

Macroeconomic Overview

U.S. Markets

Index	Weekly % Change	YTD % Change
S&P 500	+0.045%	+1.52%
Dow Jones Industrial	-0.13%	-0.14%
NASDAQ Composite	+0.46%	+8.27%
Russell 2000	+2.32%	-0.21%
VIX	-2.26%	-21.25%

U.S equities held steady during the shortened trading week, after the S&P 500 recorded its biggest weekly gain of the year. Stocks finished the week on very modest gains, despite renewed geopolitical fears after the downing of a Russian fighter jet by Turkey on Tuesday. The S&P 500 gained less than a point, finishing the week just above 2,090, while the DJIA lost 0.13%, dragged down by Disney (DIS) which sold off sharply after announcing massive losses of subscribers at its ESPN branch. The NASDAQ Composite outperformed the S&P 500 once again, posting a minor gain of 0.46% mainly attributable to the healthcare sector. Small-cap stocks clearly outperformed last



S&P 500, DJIA, NASDAQ Composite, Russell 2000 5-day chart.

week, as measured by the Russell 2000 which gained 2.32% and is now only 0.2% shy of its value at the start of the year. Last week was also the second consecutive week of decline for the VIX Index of volatility, which settled 2.26% lower despite a massive spike on Tuesday. As is often the case when equities are up, gold finished the week lower, dipping 1.91% to close below \$1,060 an ounce for the first time since October 2009. Silver also finished the week lower, losing 0.65% to close just above \$14/ounce. Crude oil prices were once again very volatile, and spiked on Tuesday when the Russian fighter jet was taken down. Despite those geopolitical concerns, the rally exhausted itself and prices finished mixed, with Brent gaining 0.45% and WTI losing 0.45%. A couple of key economic reports were released last week, notably the revised third quarter GDP growth, which came in at 2.1% compared to 1.5% initially. The upward revision was mainly attributable to an increase in inventories as businesses prepare for the holiday season, even though personal consumption also contributed, increasing 3% over the same quarter last year. The Census Bureau also released existing and new home sales for October, which painted a mixed picture of the American real estate market. Even though new home sales increased to 495,000 in October, existing home sales decreased 3.6% to 5.36 million. The price of existing homes also increased in September, as evidenced by the Case-Schiller Index which was released on Tuesday and showed 5.5% year-on-year increase in home prices. In addition, initial jobless claims fell to 260,000 last week, which marks the 38th consecutive week under 300,000 for the common indicator. Those reports seem to corroborate the Federal Reserve's decision to start gradually raising interest rates in December. In corporate news, investors sent shares of HP Inc. (HPE) tumbling on Wednesday after the company's earnings report provided a lowered guidance for the next fiscal year. Last week also saw the announcement of another megamerger, with Pfizer Inc. (PFE) offering to acquire Allergan PLC (AGN) for approximately \$160 billion. The deal would create the largest drug company, and would also result in a tax inversion as the new entity would adopt AGN's Ireland nationality.

International Markets

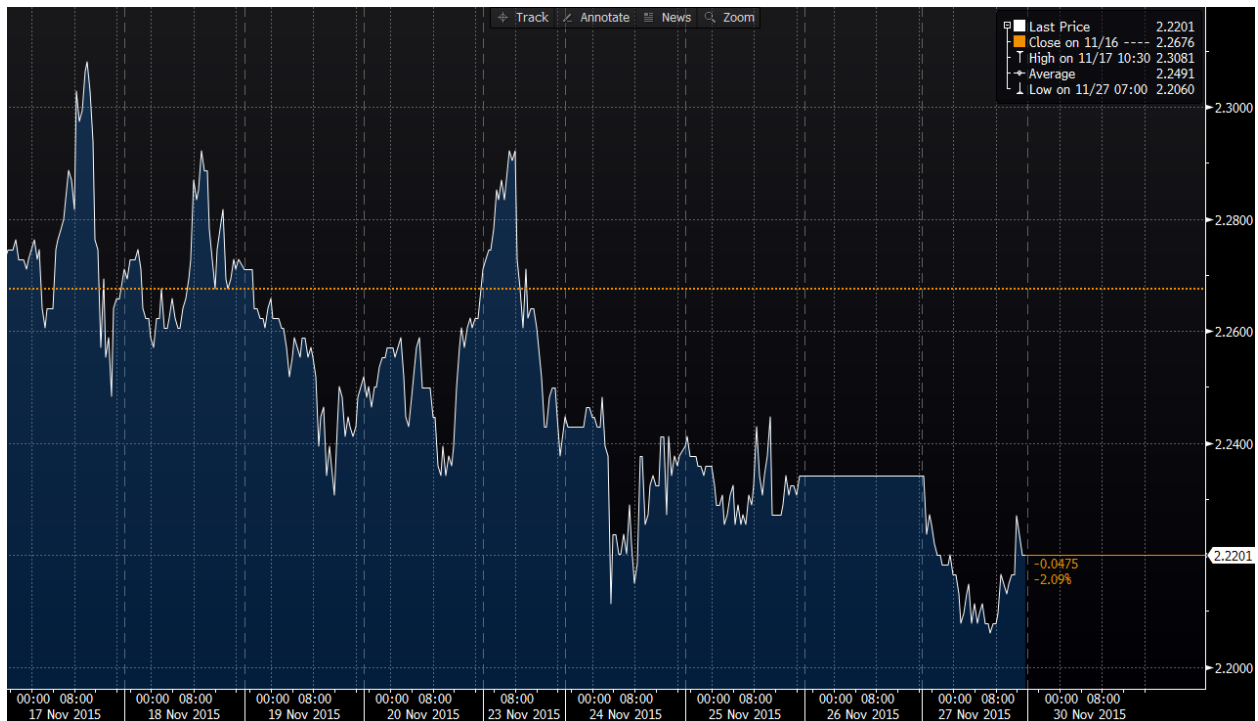
Index	Weekly % Change	YTD % Change
BE 500	+0.48%	+10.88%
Stoxx Europe 600	+0.49%	+12.01%
DAX	+1.56%	+15.18%
FTSE 100	+0.64%	-2.91%
CAC 40	+0.39%	+15.39%
Nikkei 225	+0.02%	+13.94%
Shanghai Composite	-5.35%	+6.23%
Shenzhen Composite	-4.47%	+54.33%

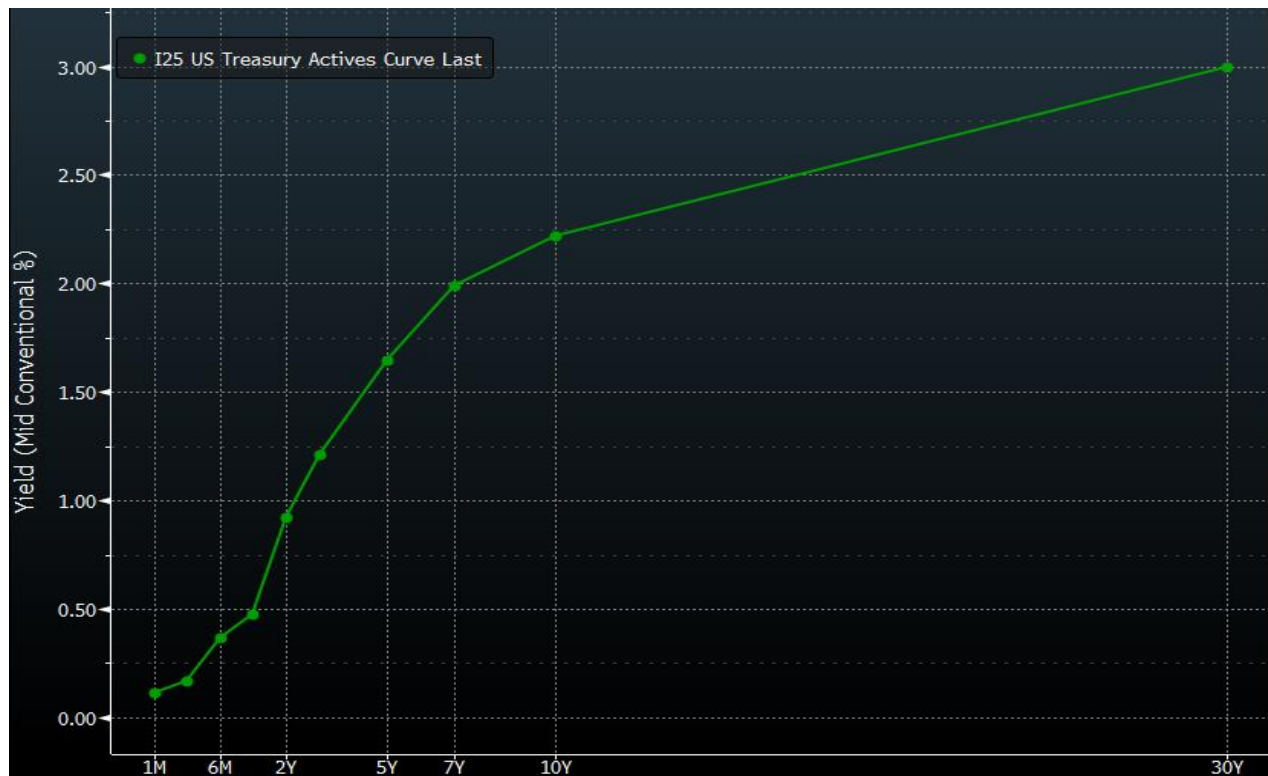
International equity markets slightly outperformed American equities during the week, helped by one and a half more days of trading. World indices had the same reaction on Tuesday morning, but the selloff was short-lived and stocks closed in positive territory on Tuesday. The Bloomberg European 500 and

Stoxx Europe 600 gained 0.48% and 0.49% respectively, while the MSCI AEFEE fell 0.52%. In Japan, Prime Minister Shinzo Abe announced the rollout of additional stimulus measures, as Japan slipped into recession for the second time in two years. The new, \$24 billion stimulus package includes cash handouts to poor, elderly people, as well as the construction of child-care and elder-care facilities in order to help people stay in the workforce, according to Abe. The Nikkei 225 was flat in reaction, rising 0.02% to close at 19,883.94. In China, volatility made a strong comeback, as two financial services companies announced they were the subject of regulatory probes following suspicions of rules violations. The news sent the Shanghai Composite down 5.35%, its biggest one-day drop since August, while the Shenzhen Composite lost 4.47%.

Bond Report

This week, Treasury yields have stayed at high level such as short-term yields which hits its five year and a half peak since investors continued to sell debt securities because of the potential upcoming rate hike by the FED at its December meeting. The 2-year yield rose at 0.93% this Monday, a level which was last reach in May 2010. Short-terms yields are more sensitive to rate hike which is why it rose significantly at the beginning of the week. Last week, the selloff started after the release of the FED's minutes where it was said that a rate hike was an eventuality in December. During the weekend, some officials from the FED, such as the president of the FED in San Francisco made some comments about the improving economic situation in the US and the goal of the FED from which we are getting closer. These comments, made investors to keep selling their bond as it became more and more evident that we will see a rate hike by December. However, yields declined on Friday to their month's lowest level as the Chinese equity market decline overnight. Indeed, the Shanghai Stock Exchange Composite Index fell by 5.5% on one day, which is its biggest day to day decline since August 25th. This happened because of the announcement from the Chinese Stock-Market Regulator that it suspected Citic Securities, Guosen Securities of violation of securities rules. This happening, plus the weak Chinese Industrial report that showed the fifth straight month decline, drove the global demand for U.S. Treasury notes higher as it is considered as a safer investment. U.S. treasury yields declined in all maturities, the 10-year treasury yield fell from 2.26% on Monday to 2.22% at the end of the week, the 30-year Treasury note fell 2bps from 3.02% to 3.00% over the same period and the two-year Treasury yield declined from 0.93% to 0.92% over the same time period as well.





What's next and key earnings

On Monday November 30th, The Pending Home Sales Index will be released. The last two reports have been disappointing and predicted weakness in the housing market. However, this report is expected to rise to a consensus of 1.0%, which would give a small boost to the housing market. On the same day, the Dallas FED Mfg Survey will be released. Low oil prices have severely affect the energy sector; the October's general activity index was at a negative 12.7 and it is expected to slightly increase to a negative 11.0 for the month of November.

