Inc.	

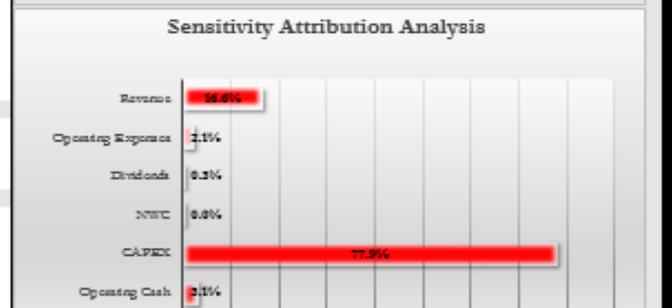


Management		Position		Total compensation qm		Total return to shareholders	
Guy, Geoffrey	Founder and Executive Chair	3.95%	per annum over 6y	N/A		N/A	
Gavor, Justin	Chief Executive Officer and	5.8%	per annum over 6y	N/A		N/A	
George, Adam	Managing Director and Secret	14.97%	per annum over 5y	N/A		N/A	
Tavey, Christopher	Chief Operating Officer	8.02%	per annum over 4y	49.7%	per annum over 4y	N/A	
Wright, Stephen	Chief Medical Officer	4.13%	per annum over 6y	N/A		N/A	
Gangalli, Julian	President of North America	108.49%	per annum over 2y	10.59%	per annum over 2y	N/A	

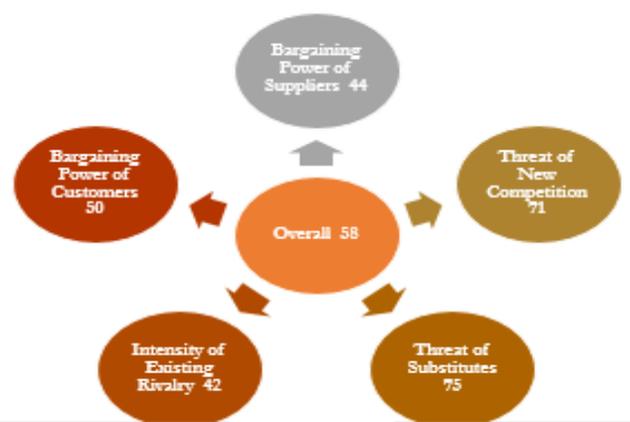
Profitability		GWPB (LTM)		GWPB (5 year historical)		Industry (LTM)	
ROIC	-9.6%	24.71%		8.85%		24.6%	
NOPAT Margin	-36.8%	-13.41%		-1.34		0.36	
Revenue/Inverted Capital	0.03	-1.94		12.07%		12.89%	
ROE	-5.0%	-14.72%		-0.32		0.59	
Adjusted net margin	-37.4%						
Revenue/Adjusted Book Value	0.01						

Invested Funds		GWPB (LTM)		GWPB (5 year historical)		Industry (LTM)	
Total Cash/Total Capital	52.6%	54.5%		16%		N/A	
Estimated Operating Cash/Total Capital	8.3%	14.8%		1%		78%	
Non-cash working Capital/Total Capital	-0.5%	-1.0%					
Inverted Capital/Total Capital	55.0%	58.6%					

Capital Structure		GWPB (LTM)		GWPB (5 year historical)		Industry (LTM)	
Total Debt/Common Equity (LTM)	0.01	0.02		0.69		3.54%	
Cost of Existing Debt	1.88%	2.51%		3.54%		3.54%	
Estimated Cost of new Borrowing	2.75%	2.92%		BBB		BBB	
CGFS Risk Rating	A	BBB		1.82		0.66	
Unlevered Beta (LTM)	2.74	1.82		12.44%		6.76%	
WACC	18.01%						



Porter's 5 forces (scores are out of 100)



Period	Revenue growth
Base Year	-64.1%
12/31/2017	106.6%
12/31/2018	369.7%
12/31/2019	173.3%
12/31/2020	78.8%
12/31/2021	41.2%
12/31/2022	42.9%
12/31/2023	37.3%
12/31/2024	-0.1%
12/31/2025	-14.8%
12/31/2026	-33.8%
Continuing Period	4.1%

Valuation		ROIC/WACC	
NOPAT margin	-36.81%		-0.53
	417.3%		1.10
	1032.3%		8.40
	1023.3%		6.40
	978.8%		3.78
	923.4%		2.45
	898.3%		2.07
	871.6%		1.78
	750.9%		1.05
	572.2%		0.95
	165.8%		0.10
	162.5%		0.10

Period	Inverted Capital	Net Claims	Price per share
Base Year	\$30.17	\$18.42	-\$307.36
12/31/2017	\$65.14	-\$35.69	-\$355.40
12/31/2018	\$111.53	-\$442.53	-\$378.11
12/31/2019	\$373.33	-\$1,660.22	-\$336.45
12/31/2020	\$334.01	-\$4,119.31	-\$216.95
12/31/2021	\$376.94	-\$7,947.56	-\$33.32
12/31/2022	\$571.28	-\$13,008.72	\$249.92
12/31/2023	\$2,022.14	-\$20,024.08	\$659.32
12/31/2024	\$5,835.64	-\$27,337.30	\$1,006.68
12/31/2025	\$11,958.87	-\$33,170.20	\$1,203.30