On Tuesday December 1st, the vehicle sales report will be released. Vehicles sales level are at a 12-year high which reflects the consumer health and the boost in the retail industry. The consensus is calling for an 18.1 million annualized rate for the month of November which is slightly below the 18.2 million from the past two months. On the same day, the Manufacturing PMI Index will be released. It is expected to slowing from 54.1 for the month of October to 52.6 for the month of November, which would be its lowest level in two years. This could be the consequences of low exports because of the strong dollar. Later that day, the Construction Spending report will be released. It is expected to post a 0.6% rise for the October report.

On Wednesday, December 2nd, the beige book will be released. This report gather economic condition and will be used in the FOMC meeting. This report will be important because investors might change their investment strategy if the outcome is different from expectations, which would greatly impact the markets.

On Friday, December 4th, the Employment situation report will be released. Nonfarm payrolls are expected to rise by 190,000 for the month of November. This is below the stellar increase of 271,000 for the month of October but more than enough to drive expectation of a rate hike at the FED December meeting. The unemployment rate is expected to remain around a low 5%. On the same hour the International Trade report will be released. The U.S. budget deficit is expected to decrease from \$40.8B to \$40.6B for the month of November whereas the report from October did not show economic strength because of the decrease of both imports and exports.

Acorda Therapeutics, Inc.

NasdaqGS:ACOR

Analyst: Coralie Cornern

Sector: Healthcare

BUY

Price Target: \$51.88

Key Statistics as of 11/27/2015

Market Price:	\$38.19
Industry:	Biotechnology
Market Cap:	\$1.65B
52-Week Range:	\$25.50 - \$45.45
Beta:	0.93

Thesis Points:

- Positive cash flow and strong financials while funding late stage clinical trials
- Continuous sales growth of existing products
- Strong early and late stage pipeline

Company Description:

Acorda Therapeutics, Inc. is a biopharmaceutical company founded by Ron Cohen in 1995. The company headquartered in Ardsley, New York, identifies, develops, and commercializes novel therapies for neurological disorders in the United States. The company markets three different drugs at the moment, through direct sales in the US and through licensing agreements in Europe, Asia, and the Americas. Acorda's main product is Ampyra, which improve walking capacities of people suffering for Multiple Sclerosis. The firm is also involved in both early and late stage development of treatments for neurological disorders such as Parkinson's disease or epilepsy.



Thesis

Acorda Therapeutics Inc, has been showing continuous revenue growth for more than ten years. The company has been cash flow positive for the past three years and has a strong and healthy balance sheet, even while financing three late stage and three early stage clinical trials. Moreover, Ampyra that currently account for about 89% of Acorda's revenue is doing very well. The sales volume increases significantly every quarters and the drug became a standard of care. Acorda owns five patents protecting Ampyra until 2027. The market forecasts are also positive for Acorda as the Multiple Sclerosis market is growing tremendously, especially in western countries, and as the number of people affected by neurological diseases is growing in general as it is today easier and easier to detect them.

A buy of Acorda Therapeutics Inc. is therefore recommended with a one-year target price of \$51.88. Currently trading at \$28.19, it has an upside potential of 38.79%.

Product Portfolio

Acorda therapeutics identifies develops and markets therapies that restore or improve functions of people suffering neurological disorders. The company currently markets three FDA approved drugs and has one of the largest pipeline of clinical and preclinical therapies in the industry.

The first product for which Acorda completed clinical development in Ampyra. Ampyra treats patients with Multiple Sclerosis (MS). MS is a disease affecting the brain and the spinal cord. By attacking the central nervous system, the disease causes the nerves to deteriorate and it can therefore disable communications between the brain and the rest of the body. Depending on which nerve is damage it can affect vision, sensation, coordination and any movement. Although there is no treatment for MS, Ampyra helps managing the symptoms. The drug is taken as simple pills by the patients. The treatment improves walking in patients and it was demonstrated by an increase in walking speed in patients taking Ampyra. 400,000 people are living with MS in the US and most of them have walking difficulties. Ampyra improves greatly patients and

patient's family everyday life, but at a cost. A 30 day supply of Ampyra costs more than \$1,000 but is covered by Medicare and Medicaid for patients diagnosed with MS. Moreover, Acorda created a patient assistance program to help people who have been prescribed Ampyra but cannot afford it. Also, Acorda Therapeutics systematically give away the treatment for free for two months for patients who are not participating in Medicaid or Medicare as not every patients respond to the drug effectively, it is called the First Step program. It means that all the patients paying for Ampyra are patients who are responding very well to the treatment, and are therefore willing to pay or get their insurance to pay a premium price. For the past three years that Acorda has been using first Step, it has been proved profitable as patients enrolled in the first step program are more persistent than those who were not. For the year ended December 31, 2014, Ampyra generated \$366.2 million in revenues. Ampyra is today a standard of care for doctors with patients experiencing walking difficulties.

Acorda Therapeutics also markets two other products: Qutenza and Zanaflex. Qutenza are patches to be applied on damaged hyperactive pain nerves. By being applied directly to the skin it delivers the drugs directly and a one hour application can provide up to three month of relief. Qutenza is mainly used on patients suffering from shingles. Qutenza is only applied by healthcare professionals, patients cannot have Qutenza on hand. The last product marketed by Acorda is Zanaflex, a drug managing spasticity. People suffering spasticity undergo painful or rigid muscles and spasms both during the day and the night. It is again targeting people with MS but also spinal cord injury or any kind of brain trauma or strokes. Zanaflex capsules are taken multiple times daily by patients because of the short duration of effect. Zanaflex accounted for 22% of the company's total revenue in the latest quarter.

Pipeline

Acorda Therapeutics' goal is to become a leader in both developing and marketing therapies to improve, or restore functions of people having experienced or undergoing neurological disorders. The company therefore invest a lot in Research and Development to be able to expand its product portfolio. Acorda's pipeline is quite wide. According to the CEO Ron

Cohen, Acorda is currently 'in a strong position to have three late stage clinical programs'. Indeed, three different therapies are currently at phase 3, Plumiaz being at the most advanced stage. Plumiaz is a potential treatment for patients with epilepsy who experience seizure clusters (periods of increased seizures). It would be prescribed to patients as a nasal spray. Patients would need to have the drug on hand as it would need to be taken just after an initial seizure to prevent multiple seizures. Acorda received a complete response letter (CRL) requesting additional clinical data for Plumiaz. The company announced in May that it will conduct three new clinical trials that will lead to a new drug application (NDA) re submission in early 2017. Acorda's management believe that Plumiaz could generate more than \$200 million in annual sales.

Continuing with the late stage pipeline, CVT-301 is Acorda's other most advanced program. Acorda acquired Civitas Therapeutics in October 2014 for \$530.01 million in order to get the complete and global rights for CVT-301. The treatment being developed would help patients with Parkinson's disease (PD) experiencing OFF episodes to return to an ON state. OFF episodes are characterized by tremor, muscle stiffness and impaired ability to move. By inhaling the right amount of L-dopa, patients could avoid off episodes of their disease. This treatment is currently the highest priority for Acorda. The company aims at filing an NDA by the end of 2016. Acorda projects that CVT-301 US peak sales would be greater than \$500 million.

The last program in the late stage pipeline is Dalfampridine, which is the molecule also used in Ampyra, that could also solved post-strokes walking issues. This addresses the walking issues caused by strokes. A stroke is caused by the rupture of a blood vessel, which reduced the amount of oxygen carried to the brain therefore causing brain damage. Approximately half of the people surviving a stroke, or three million people, will have to live with mobility impairment. Acorda is currently conducting phase 3 clinical trials since December 2014.

Regarding the earlier stage clinical pipeline, Acorda is currently developing three major programs. The Cimaglermin Alfa, currently in phase 1b clinical trials is a treatment for heart failure, a chronic condition where the muscle is unable to pump enough blood to meet the body's need for oxygen. Also in phase 1 is rHIgM22, an antibody being studied for the treatment of MS on patients experiencing an acute relapse. Finally, Acorda is working on the development of CVT-427, which is an

investigational agent for the treatment of acute migraine. CVT-427 would be an inhaled treatment, entering the body through the lungs and therefore reaching the brain shortly and bypassing the digestive system. The phase 1 study is expected to begin before the end of the year.

Porter's Five Forces

The bargaining power of suppliers can be classified as relatively high. Indeed, Alkermes therapeutics is Acorda's main supplier. Alkermes manufactures both Ampyra and Zanaflex for Acorda. Acorda signed an agreement with Alkermes (formerly Elan) in 2003 and is committed to purchase at least 75% of the material for Ampyra from them. Acorda uses Pantheon as a second manufacturing source for Ampyra, in case Alkermes is unable or unwilling to meet Acorda's manufacturing requirement. Following the agreement, Acorda is not allowed to purchase more than 25% of its product from Pantheon. Moreover, the only supplier of 4-aminopyridine, or dalfampridine, the main component of Ampyra, is Regis Technologies. If for any reasons Regis was to experience technical difficulties or delays it would be very hard and costly for Alkermes and Acorda to find alternative supply arrangements.

The bargaining power of customers is low. Customer who are being prescribed Acorda's products do not have any other choice. Ampyra especially is the only drug improving MS patients' walking capacities. Moreover, patients are not really sensitive to prices. The drugs developed by Acorda are mostly supported by Medicaid and Medicare, and when it is not the case, Acorda Patient Assistance program can reimburse part or all the medication cost. The demand for Acorda's product is currently inelastic: for example, the effects of spasticity are so severe for patients and their family that no matter the price of Zanaflex, patients will still get prescriptions. Moreover, the number of customers is likely to grow in the following years.

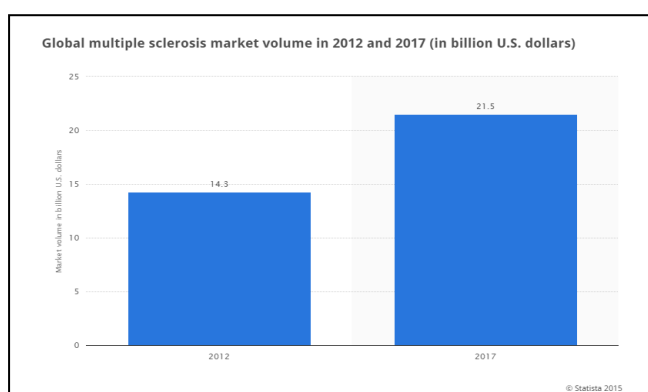
The intensity of existing rivalry is high. The industry is highly competitive and other biotechnology firms are engaged in research or marketing of treatment for neurological diseases. Acorda is also competing with generic drug manufacturers as they are trying to get the rights to manufacture generic version of Ampyra.

The threat of substitutes is low. Although there can be complements, there are actually no real substitute for Ampyra and the patent goes out to 2027. Although generic version of Zanaflex have been available for a few years, it did not significantly affect Acorda's growth.

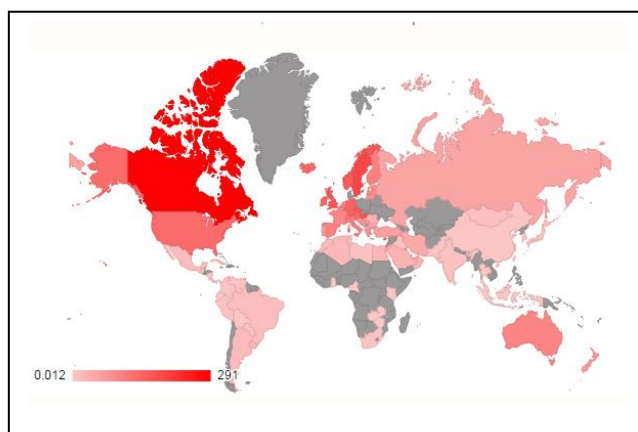
The threat of new competitors is low. The barriers to enter are very high as biotechnology firms require a tremendous amount of capital to be invested in Research in Development in order to start a firm. Additionally, Acorda focuses on neurological disorder, which is a very specialized area in which only few people are experts.

Macro Environment

Multiple Sclerosis is an inflammatory disease that causes severe nerve damage. The population affected vary greatly between countries and within age groups and sex. Most people are diagnosed with MS between the age of 20 and 40 years old. MS is a degenerative disease meaning that people can experience the first symptoms only years after the first diagnosis. Nevertheless, one out of 4four MS' patients will experience walking difficulty at the time of the diagnosis. It is the most widespread neurological disorder condition today. Patients with MS rarely become severely disable or completely paralyzed. The most common symptoms include muscle weakness and spasms as well as problem with balance that causes walking difficulties to many patients- the walking difficulties are treated by Ampyra. In a poll of more than 2000 people affected by MS, 87% declared they experienced decreasing walking ability. There is no cure for MS, only medications to calm the symptoms and improve patients' life. About 2.5 million people in the world live with MS, and it is estimated that 200 new cases are diagnosed every day in the US. In 2017 as per shown in the below graph, the global MS market is due to reach 21.5 billion.



It has also been proved that people with MS mainly live above the Ecuador line. A 2013 research covering 80% of the world population showed that people getting less exposure to the sun (therefore less vitamin D) were more likely to develop MS. The map below shows prevalence of MS per 100,000 people, the countries most affected by the disease are the further from the Ecuador and are the US, Canada and Western Europe, where Acorda is selling Ampyra through licensing agreements.



Acorda Therapeutics is also focusing on its late stage drug, CVT-301 that treats patients affected by Parkinson's Disease (PD). This should be a huge market for Acorda as management estimated that if approved, CVT-301 could generate more than \$500 million annually. Currently, an estimated seven to ten million people are diagnosed with Parkinson's disease, one million being Americans. Incidence of PD increases with age. The population is currently aging as a result of the baby boom generation entering their elderly years. The number of elderly will grow by a large average of 2.8% annually until 2030 which is the highest growth forecast since the 1930's.

These macro data and the potential healthcare coverage improvement in the US could lead Acorda Therapeutics to further increase its revenue and sales volume. It is very unlikely that a cure for MS is found in a near future as specialists do not yet agree on what causes the disease, and as effective treatment for MS vary a lot from one patient to another. The downside risk for Acorda here is scientists finding a cure for Parkinson's disease. Many biotechs receive tremendous amount of funding and are developing treatments for PD.

Management

Ron Cohen, the current CEO of Acorda is also the founder of the company. He has been CEO and president since 1995. Ron Cohen is an award winning CEO and doctor (he completed his residency in internal medicine and is board certified in internal medicine). Dr. Cohen was named NeuroInvestment's CEO of the year and was recognized by PharmaVoice Magazine as one of the 100 Most Inspirational People in the Biopharmaceutical Industry. He is a recipient of the Ernst & Young Entrepreneur of the Year Award and is an inductee of the National Spinal Cord Injury Association's "Spinal Cord Injury Hall of Fame." Dr. Cohen was also recognized by the New York Biotechnology Association "Business Leader of the Year". Ron Cohen is an educated, influential CEO that is truly involved and truly understands the processes in its company.

He most importantly serves as Chairman of Emerging Company Section at the Biotechnology Industry Organization (BIO), which is the largest trade organization for the biotechnology industry. In other words, BIO is an organization lobbying in the US. Its Executive position in BIO gives Ron Cohen a word to say in the lobbying process and a special insight of the biotechnology industry.

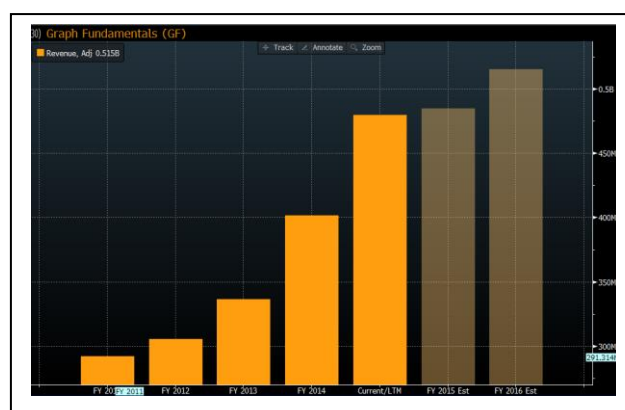
Ron Cohen is very influential in the Biotech industry. Acorda therefore heavily relies on the service of its CEO, who is very unlikely to leave or retire any time soon. Cohen is the main strategist in Acorda's commitment of remaining a leader and an innovator in neurology.

Financials

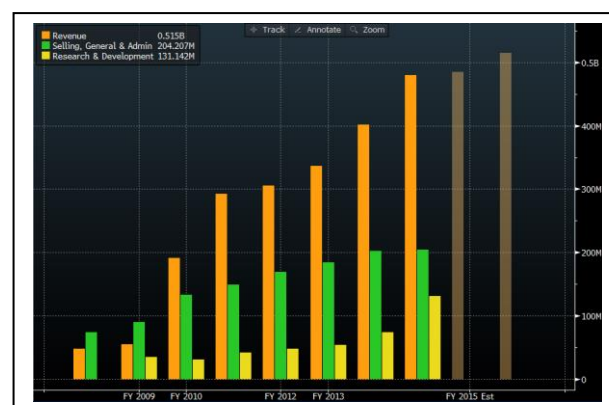
FY 2014

Siena Market Line 1st week of December 2015

2014 has been a very profitable year for Acorda Therapeutics. The company managed to increase its revenue by almost 20%, mainly thanks to Ampyra net revenue of \$366.2 million, up 21% from the prior year. Zanaflex' sales increased as well: overall revenue from Zanaflex for the full year 2014 was \$15.3 million, including US sales, as well as royalties received from Actavis, a generic producer, and their sales of generic tizanidine (component of Zanaflex). Acorda's normalized NOPAT in 2014 was \$134 million or 28% higher than the previous year, and is forecasted to reach \$188 million at the end of 2015. Acorda manages to constantly increase revenue as per shown in the below table.



The increase in revenue goes with a continuous increase in Research and development and in Selling, General and Administrative expenses. The increase in those costs account for ongoing work on the marketed products and for costs related to phase 3 trials. The below table shows Revenue in orange, SG&A in green and R&D in yellow, showing that the expenses are growing together with revenue but also showing that the margins are quite high: 36.78% for the LTM SG&A margin and 25.67% for R&D margin.



It is also in 2014 that

Acorda completed the acquisition of Civitas Therapeutics for \$530 million, which explained the issuance of long term debt. Despite Civitas' acquisitions and strong investment in the late stage pipeline, Acorda managed to stay cash flow positive with a free cash flow of \$69.9 million at the end of 2014, which highlights the firm's ability to generate profits.

Concerning FY 2015 guidance, the management team is confident. The Ampyra revenue guidance from the last earnings call in October was raised to \$430 million. It is almost certainly going to be surpassed as Ampyra's sales grew a robust 21% in the latest quarter and has been growing continuously throughout the years. Ampyra sales account for 89% of the company's sales revenue, the remaining 11 % being Zanaflex, Qutenza and royalties. Moreover Acorda's CFO, Michael Rogers, mentioned in the call that he expects the company will still be cash flow positive at the end of the year. The LTM Debt to Equity ratio is about 30%. Looking in the future, the company wants to be prudent about further issuance of debt, and the CFO declared that he was not willing to issue new debt in case of early stage product acquisition, but that he will be more flexible with use of leverage regarding commercial, cash flow generating assets.

Valuation

The valuation of Acorda Therapeutics is based on a proforma that values the company with a discounted cash flow model and focus on the company's return on invested capital. A summary of the outputs of the valuation is attached to this report and can be found on the last page. When valuing Acorda, a slow decay

growth rate has been utilized to determine the speed of reversion toward long term stability. The intrinsic value of the firm is quite sensitive to the risk premium. A 1.5% premium has been added to the United States' risk premium of 5.5% linked to the overall risk in the biotechnology industry.

The revenue growth rates for FY 2015 and FY 2016 are analysts' median estimates of 1.1% and 6.3% respectively. In the following years revenue growth has been set to decline to reach a revenue growth for the long-term of 3% which is assuming revenue growth to follow long-term GDP growth.

The following financial metrics are used to attain a valuation of the company converging to sub-industry averages through the continuing period. A conservative approach has been utilized in valuing Acorda Therapeutics. The LTM operating cost to Revenue ratio is 78.5%, and it is unlikely that the company will manage to decrease operating costs, it is more likely on the contrary that Acorda increases its operating cost, this is why Operating cost are set to be 80% in the long term. NPPE margins has been set to be constant, remaining at 8.8%. According to the proforma, Acorda is currently creating value as per its latest ROIC/WACC ratio of 3.25.

Additionally, ACOR stock price fell dramatically after the last earnings call on October 22nd, even though management gave investors quite a bullish guidance. The reason for this 16% fall to \$25.78 after the earning call is that Ron Cohen mentioned potential lawsuits to occur in the near future. Indeed, some party issues Inter Partes Review (IPR) petitions against Acorda. IPRs were challenging four of Acorda's five Ampyra's patents. Acorda of course is opposing the IPR petitions. Investors overreacted to this announcement as some of them are not familiar with IPRs. An IPR essentially allows third parties (without any restrictions, so anyone may file one) to contest the validity of a patent. Then, the patent's owner files a response explaining why the IPR should be denied institution. Third party already filed IPR against Acorda in the past and it never hurt the company really. IPR are very common in the biotech industry (as well as in technology) and 86% of the claims are cancelled by the petitioners. While some investors were not educated enough to IPRs, some others saw this drop in price as a good opportunity to buy the stock, and ACOR price already went up to reach \$38.19. The stock is still significantly undervalued.

According to the assumptions utilized in the valuation ACOR has an upside potential of 38.79% with a one year target of \$51.88.

Summary

Management is very confident in the firm's ability to further grow Ampyra's sales. Acorda is also highly dedicated to research and its pipeline is seen as a priority. Acorda's potential for growth is tremendous. The risks

linked to the biotechnology industry, the political announcement and the last earning calls made Acorda's stock price drop but the stock was already undervalued. It proves to be a good investment opportunity since the company has a healthy balance sheet and capital available in order to pursue its growth and improve its pipeline.

Sources:

- Acorda therapeutics , 10-K
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 - www.census.gov
 - www.acorda.com
 - www.statista.com
 - www.vitamindcouncil.org
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CENTER FOR GLOBAL FINANCIAL STUDIES

Acorda Therapeutics, Inc.		ACOR	Analyst Coralie Cornern	Current Price \$37.38	Intrinsic Value \$51.39	Target Value \$51.89	Divident Yield 0%	1-y Return: 38.81%	BULLISH	
General Info			Peers	Market Cap.	Management					
Sector	Healthcare				Professional	Title	Comp. FY2012	Comp. FY2013	Comp. FY2014	
Industry	Biotechnology		DepoMed Inc.	\$1,149.15	Cohen, Ron	Founder, Chief Executive Officer, President a	\$3,847,359	\$3,918,022	\$4,045,181	
Last Guidance	October 22, 2015			0	Rogers, Michael	Chief Financial Officer	\$0	\$4,352,774	\$1,295,066	
Next earnings date	February 16, 2016		Akom, Inc.	\$3,752.26	Wasman, Jane	President of International, General Counsel a	\$3,448,808	\$2,159,622	\$2,334,282	
Market Data			Isis Pharmaceuticals, Inc.	\$7,414.87	Hindman, Andrew	Chief Business Development Officer	\$0	\$0	\$5,167,666	
Enterprise value	\$1,585.43		Emergent BioSolutions, Inc.	\$1,503.99	Carrazana, Enrique	Chief Medical Officer	\$1,190,489	\$1,618,845	\$1,663,699	
Market Capitalization	\$4,449.48				Lawrence, David	Chief of Business Operations	\$1,184,205	\$1,204,121	\$0	
Daily volume	0.22		Impax Laboratories Inc.	\$3,108.24	Past Earning Surprises					
Shares outstanding	43.16		ACADIA Pharmaceuticals Inc.	\$3,796.31	Revenue		EBITDA	Norm. EPS	Standard Error of "Surprise"	
Diluted shares outstanding	43.36		Aegerion Pharmaceuticals, Inc.	\$294.58	Last Quarter		27.95%	0.00%	93.75%	27.79%
% shares held by institutions	26.01%		Current Capital Structure		Last Quarter-1		2.44%	0.00%	82.35%	27.05%
% shares held by insiders	2.11%		Total debt/ Common Equity (LTM)	0.30	Last Quarter -2		0.20%	0.00%	0.00%	0.07%
Short interest	18.00%		Cost of Borrowing (LTM)	5.56%	Last Quarter -3		13.72%	0.00%	9.52%	4.06%
Days to cover short interest	9.73		Estimated Cost of new Borrowing	5.91%	Last Quarter -4		11.88%	0.00%	150.00%	48.14%
52 week high	\$45.45		Altman's Z	2.36	Standard error		4.9%	0.0%	28.0%	11.76%
52-week low	\$25.50		Estimated Debt Rating	B	Standard Error of Revenues prediction		4.9%	Industry Outlook (Porter's Five Forces)		
5y Beta	1.55		Current levered Beta	0.93	Imputed Standard Error of Op. Cost prediction		NM	Bargaining Power of Suppliers (0th Percentile), Bargaining Power of Customers (71th Percentile), Intensity of Existing Rivalry (67th Percentile), Threat of Substitutes (100th Percentile), Threat of New Competition (100th Percentile), and Overall (85th Percentile).		
6-month volatility	40.55%		LTM WACC	7.93%	Imputed Standard Error of Non Op. Cost prediction		28.0%			
Proforma Assumptions										
Convergence Assumptions		General Assumptions		Items' Forecast Assumptions				Other Assumptions		
		Money market rate (as of today)	0.37%	Base year (LTM)		Convergence period (Sub-industry)	Adjustment per year	Tobin's Q		
All base year ratios linearly converge towards the Sub-industry ratios over an explicit period of 10 years		Risk-Free rate (long term estimate)	2.93%	Operating Cash/ Rev.	0.00%	0.00%	0.0%	80%		
		Annual increase (decrease) in interest rates	0.1%	NWV/ Rev.	2.93%	2.93%	0.0%	Excess cash reinvestment		
		Marginal Tax Rate	37.5%	NPPE/ Rev.	8.84%	8.84%	0.0%	Money market rate		
		Country Risk Premium	7.0%	Dpr/NPPE	26.05%	21.05%	-0.5%	Other claims on the firm's assets		
				NOPAT MARGIN	34.09%	21.50%	-1.3%	\$0.00		
Forecast Year		Revenue Growth Forecast	Revenue (\$) Forecast	Op. Exp./ Rev.	78.49%	80.00%	0.2%	Capitalization		
LTM		\$479.63	SBC/ Rev.	6.99%	2.47%	-0.5%	100% of all rent expenses are capitalized and amortized 'straightline' over 10 years			
FY2015	1.1%	\$484.71	Rent Exp./ Rev.	1.29%	0.72%	-0.1%	100% of all R&D expenses are capitalized and amortized 'straightline' over 10 years			
FY2016	6.3%	\$515.03	R&D/ Rev.	25.67%	18.28%	-0.7%	E&P expenses are not capitalized			
FY2017	9.1%	\$561.99	E&D/ Rev.	0.00%	0.00%	0.0%	50% of all SG&A expenses are capitalized and amortized 'straightline' over 10 years			
FY2018	28.7%	\$723.44	SG&A/ Rev.	36.78%	24.02%	-1.3%	Valuation Focus			
FY2019	25.7%	\$909.51	ROIC	24%	13.29%	-1.12%	DCF Valuation			
FY2020	18.1%	\$1,074.10	EV/ Rev.	2.35x	2.57x	0.02x	Relative valuation			
FY2021	-4.5%	\$1,026.29	EV/EBITDA	6.11x	7.46x	0.14x	Distress Valuation			
FY2022	7.9%	\$1,107.32	Debt/ Equity	30%	22%	-0.9%	Monte Carlo Simulation Assumptions			
FY2023	7.4%	\$1,188.95	Unlevered beta	0.78	0.87	0.01	Revenue Growth deviation			
FY2024	5.6%	\$1,255.66	Dividends/ REV	0%	1%	0.1%	Operating expense deviation			
Continuing Period	3.0%	\$1,293.33					Continuing Period growth			
							Triangular (2.91%, 3%, 3.09%)			
							Country risk premium			
							Intrinsic value σ(e)			
							1-year target price σ(e)			
Valuation										
Forecast Year	ROIC	WACC	Invested Capital	Implied Enterprise Value	Net Claims on Assets and Dilution Costs	Shares Outstanding	Price per Share	Monte Carlo Simulation Results		
LTM	24.5%	7.9%	\$959.33	\$2,603.49	\$308.50	43.16	\$51.37	The 3σ(e)-adjusted intrinsic value is \$51.39; the 3σ(e)-adjusted target price is \$51.89; and the analysts' median target price is \$41.13		
FY2015	26.3%	8.1%	\$940.49	\$2,542.33	\$293.00	43.16	\$51.50			
FY2016	19.9%	7.6%	\$974.89	\$2,581.86	\$228.16	43.16	\$53.88			
FY2017	20.3%	7.8%	\$1,039.96	\$2,649.13	\$172.05	43.16	\$58.29			
FY2018	23.7%	8.0%	\$1,329.17	\$2,902.98	\$106.61	43.16	\$65.22			
FY2019	22.6%	8.3%	\$1,646.08	\$3,160.93	\$39.24	43.16	\$72.09	Sensitivity Analysis		
FY2020	20.8%	8.6%	\$1,899.27	\$3,343.05	-\$74.37	43.16	\$75.58			
FY2021	16.7%	8.8%	\$1,745.02	\$3,167.32	-\$234.43	43.16	\$78.31			
FY2022	18.9%	9.0%	\$1,823.37	\$3,200.25	-\$362.10	43.16	\$83.15			
FY2023	18.7%	9.2%	\$1,892.59	\$3,221.69	-\$485.37	43.16	\$87.97			
FY2024	18.3%	9.4%	\$1,927.22	\$3,210.93	-\$602.54	43.16	\$91.69	Revenue growth variations account for 95.9% of total variance		
Continuing Period	13.3%	9.5%	\$2,093.03					Risk premium's variations account for 2.5% of total variance		
								Operating expenses' variations account for 1.4% of total variance		
								Continuing period growth variations account for 0.2% of total variance		

Dunkin Brands Group, Inc.

NASDAQ:DNKN

Analyst: Arthur Jeannerot

Sector: Consumer Disc.

BUY

Price Target: \$59

Key Statistics as of 11/29/2015

Market Price: \$42.24
 Industry: Leisure/Restaurants
 Market Cap: \$3,913M
 52-Week Range: \$39.29-56.79
 Beta: 0.65

Thesis Points:

- Dunkin Brands is a leader in the quick service restaurant industry.
- Its franchise-only business model provides better margins than competitors.
- Sell-off into third quarter earnings release provides attractive entry point.

Company Description:

Dunkin Brands Group, Inc. (Dunkin') is the result of the merger of ice-cream maker Baskin-Robbins and coffee and donuts chain Dunkin' Donuts and has been publicly traded since July 2011. It operates in four different segments: Dunkin' Donuts U.S, Baskin-Robbins U.S, Dunkin' Donuts International and Baskin-Robbins International. Dunkin's revenues come from five sources: royalties from franchisees, rental income, sales of ice cream to franchisees, retail sales in company-owned restaurants, and other income. As opposed to most of its competitors, Dunkin owns and operates very few locations, and over 99% of the company's stores are franchises. As a result, the majority of its revenues come from franchise fees and rent income, making this company a cash cow with free cash flow of \$176 million on sales of \$748.7 in fiscal 2014.



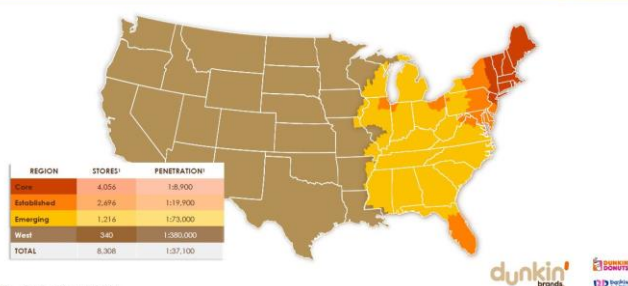
Thesis

Dunkin' is among the leaders in the quick service restaurants (Q.S.R) industry, with over 19,000 restaurants operating in 60 countries. Thanks to its asset-light business model, the company has effectively been creating value, as evidenced by its positive ROIC/WACC ratio of 37.7, and will continue to do so by increasing its footprint both domestically and internationally. Dunkin' also benefits from strong customer loyalty, great brand awareness, and a lack of substitutes for customers who are used to their morning caffeine shot. The stock suffered from a harsh selloff in the weeks that led to the third quarter earnings call, which I believe creates an attractive entry point for a medium to long-term investment.

Industry Outlook

The restaurant industry has been enjoying robust growth since 2009, as the global economy started to recover. According to a research report from the National Restaurant Association, industry sales are expected to surpass \$700 billion for the first time in 2015, a 20% increase in 5 years. The industry is very sensitive to macroeconomic trends, as consumers do not hesitate to cut down on eating out during recessions. As a result, growth in the industry is highly correlated with GDP growth. Within the industry, the QSR sub-industry is less subject to economic downturns, as it offers more value-oriented products, the demand of which is less elastic. Dunkin' Brands can capitalize on the industry's strong momentum by continuing its expansion both domestically and internationally, as it still has a lot of room to grow its footprint. For comparison, Dunkin' currently has 11,568 locations worldwide, while its main competitor Starbucks has over 23,000. The biggest expansion opportunity lies in the West of the U.S, as we can see on this picture from Dunkin's latest investor presentation.

Opportunity to Double Dunkin' Donuts U.S. Footprint



Business Model

Dunkin' Brands' particularity and biggest advantage is the fact that it owns and operates very few restaurants (41 out of 18,821 as of fiscal 2014), which allows the company to focus on product innovation and marketing, and to grow with much smaller capital investments. This particularity makes Dunkin' a very attractive investment in the restaurant industry, as it operates much more efficiently than its competitors. Restaurant usually operate on very small margins due to their high operating costs, and they are also very reliant on food costs, which makes them very sensitive to small changes in the environment. On the contrary, Dunkin's almost franchise-only model provides the company with a regular stream of cash flows, which require minimal investment. As a result, the company's return on invested capital was a staggering 304%, while its weighted average cost of capital was only 8.06% according to our proforma valuation.

People

Dunkin' brands is led by highly experienced professionals with significant combined experience in the restaurant industry. Nigel Travis, chairman since 2013 and CEO since 2009, previously worked in executive positions at Papa John's (PZZA), where he led the company's international and digital growth, as well as Burger King (QSR) where he was credited with turning around the company's EMEA business. Travis is assisted by Jack Clare, Chief Information and Strategy Officer, who focuses on the company's use of technology to improve profitability and efficiency. Clare previously had similar responsibilities at Yum! Restaurants International (YUM), where he was responsible for the company's IT strategy. Another key person in the organization is Scott Murphy, who joined the company in 2004 and is now Chief Supply Officer and SVP of operations for Dunkin' Donuts U.S and Canada. Murphy is responsible for driving franchisee profitability by improving supply chain efficiencies, on top of overseeing operations for the more than 8,000 North American Dunkin' Donuts locations.

Product Differentiation

As opposed to Starbucks, which offers a high-end customer experience, Dunkin' is positioned as a cheaper alternative for people's morning coffee. As evidenced by its slogan "America runs on Dunkin'", the company provides many average working-class Americans their much-needed wake up beverage. As a result, customers are very loyal to the brand, and most people are able to categorize themselves as either a Starbucks or Dunkin' type of person. Furthermore, Dunkin' is more popular for its food offerings than Starbucks, making it a premier destination for breakfast for many Americans. As opposed to Starbucks, whose customers come for the coffee and sometimes end up buying a snack, Dunkin's customers come as much for the coffee as they do for breakfast sandwiches and donuts. As a result, many Dunkin' customers would not consider going to Starbucks for their daily coffee.

Corporate Responsibility

Dunkin' Brands doesn't only strive to be a profitable and efficient company, it also holds its corporate responsibility very dearly. The company's commitment to its social responsibility is perfectly illustrated by its 4-point motto: "Our guests, our planet, our people, our neighborhoods. The company takes care of its guests by focusing on serving the best quality products in a convenient and friendly environment. Dunkin' uses sustainable sourcing and packaging to minimize its impact on the environment, as well as sustainable building and energy-efficient lighting in its points of distribution. The company's employees and franchisees are one of its key strengths, so Dunkin' strives to maintain a great culture and environment for its workers, as well as to provide them with the training necessary for them to thrive. The company is also very active in local communities, notably through the Dunkin' Donuts and Baskin-Robbins Community Foundation (DDBRCF), which was established in 2006 to address three critical issues: hunger, children's health, and children's safety. The foundation's goal is to leverage Dunkin's network of franchisees to raise funds for local charities, to which it has donated over \$8 million since 2006.

Financials

On October 22nd, Dunkin Brands announced its results for the third quarter. The company generated revenues of \$209.8M, an increase of 8.9% compared to the same

quarter in 2013. In addition, earnings per share increased 6.12% to reach \$0.52. When examining the figures more closely, we can see that comparable store sales increased for both Dunkin' Donuts and Baskin-Robbins locations in the U.S, as well as for international Dunkin' Donuts locations. Revenue growth was also fueled by the company's expansion efforts, which resulted in 90 net new restaurants worldwide, including 68 new Dunkin' Donuts restaurants in the U.S. For the full year, the company expects comparable store sales to grow between 2 and 4%, and net unit developments to grow between 4 and 6%. The third quarter was the 45th consecutive quarter in which the Dunkin Donuts branch had positive same store sales growth, which shows that the company is able to retain its customers as well as to attract new ones. As a result, the company has increased its quarterly dividend payment every year since its IPO, raising it from \$0.15 in 2001 to \$0.29 in 2016, which translates into a CAGR of 24.57%. The company is also returning cash to shareholders via its share buyback programs followed by retirement of common shares. From 2012 to the third quarter of 2015, the company repurchased close to 29 million shares and retired most of them. In addition to its regular share repurchase program, DNKN initiated a \$400 million accelerated share repurchase (ASR) program in February 2015, which resulted in the acquisition of approximately 8.2 million shares of the company's common stock. Last month, Dunkin' entered into another ASR for \$125 million, which should results in the repurchase of approximately 3.15 million shares. This is a good sign that management believes the company's shares are currently undervalued.

Conclusion

Dunkin' Brands' asset-light business mode provides a unique investment opportunity in the quick-service restaurant industry. The company is on path to double Dunkin' Donuts' footprint in the U.S, on top of its large international expansion program. In addition, the Baskin-Robbins segment has been performing better than expected lately, helped by a very strong brand momentum in both U.S and international markets. The stock price was recently punished by an overreaction of the market, and I believe it offers compelling value for a medium to long-term investment. I rate DNKN a buy with a 12-month price target of \$59, which represents an upside of approximately 40%.

CENTER FOR GLOBAL FINANCIAL STUDIES

CENTER FOR GLOBAL FINANCIAL STUDIES															
Dunkin' Brands Group, Inc.	DNKN	Analyst Arthur JEANNEROT	Current Price \$41.92	Intrinsic Value \$52.72	Target Value \$58.98	Divident Yield 3%	1-y Return: 43.2%	BULLISH							
General Info		Peers	Market Cap.	Professional		Management									
Sector	Consumer Discretionary	Starbucks Corporation	\$92,042.75	Travis, Nigel		Comp. FY2012		Comp. FY2013							
Industry	Hotels, Restaurants and Leisure	Restaurant Brands International Inc.	\$7,574.22	Chairman and Chief Executive Officer		\$1,911,278		\$4,288,758							
Last Guidance	October 22, 2015	The Wendy's Company	\$2,890.68	Chief Financial Officer and Senior Vice President		\$1,768,172		\$1,098,949							
Next earnings date	February 1, 2016	McDonald's Corp.	\$104,595.56	Emmett, Richard		Chief Legal & Human Resources Officer		\$0							
Market Data		Yum! Brands, Inc.	\$31,377.14	Costello, John		President of Global Marketing & Innovation		\$868,924							
Enterprise value	\$6,055.58	Panera Bread Company	\$4,615.42	Twohig, Paul		President of Dunkin' Donuts U S & Canada :		\$816,909							
Market Capitalization	\$3,883.45	The Cheesecake Factory Incorporated	\$2,243.51	Heckel, Gary		Vice President of Concept Development & Re		\$0							
Daily volume	1.31	Carrols Restaurant Group, Inc.	\$398.72	Past Earning Surprises											
Shares outstanding	92.64	Dean Foods Company	\$1,718.43												
Diluted shares outstanding	100.02	Krispy Kreme Doughnuts, Inc.	\$897.77	Last Quarter		Revenue		EBITDA							
% shares held by institutions	106.36%	Current Capital Structure		Last Quarter-1		2.68%		4.59%							
% shares held by insiders	0.50%	Total debt/Common Equity (LTM)	0.63	Last Quarter-2		3.47%		4.26%							
Short interest	13.01%	Cost of Borrowing (LTM)	4.11%	Last Quarter -3		2.88%		9.78%							
Days to cover short interest	6.97	Estimated Cost of new Borrowing	6.92%	Last Quarter -4		1.00%		1.35%							
52 week high	\$56.79	Altman's Z	1.13	Standard error		-2.24%		1.34%							
52-week low	\$39.29	Estimated Debt Rating	CC	Standard Error of Revenues prediction		1.0%		1.5%							
5y Beta	0.25	Current levered Beta	0.37	Imputed Standard Error of Op. Cost prediction		1.1%		2.7%							
6-month volatility	27.31%	LTM WACC	8.06%	Imputed Standard Error of Non Op. Cost prediction		2.2%		Industry Outlook (Porter's Five Forces)							
Bargaining Power of Suppliers (75th Percentile), Bargaining Power of Customers (43th Percentile), Intensity of Existing Rivalry (33th Percentile), Threat of Substitutes (67th Percentile), Threat of New Competition (-33th Percentile), and Overall (64th Percentile).															
Proforma Assumptions															
Convergence Assumptions			General Assumptions			Items' Forecast Assumptions			Other Assumptions						
All base year ratios linearly converge towards the Sub-industry ratios over an explicit period of 5 years			Money market rate (as of today)	0.41%	Base year (LTM)			Convergence period (Sub-industry)			Adjustment per year				
			Risk-Free rate (long term estimate)	3.00%	Operating Cash/ Rev.	1.63%	2.21%			0.0%					
			Annual increase (decrease) in interest rates	0.1%	NWV / Rev.	0.00%	1.58%			0.1%					
			Marginal Tax Rate	37.5%	NPPE / Rev.	23.40%	25.00%			0.1%					
			Country Risk Premium	6.0%	Dpr/ NPPE	10.82%	12.37%			0.1%					
Forecast Year			Revenue Growth Forecast		Revenue (\$) Forecast		NOPAT MARGIN			100% of all rent expenses are capitalized and amortized 'straightline' over 10 years					
LTM					\$800.35	Op. Exp./ Rev.	33.56%	35.00%			0.1%				
FY2015	1.2%				\$810.21	Rent Exp./ Rev.	48.28%	50.00%			0.1%				
FY2016	5.1%				\$851.67	SBC/ Rev.	1.89%	2.00%			0.0%				
FY2017	5.6%				\$899.63	R&D/ Rev.	7.40%	8.00%			0.0%				
FY2018	4.3%				\$938.45	E&D/ Rev.	0.00%	0.00%			0.0%				
FY2019	3.7%				\$972.78	SG&A/ Rev.	0.00%	0.00%			0.0%				
FY2020	3.3%				\$1,005.16	ROIC	28.35%	30.00%			0.1%				
FY2021	3.2%				\$1,036.97	EV/Rev.	304%	21.24%			-18.84%				
FY2022	3.1%				\$1,068.93	EV/EBITA	8.61x	2.15x			-0.43x				
FY2023	3.0%				\$1,101.44	Debt/Equity	16.99x	18.00x			0.07x				
FY2024	3.0%				\$1,134.71	Unlevered beta	63%	106%			2.9%				
Continuing Period	3.0%				\$1,168.75	Dividends/REV	0.80	0.73			0.00				
								12%			-0.7%				
Valuation										1-year target price $\sigma(\epsilon)$					
Forecast Year										ROIC			WACC		
LTM															
FY2015															
FY2016															
FY2017															
FY2018															
FY2019															
FY2020															
FY2021															
FY2022															
FY2023															
FY2024															
Continuing Period															
Invested Capital										Implied Enterprise Value			Net Claims on Assets and Dilution Costs		
LTM															
FY2015															
FY2016															
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FY2024															
Continuing Period															
Shares Outstanding										Price per Share			Monte Carlo Simulation Results		
LTM															
FY2015															
FY2016															
FY2017															
FY2018															
FY2019															
FY2020															
FY2021															
FY2022															
FY2023															
FY2024															
Continuing Period															
Sensitivity Analysis										Revenue growth variations account for 95.9% of total variance					
										Risk premium's variations account for 2.5% of total variance					
										Operating expenses' variations account for 1.4% of total variance					
										Continuing period growth variations account for 0.2% of total variance					

LA-Z-BOY, Inc.

LZB: NYSE

Analyst: Mark Papuzza
Sector: Consumer
Discretionary

BUY

Price Target: \$33.47

Key Statistics as of 11/18/15

Market Price: \$25.89
Industry: Home Furnishings
Market Cap: \$1.3 B
52-Week Range: \$22.40-29.34
Beta: .52

Thesis Points:

- 4-4-5 Strategy
- Home Furnishings Industry Outlook
- Financials –Value Creation, Negative Net Debt

Company Description:

La-Z-Boy Incorporated manufactures, markets, imports, distributes, and retails upholstery furniture products, accessories, and casegoods furniture products in the United States, Canada, and internationally. It operates in three segments: Upholstery, Casegoods, and Retail. La-Z-Boy Incorporated sells its products through a network of 325 La-Z-Boy Furniture Galleries stores and 576 Comfort Studio locations, as well as in-store gallery programs for its Kincaid and England operating units. The company was formerly known as La-Z-Boy Chair Company and changed its name to La-Z-Boy Incorporated in 1996. La-Z-Boy Incorporated was founded in 1927 and is based in Monroe, Michigan.



Thesis

La-Z-Boy, Inc. strives to be the leading global provider of comfortable, stylish home furnishings. The furniture industry is growing, and the outlook is strong for the years to come. Combined with La-Z-Boy's success in implementing the 4-4-5 Strategy and strong balance sheet, the company will continue to create value and increase the price of their stock.

4-4-5 Strategy

La-Z-Boy is one of the most recognizable names in the furniture industry. The company is the second largest manufacturer/distributor of residential furniture in the U.S., is the third largest retailer of single-source home furnishings networks, and is the largest manufacturer of reclining chairs worldwide. La-Z-Boy operates in three segments; Upholstery, Retail and Casegoods. The Upholstery segment is the largest, accounting for 72% of the company's \$1.43 billion dollars in sales in 2015. This segment is responsible for manufacturing, importing and exporting furniture that includes recliners, motion furniture, sofas, loveseats, chairs, sectionals, ottomans, sleeper sofas and more. The Retail segment follows Upholstery with 21% of sales. This segment includes 110 company owned La-Z-Boy Furniture Galleries stores, and predominantly sells upholstered furniture along with numerous accessories. The final segment, Casegoods, accounts for 7% of sales. This segment is responsible for importing, marketing and distributing wood furniture that includes bedroom sets, dining room sets, entertainment centers and more.

Two years ago, La-Z-Boy implemented an expansion plan to put themselves in markets they have never been before. The plan for the company was to open up 400 new stores and bring in an average of \$4 million per store in the next five years. Named after this goal, the plan is called the 4-4-5 Strategy. The company envisioned a potential \$1.6 billion retail store network with the success of this plan. Other goals of this strategy included maximizing the power of the brand name and fully penetrating the North American market. To date, 330 La-Z-Boy Furniture Gallery stores have been opened. The plan is very ahead of schedule, as the company now estimates they will

achieve their goal of \$4 million average revenue per store in calendar year 2015, two years ahead of what they were aiming for. With the early completion of this target, the company can begin to develop new plans to continue pushing La-Z-Boy further. With an estimated free cash flow of \$54 million to work with in 2016, the company plans to implement more than 30 projects, including 15 net new stores and 14 remodels to their newest concept design format. Redesigning stores to the new format is key at this point for the company, as the new format has proven to perform at a higher level than the old format.

Industry Outlook

The \$100 billion dollar home furnishing industry currently has a very positive outlook. The housing market is on the rise, and furniture sales are up from the past few years. Sales of new homes hit a seven-year high this year, which is a solid indicator that the demand for furniture will continue to increase. Most analysts estimate the industry to grow at 5%.

To assess the home furnishings industry, we will take a look at Porter's Five Forces of competition, threat of new entrants, threat of substitutes, buyer power, and supplier power.

Competition: High

The competitiveness in the furniture industry is high, as there are numerous big name companies fighting for higher market share. It is essential that companies have a competitive advantage to survive, and La-Z-Boy has several. The company is optimistic about their position in the market, as they are confident in their products, merchandising and branded distribution channel. La-Z-Boy is currently the second largest manufacturer/distributor of home furniture in the U.S. La-Z-Boy focuses on highlighting the value and quality of their brand, the comfort of their products and the styling of their products. The company strives to innovate and provide the best customer service possible in order to further separate themselves from the pack of competitors.

Threat of New Entrants: Medium

Being that there will always be a demand for furniture, many businesses will have an interest in joining the industry. There are no significant barriers to enter, so it is possible for these businesses to enter the industry. However, it would be very expensive and tough to compete with respected and dependable companies that have been around for a long time, such as La-Z-Boy.

Threat of Substitutes: Low

There are no substitutes for furniture. Furniture is a key component in houses all around the world, and is known to turn a house into a home. As long as people buy houses, furniture will be needed and there is no other substitutes to replace that.

Buyer Power: Medium

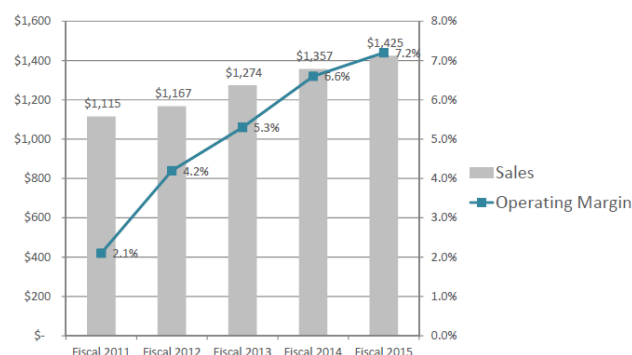
Relating back to the competition in this industry, buyers have the power to compare La-Z-Boy furniture prices with many other home furniture stores. That is why companies in this industry need solid pricing and quality products to have a competitive advantage in the field, and sway buyers to come purchase from them.

Power of Suppliers: Low

In this industry, there is a wide range of raw materials that can be used in making furniture. Materials such as wood, plastic or metal can be used, making the power of suppliers relatively low.

Financials – Value Creation

In La-Z-Boy's most recent quarter, the company posted their highest operating margin in over twelve years at 8.7%. This proves the company is making the most money per sale than they have in over a decade. As illustrated in the graph below, the company has continued to increase their operating margin over the past five years, and will work to continue this trend.



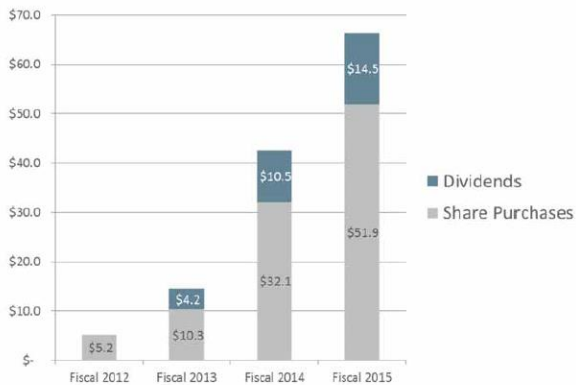
One of the most notable aspects on La-Z-Boy's balance sheet is the EBITDA margins. The company's EBITDA margins have grown year over year, and consistently outgrow their revenue growth. This trend is estimated to continue in the upcoming years as well. This demonstrates that the company is creating value, and eliminating expenses that are eating into their bottom line. Another key piece of evidence to show that the company is creating value is to look at their ROIC/WACC ratio, which is currently a solid 1.82.

Another notable aspect of the company is their negative debt. La-Z-Boy's net debt is currently -\$130 million. This is not uncommon, as the company has consistently had more cash on hand than debt since 2010, which should be very encouraging to investors.



Lastly, it is essential to note the company's dividends and share repurchases. As the company creates value, it is important to them to return value to their shareholders. This past quarter, the company decided to increase their quarterly dividend 25% to \$0.10. La-Z-Boy has also

consistently repurchased shares from the market. With the amount of shares the company has repurchased in 2015 as illustrated below, it is evident that they believe the shares are currently undervalued.



Conclusion

I am recommending a buy on La-Z-Boy, Inc. because they will continue to grow financially as a result of being one of the leaders in a growing industry, and their continued penetration into the U.S. furniture industry. The company will continue to keep up with trends in the market, and continue to create value and return that value to their shareholders. The one year target value for this company is \$33.47 based on my valuation, and the assumptions used can be viewed in the pro forma below.

CENTER FOR GLOBAL FINANCIAL STUDIES														
La-Z-Boy Incorporated		LZB	Analyst Mark Papuzza		Current Price \$26.03	Intrinsic Value \$32.08	Target Value \$33.47	Dividend 1%	1-y Return: 29.81%	NEUTRAL				
General Info			Peers		Market Cap.		Management							
Sector	Consumer Discretionary		Ethan Allen Interiors Inc.		\$774.87	Professional		Title						
Industry	Household Durables		Tempur Sealy International Inc.		\$4,301.61	Darrow, Kurt		Chairman, Chief Executive Officer and						
Last Guidance	November 18, 2015		Natuzzi SpA		\$34.30	Riccio, Louis		Chief Financial officer and Senior Vice						
Next earnings date	February 17, 2016		Flexsteel Industries Inc.		\$344.44	Collier, J.		Chief Marketing Officer, Senior Vice F						
Market Data			Hooker Furniture Corp.		\$265.79	Bacon, Mark		Senior Vice President and President o						
Enterprise value	\$1,243.23		Leggett & Platt, Incorporated		\$6,041.30	Edwards, Darrell		Chief Supply Chain Officer and Senior						
Market Capitalization	\$4,838.67		Stanley Furniture Company, Inc.		\$42.34	Mueller, Margaret		Chief Accounting Officer, Vice Preside						
Daily volume	4.47		#REF!		#REF!	Past Earnings Surprises								
Shares outstanding	50.19					Revenue		EBITDA	Norm. EPS	Standard Error of "Surprise"				
Diluted shares outstanding	51.55					Last Quarter		-1.34%	2.22%	0.00%	1.04%			
% shares held by institution	72.39%					Last Quarter-1		0.08%	9.70%	28.57%	8.37%			
% shares held by insiders	1.31%					Last Quarter-2		-1.04%	-8.28%	0.00%	2.60%			
Short interest	2.23%					Last Quarter-3		-2.78%	-14.00%	-13.16%	3.61%			
Days to cover short intere	0.00					Last Quarter-4		-1.48%	6.80%	5.88%	2.62%			
52 week high	\$29.34					Standard error		0.5%	4.5%	6.8%	2.62%			
52-week low	\$22.82					Standard Error of Revenues prediction		0.5%	Industry Outlook (Porter's Five Forces)					
5y Beta	1.44					Imputed Standard Error of Op. Cost predict		4.5%	Bargaining Power of Suppliers (100th Percentile), Bargaining Power of Customers (100th Percentile), Intensity of Existing Rivalry (67th Percentile), Threat of Substitutes (100th Percentile), Threat of New Competition (83th					
6-month volatility	24.47%					Imputed Standard Error of Non Op. Cost pr		5.1%						
Proforma Assumptions														
Convergence Assumption			General Assumptions			Items' Forecast Assumptions			Other Assumptions					
All base year ratios linearly converge towards the Sub-industry ratios over an explicit period of 10 years			Money market rate (as of today)			Base year (LTM)			Convergence period (Sub-indust.) adjustment per year			Tobin's Q	80%	
			Risk-Free rate (long term estimate)			Operating Cash/Rev.			0.00%			Excess cash reinvestment	Money market rate	
			Annual increase (decrease) in interest rates			NWV/Rev.			16.57%			Other claims on the firm's asse	\$0.00	
			Marginal Tax Rate			NPPE/Rev.			11.88%			Capitalization		
			Country Risk Premium			Dpr/NPPE			13.84%			100% of all rent expenses are capitalized and amortized 'straightline' over 10 years		
						NOPAT MARGIN			6.01%			100% of all R&D expenses are capitalized and amortized 'straightline' over 10 years		
Forecast Year			Revenue Growth Forecast		Revenue (\$)	Forecast	Op. Exp./Rev.		90.06%		-0.3%		E&P expenses are not capitalized	
LTM					\$1,457.13		SBC/Rev.		0.78%		0.50%		SG&A expenses are not capitalized	
FY2016			4.3%		\$1,528.53		Rent Exp./Rev.		3.43%		0.1%		Valuation Focus	
FY2017			4.3%		\$1,594.25		R&D/Rev.		0.55%		0.63%		DCF Valuation	
FY2018			5.8%		\$1,686.72		E&D/Rev.		0.00%		0.00%		Relative valuation	
FY2019			5.2%		\$1,774.43		SG&A/Rev.		27.73%		-0.2%		Distress Valuation	
FY2020			4.4%		\$1,852.51		ROIC		12%		0.35%		Monte Carlo Simulation Assumptions	
FY2021			3.7%		\$1,921.05		EV/Rev.		0.93x		1.12x		Revenue Growth deviation	
FY2022			3.4%		\$1,985.40		EV/EBITA		10.20x		10.51x		Normal (0%, 1%)	
FY2023			3.2%		\$2,048.44		Debt/Equity		23%		234%		Continuing Period growth	
FY2024			3.1%		\$2,111.68		Unlevered beta		0.71		0.72		Triangular (5.82%, 6%, 6.18%)	
FY2025			3.0%		\$2,175.96		Dividends/REV		1%		2%		Country risk premium	
Continuing Period			3.0%		\$2,241.24						0.1%		Triangular (2.31%, 3%, 3.03%)	
													Intrinsic value of (e)	
													1-year target price of (e)	
Valuation														
Forecast Year		ROIC	WACC	Invested Capital	Implied Enterprise Value	Claims on Assets and Dilution	Shares Outstanding	Price per Share	Monte Carlo Simulation Results					
LTM		11.3%	6.6%	\$885.86	\$1,966.20	\$392.13	50.19	\$31.99						
FY2016		12.3%	6.7%	\$948.68	\$2,051.38	\$395.53	50.19	\$33.34						
FY2017		11.1%	6.8%	\$1,012.07	\$2,149.61	\$399.44	50.19	\$35.15						
FY2018		11.1%	6.9%	\$1,095.54	\$2,270.36	\$399.36	50.19	\$36.84						
FY2019		10.8%	7.1%	\$1,179.30	\$2,395.51	\$406.01	50.19	\$38.60						
FY2020		10.6%	7.2%	\$1,253.63	\$2,522.44	\$406.02	50.19	\$40.47						
FY2021		10.3%	7.3%	\$1,336.01	\$2,651.65	\$399.23	50.19	\$42.48						
FY2022		10.2%	7.4%	\$1,411.69	\$2,787.10	\$389.06	50.19	\$44.63						
FY2023		10.0%	7.5%	\$1,488.50	\$2,931.42	\$358.25	50.19	\$47.11						
FY2024		9.8%	7.6%	\$1,567.48	\$3,086.53	\$346.28	50.19	\$49.54						
FY2025		9.7%	7.7%	\$1,643.25	\$3,254.02	\$334.08	50.19	\$52.23						
Continuing Period		15.4%	7.8%	\$969.79										
Sensitivity Analysis														
Revenue growth variations account for 35.3% of total variance														
Risk premium's variations account for 2.5% of total variance														
Operating expenses' variations account for 1.4% of total variance														
Continuing period growth variations account for 0.2% of total variance														

The 3σ(e)-adjusted intrinsic value is \$32.08;
the 3σ(e)-adjusted target price is \$33.47; and
the analysts' median target price is \$31.4

NewLink Genetics Corp.

NASDAQ: NLNK

Analyst: Andrew Varone

Sector: Healthcare

BUY

Price Target: \$44.41

Key Statistics as of 11/24/2015

Market Price:	\$36.50
Industry:	Biotechnology
Market Cap:	\$1.07B
52-Week Range:	\$31.70-58.73
Beta:	0.97

Thesis Points:

- Approval of Pancreatic Cancer treatments would result in major market share gains
- Undervaluation due to macroeconomics gives entry for investors
- High cash can be used to pursue future catalysts and cure high demand diseases.

Company Description:

NewLink Genetics Corporation (NLNK) is a biopharmaceutical company focused on discovering, developing and commercializing immunotherapeutic products for cancer treatment. Its portfolio includes both biologic and small-molecule immunotherapy product candidates. Its biologic product candidates are based on its HyperAcute immunotherapy technology, which is designed to stimulate the human immune system. Its small-molecule product candidates are focused on breaking the immune system's tolerance to cancer by inhibiting the indoleamine-(2, 3)-dioxygenase (IDO) pathway. Its lead product candidate algenpantucel-L or HyperAcute Pancreas. HyperAcute Pancreas is being studied in two Phase III clinical trials; one in surgically-resected pancreatic cancer patients that is being performed under a Special Protocol Assessment (SPA) with the United States Food and Drug Administration (FDA) and one in patients with locally advanced pancreatic cancer.



Thesis

NewLink Genetics Corp (NLNK) is a BUY because of its growth potential and undervaluation. NLNK is awaiting FDA approval for a treatment called IMPRESS. This treatment would be used for pancreatic cancer which currently affects 50,000 annually. Over the past 30 years, there has been no decrease in the mortality rate of those suffering with pancreatic cancer. Getting approved would give the company significant growth because of the potential new customers that need the treatment. There is currently an undervaluation of the stock due to the expectation of future legislation restricting the markup that the company can charge on its treatments. The stock price had decreased in September and has yet to see a major back to where it was priced prior. Because of this, there is major upside and very little downside to the stock.

The stock has a one-year target of \$44.41 making it a BUY with an upside potential of 22%.

Porter's 5 Forces

Threat of new entrants is low. The threat of new entrants is low because of the nature of the firms. A company trying to gain entry will need significant capital to purchase buildings and equipment to create the drugs for cancer patients. Furthermore, more capital will be needed because of patients that are associated with the biotech industry and to contract suppliers to gain the necessary ingredients for their drugs. Lastly, there is high government regulation to get these drugs sold on shelves. The drugs must go through different phases in the pipeline and get approval from the FDA for it to be distributed.

The threat of substitution is low. NewLink Genetics also focuses on diseases that have very little cures. They created a cure for Ebola and are awaiting FDA approval for adjuvant treatment of patients with surgically resected pancreatic cancer.

Bargaining power of customers is high. Though customers that are affected with illness that NLNK treats do not have many alternatives, the bargaining power remains in the insurance companies. Insurance companies set the rate that they will pay for cancer treatments. Also, there has been a push in politics for biotech companies to not have as high of markups. If legislation pass that puts a cap on the amount of markup that these companies can markup their products, this will further give bargaining power to the

customers.

Bargaining power of suppliers is neutral. NLNK currently have partnerships with other companies to help create their products through research and development. Though if they want to further the pipeline into a new disease that presents itself, similar to what lead them creating Ebola vaccines then they would need to partner with another company that has the ingredients needed. NLNK does have \$200M in cash that they can use to partner with other companies if needed and gain more catalysts.

Threat of rivalry is low. This is because NewLink Genetics has development drugs and treatments where there is little competition present and where it would hard for others to enter because of the barriers to entries that are presented.

Industry Overview

NewLink Genetics operates in what is called immunotherapy; it is a relatively new alternative to cancer treatments. Immunotherapy uses the body's natural immune system to combat cancer cells. This is done by exposing the body to dead cancer cells to help trigger the body's response and combat these cancer cells.

NewLink has developed their immunotherapy called HyperAcute Cellular Immunotherapies. It is in its final stage of development and will treat prostate and renal cancers. Also in their pipeline are treatments for pancreatic cancer, NSCLC, and melanoma.

What sets apart NewLink and has them set up to be the industry leader is the way they combat cancer cells using immunotherapy. Traditionally, patient's tissues or cells were needed to create the vaccine that would be injected into the body. Instead, NLNK using tumor specific human cells that are have been lined with alpha-gal. The body's immune system then attacks these tumor cells and triggers a response for the body to continue killing cancer cells. Because of this, it is easy to give the patients these cells as they are not patient specific but cancer specific. Lastly, it is believed that a stronger immune response will be triggered as NLNK uses whole cells rather than cell fragments to trigger the immune response.

Clinton Effect

The stock had seen a huge drop in price in September where it fell from low-50s to mid-30s. This was due to Hillary Clinton wanting to reduce the markups that

companies have on their drugs. This decrease in price was a reaction to this news. This is a positive or NLNK as the huge drop in price was due to macroeconomics and was not industry specific.

This creates an entry point for this stock because it can be considered undervalued. The stock currently reflects the decrease in revenues if legislation passes that Clinton and other members of the Democratic party currently want. The stock will be considered undervalued if a law restricting markups does not pass into legislation. This is because the revenues would remain constant if sales remain constant for the company.

If a law does pass, there is still room for revenues to increase. This is because of an increase in revenues from potential products that NLNK currently have in their pipeline. If their revenues are restricted because they have to sell their current products for loss, they can make it up by selling new products.

Pancreatic Cancer Treatment

NewLink Genetics are awaiting FDA approval after completed enrollment in phase 3 of their drug, IMPRESS. This drug is used to target pancreatic cancer. This would be the first drug of its kind to treat pancreatic cancer. Getting FDA approved cause result in substantial revenue growth for the company.

The growth for NLNK will be due to the amount of patients that are available for the drug treatment. In 2015, it is estimated that there will be 49,000 new cases of pancreatic cancer. This new cases will result in around 40,500 deaths. Currently there are two routes to go for pancreatic cancer. They are surgical resection and chemotherapy. Out of these 49,000 new cases, only 15,000 will be eligible for surgical resection. This is due to pancreatic cancer being found in too late of a stage, making surgery impossible and not a reliable treatment.

Since there are no reliable treatments, the one-year survivability for those at any stage is 26%. Going to the five-year survivability rate, that number decrease even further to 6% survivability for those with any stage of pancreatic cancer. Getting FDA approval for IMPRESS would be a major cancer breakthrough that is much needed. IMPRESS can treat those suffering with pancreatic cancer at any phase. This means they can capture market share from those who do not treatment because their pancreatic cancer has spread too far and for those who would be eligible for surgical resection. For those that will need chemotherapy,

NLNK has PILLAR in the phase 3 of the pipeline that is for chemotherapy in pancreatic cancer.

Despite advances in cancer research, mortality rates in those suffering with pancreatic cancer have remained unchanged over the last 30 years. Getting these treatments FDA approved could present major upside.

Product Pipeline

The two treatments that NewLink Genetics has in their pipeline are in the only ones in phase 3 but, they have other products in their pipeline. In phase 2 that have treatments that targeted the diseases of NSCLC and melanoma. Just finished up their phase 1 in the pipeline are treatments that cure prostate and renal cancer. Though these products will not be completed in the next year, their potential pipeline gives investors of growth for the future. The product that they currently have in the pipeline has relatively high demand due to the nature of the diseases they treat. They either cause high amounts of death or do not currently have any reliable forms of treatment. This will allow the company to grow and gain market share as their products are better than those on the market. Their products that treat cancer using their HyperAcute treatment is supposed to have a greater immune response which can be measured once its tested is completed.

Treatments for New Diseases

NewLink Genetics were the first ones to create a vaccine for Ebola with the partnering of Merck. Due to the outbreak of Ebola in the United States, there were a lot of companies competing to try and treat a vaccine for Ebola. The pairing of NewLink and Merck created a vaccine that was 100% effective in its field test. The vaccine was given to two tribes in Africa. The first had not been exposed to the virus yet; the other tribe had been exposed to the virus and was given the vaccine a few days later. The tribe that had yet to be exposed had zero people contract the virus. The second tribe only had sixteen members contract the virus.

Though the stock price reflects the finding of the cure and the amount they sold it for in a contract, this shows that NewLink's ability to find cures for diseases. Currently, they have \$200M on their books in cash to purchase catalysts and to fund research and development of any treatments in areas that are needed.

Conclusion

NLNK is considered a BUY because of the upside it currently has. NLNK have products in their pipeline for treatments that are currently needed. The stock price is currently undervalued due to speculation that legislation will be passed that limited markups on their treatments. Being on macroeconomic issue, this affects all biotech stocks. NLNK have much higher upside potential than downside which supports it of being a buy.

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NewLink Genetics Corporation	NLNK	Analyst Andrew Varone	Current Price \$36.50	Intrinsic Value \$44.41	Target Value \$47.76	Divident Yield 0%	1-y Return: 30.86%	BULLISH	
General Info		Peers		Market Cap.		Management			
Sector	Healthcare	Verastem, Inc.	\$81.63	Professional	Title	Comp. FY2012	Comp. FY2013	Comp. FY2014	
Industry	Biotechnology	Array BioPharma Inc.	\$346.23	Link, Charles	Founder, Chairman, Chief Executive Officer	\$1,452,418	\$2,036,358	\$3,291,208	
Last Guidance	May 5, 2015	Opko Health, Inc.	\$6,033.28	Vaharian, Nicholas	President, Chief Medical Officer and Director	\$958,935	\$1,310,184	\$2,252,807	
Next earnings date	February 26, 2016	GlycoMimetics, Inc.	\$129.27	Henneman, John	Chief Financial Officer, Executive Vice Preside	\$0	\$0	\$4,017,075	
Market Data		INSYS Therapeutics, Inc.	\$2,265.38	Wiley, Brian	Vice President of Business Development	\$0	\$1,846,525	\$856,764	
Enterprise value	\$883.24	Seattle Genetics, Inc.	\$5,960.02	Langren, Carl	Principal Accounting Officer and Vice Preside	\$0	\$0	\$0	
Market Capitalization	\$4,449.48	Cellidex Therapeutics, Inc.	\$1,786.48	Mautino, Mario	Vice President of Drug Discovery Module and	\$0	\$0	\$0	
Daily volume	0.22	Anad Pharmaceuticals Inc.	\$1,228.51	Past Earning Surprises					
Shares outstanding	28.79	Isis Pharmaceuticals, Inc.	\$7,454.50	Revenue		EBITDA	Norm. EPS	Standard Error of "Surprise"	
Diluted shares outstanding	31.56	Spectrum Pharmaceuticals, Inc.	\$369.02	Last Quarter		43.54%	0.00%	NM	21.77%
% shares held by institutions	26.01%	Current Capital Structure		Last Quarter-1		128.53%	0.00%	NM	64.26%
% shares held by insiders	2.03%	Total debt /Common Equity (LTM)	0.01	Last Quarter -2		77.54%	0.00%	NM	38.77%
Short interest	15.80%	Cost of Borrowing (LTM)	9.77%	Last Quarter -3		10.37%	0.00%	NM	5.18%
Days to cover short interest	8.18	Estimated Cost of new Borrowing	2.63%	Last Quarter -4		803.23%	0.00%	NM	401.61%
52 week high	\$58.73	Altman's Z	41.35	Standard error		148.9%	0.0%	NM	78.65%
52-week low	\$31.70	Estimated Debt Rating	AAA	Standard Error of Revenues prediction		148.9%	Industry Outlook (Porter's Five Forces)		
5y Beta	0.96	Current levered Beta	1.25	Imputed Standard Error of Op. Cost prediction		NM	Bargaining Power of Suppliers (100th Percentile), Bargaining Power of Customers (100th Percentile), Intensity of Existing Rivalry (100th Percentile), Threat of Substitutes (100th Percentile), Threat of New Competition (100th Percentile), and Overall (100th Percentile)		
6-month volatility	77.69%	LTM WACC	10.32%	Imputed Standard Error of Non Op. Cost prediction		NM			
Proforma Assumptions									
Convergence Assumptions		General Assumptions		Items' Forecast Assumptions			Other Assumptions		
Money market rate (as of today)		0.37%		Base year (LTM)	Convergence period (Sub-industry)	Adjustment per year	Tobin's Q	80%	
All base year ratios linearly converge towards the Sub-industry ratios over an explicit period of 10 years	Risk-Free rate (long term estimate)	2.93%	Operating Cash /Rev.	0.00%	0.00%	0.0%	Excess cash reinvestment	Money market rate	
	Annual increase (decrease) in interest rates	0.1%	NWV /Rev.	2.69%	13.35%	1.1%	Other claims on the firm's assets	\$0.00	
	Marginal Tax Rate	37.5%	NPPE /Rev.	4.18%	40.30%	3.6%	Capitalization		
	Country Risk Premium	6.0%	Dgt /NPPE	14.06%	14.00%	0.0%	100% of all sent expenses are capitalized and amortized 'straightline' over 10 years		
Forecast Year		Revenue Growth Forecast	Revenue (\$) Forecast	NOPAT MARGIN	48.45%	62.00%	1.4%	100% of all R&D expenses are capitalized and amortized 'straightline' over 10 years	
LTM			Op. Exp. /Rev.	36.67%	60.20%	2.4%	E&P expenses are not capitalized		
FY2015	10.0%	\$230.09	SBC /Rev.	6.13%	2.47%	-0.4%	SG&A expenses are not capitalized		
FY2016	9.0%	\$253.10	Rent Exp. /Rev.	0.52%	0.72%	0.0%	Valuation Focus		
FY2017	8.0%	\$275.88	R&D /Rev.	29.79%	18.28%	-1.2%	DCF Valuation	100%	
FY2018	8.0%	\$297.95	E&D /Rev.	0.00%	0.00%	0.0%	Relative valuation	0%	
FY2019	7.0%	\$318.81	SG&A /Rev.	13.60%	13.00%	-0.1%	Distress Valuation	0%	
FY2020	6.0%	\$337.94	ROIC	72%	13.29%	-5.83%	Monte Carlo Simulation Assumptions		
FY2020	5.0%	\$354.84	EV /Rev.	3.58x	2.03x	-0.15x	Revenue Growth deviation	Normal (0%, 1%)	
FY2021	4.0%	\$369.03	EV/EBITA	5.14x	5.91x	0.08x	Operating expense deviation	Normal (0%, 1%)	
FY2022	3.0%	\$380.10	Debt /Equity	1%	0%	-0.1%	Continuing Period growth	Triangular (5.82%, 6%, 6.18%)	
FY2023	3.0%	\$391.50	Unlevered beta	1.24	1.20	0.00	Country risk premium	Triangular (2.91%, 3%, 3.09%)	
FY2024	3.0%	\$403.25	Dividends /REV	0%	1%	0.1%	Intrinsic value $\sigma(e)$	\$0.09	
Continuing Period	3.0%	\$415.35					1-year target price $\sigma(e)$	\$0.10	
Valuation									
Forecast Year	ROIC	WACC	Invested Capital	Implied Enterprise Value	Net Claims on Assets and Dilution Costs	Shares Outstanding	Price per Share	Monte Carlo Simulation Results	
LTM	71.6%	10.3%	\$344.95	\$1,121.91	\$85.73	28.79	\$43.91		
FY2015	69.3%	10.4%	\$378.56	\$1,033.15	-\$40.83	28.79	\$47.19		
FY2016	34.6%	10.5%	\$411.51	\$1,043.44	-\$136.16	28.79	\$51.02		
FY2017	32.6%	10.6%	\$443.09	\$1,050.97	-\$228.94	28.79	\$54.68		
FY2018	30.7%	10.6%	\$472.55	\$1,056.31	-\$319.96	28.79	\$58.29		
FY2019	28.7%	10.7%	\$499.15	\$1,060.17	-\$408.63	28.79	\$61.97		
FY2020	26.9%	10.8%	\$522.16	\$1,063.45	-\$492.12	28.79	\$65.95		
FY2021	25.0%	10.9%	\$540.92	\$1,067.21	-\$789.15	28.79	\$74.51		
FY2022	23.2%	10.9%	\$554.88	\$1,072.64	-\$861.25	28.79	\$81.32		
FY2023	21.5%	11.0%	\$569.18	\$1,085.53	-\$927.67	28.79	\$93.50		
FY2024	19.9%	11.1%	\$583.83	\$1,107.17	-\$988.02	28.79	\$97.24		
Continuing Period	13.3%	11.2%	\$1,938.05						
Sensitivity Analysis									
Revenue growth variations account for 95.9% of total variance									
Risk premium's variations account for 2.5% of total variance									
Operating expenses' variations account for 1.4% of total variance									
Continuing period growth variations account for 0.2% of total variance									

Taylor Devices, Inc.

NasdaqCM:TAYD

Analyst: Daniel Bacchi

Sector: Industrials

BUY

Price Target: \$19.77

Key Statistics as of 11/24/2015

Market Price:	\$16.44
Industry:	Machinery
Market Cap:	\$ 55.45M
52-Week Range:	\$9.39 – 17.44
Beta:	0.49

Thesis Points:

- Macroeconomics plays a large part in the continued growth for the corporation
- Expansion of facilities created a higher production capability at an increased efficiency
- Limited competition and barriers to entry allow for higher margins

Company Description:

The Company was incorporated in the State of New York on July 22, 1955 and is engaged in the design, development, manufacture and marketing of shock absorption, rate control, and energy storage devices for use in various types of machinery, equipment and structures. In addition to manufacturing and selling existing product lines, the Company continues to develop new and advanced technology products. (Form 10-K, August 27, 2015)



Thesis

Taylor Devices, Inc. (TAYD) has had great growth in the past year, both on the top and bottom line. The main catalyst for that growth has been identified as the turnaround of the economy. For the immediate future, the use of seismic dampers, a premier product sold by Taylor Devices, Inc., is only set to increase thanks to the health of the current economy. The increased demand will be met by the corporation's decision to expand its production facility. Based on the limited competition and high barriers to entry, the firm will gain a strong foothold into the industry and will see continued value creation for some time to come; it is therefore a recommended buy.

Industry Outlook

Taylor Devices, Inc. operates in the Machinery Industry, their key market segments include: Aerospace and Defense, Industrial, and Construction. The breakdown of sales shown in Exhibit 1 demonstrates the increased levels of construction necessitating the seismic/wind protection for both new construction and retrofitting of existing buildings or bridges. The management team noted in their analysis from the 10-K that Aerospace and Defense also saw a sales increase, 35% from 2014, that was far surpassed by the 83% increase from Construction.

Exhibit 1

Year ended May 31		
Market	2015	2014
Industrial	7%	10%
Construction	54%	46%
Aerospace / Defense	39%	44%
Other	7%	0%

The outlook for sales for both Aerospace and Defense and Construction looks positive for Taylor Devices, Inc. Recently, Los Angeles, California passed a law mandating the retrofitting of about 13,500 soft-story apartment buildings and 1,500 concrete buildings. (source: [Los Angeles Passes Earthquake Safety Retrofitting Law for Older Buildings](#)) Taylor Devices, Inc. is sure to get a piece of the pie created by Los Angeles. They primarily compete for customers against UTC Aerospace Systems Division of United Technologies in Ft. Worth, Texas; they only beat Taylor Devices, Inc. on volume, as TAYD

is able to compete directly on price, warranty and product performance. With the \$1.1M expansion set to begin this Autumn, Taylor Devices, Inc. will gain the ability to contend better on volume. Two other competitors produce seismic damping devices and many other corporations produce alternative protection technologies, that present a different solution to the same problem. CEO Douglas P. Taylor remarked on the increased sales in construction in a recent interview with Buffalo News: "It's mostly California. They've tried to postpone things and the state's not letting people in California postpone things anymore. They're putting code changes in and requiring that structures start to comply with the revised seismic code."

In the same interview Taylor expanded on a project that will protect residential homes from seismic activity:

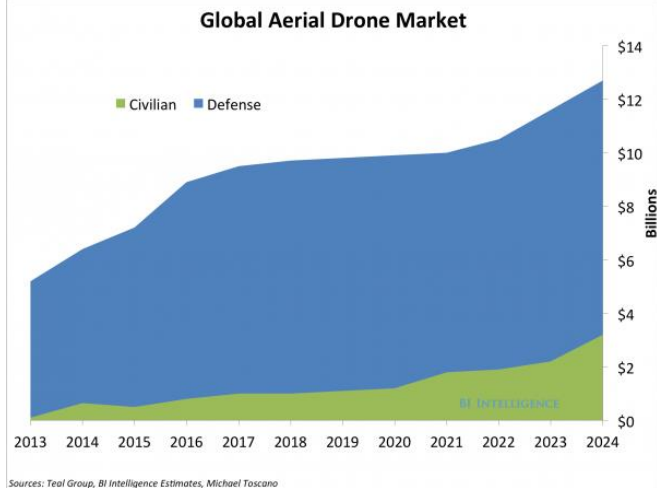
"We've got a new concept, which is being tested at UB right now, which hides the dampers around the perimeter of the cutout, and that seems to work really, really well. We've got a patent filed on it. You wouldn't know they were there." (Source: [Taylor Devices Grows by Keeping Shaking to a Minimum](#))

This comment illustrates Taylor Devices, Inc. commitment to developing business and will serve them well into the future.

The Aerospace and Defense industry indicates a similar potential for growth. The government is required to diversify the supplies for each project, necessitating the use of multiple suppliers. Currently Taylor Devices, Inc. supplies the landing gears for unmanned aerial vehicles (UAV), also known as drones, a growing business for the corporation and the outlook for both the government and Taylor Devices, Inc. is more and more drones.

A recent article from Business Insider examines a report from BI Intelligence that forecasts the business opportunities available in drone technology, from military applications to civilian and commercial. The report highlights the increased activity within the civilian and commercial market that will continue to see growth due to deregulation of drone flight. Taylor Devices, Inc., already a major player in the supply chain for drone technology, will only see increased sales in the drone market. The graph in Exhibit 2 forecasts the drone market to be worth around \$13B by the year 2024, with just above \$3B of the market labelled as civilian. (Source: [UAV Market Forecast](#))

Exhibit 2



Porter's Five Forces

The bargaining power of suppliers is low, Taylor Devices, Inc. maintains a diverse supply chain sourcing its principal raw materials from numerous supplier inside and outside the U.S. The cost of switching supplies would not materially affect the company's operations.

The bargaining power of customers is low, the number of competitors that directly manufacturer a similar product is limited, indicative of very few choices for their application. The high margins of Taylor Devices, Inc. reflect the number of competitors; with little competition, the sellers of the markets are able to charge a higher premium.

The intensity of existing rivalry is medium, Taylor Devices, Inc. fights for the same customers as their rivals and the industry is not superbly large. The industry has seen growth in the past few years due to the increase in regulation that requires buildings and bridges to employ some type of seismic damping technology, and each year brings new opportunities for the members of the industry.

The threat of substitutes is medium, there are a plethora of new technologies that could substitute the use of seismic damping technology, but at the same time they could be used to supplement each other. Depending on the application the substitute could be of higher quality, but because this technology is not new and is well known for its quality the future seems strong for the products offered by Taylor Devices, Inc.

The threat of new competition is low, the capital required to start a business is intense. The technology is constantly evolving, requiring continual research and development. Taylor Devices, Inc. engages in multiple R&D projects; the government often sponsors projects and Taylor Devices, Inc. will often partner with universities to

develop and research new or existing products. In the interview with Buffalo News, Taylor identified working with Iowa State University on a new system. The corporation has an ongoing relationship with nearby SUNY at Buffalo, working with the Structural Engineering and Earthquake Simulation Laboratory. This program uses state funded projects to create the commercial products later sold by Taylor Devices, Inc. Taylor later discusses in the interview the importance of patents which helps Taylor Devices, Inc. maintain a competitive advantage in the marketplace and dissuade new competition.

Expansion

This Autumn Taylor Devices, Inc. will be building an expansion that will add space to allow for the assembly and testing of seismic dampers that have begun to approach 50 ft. in length. The size of the parts have begun to grow in scale year after year reflecting world-wide seismic codes that require ever increasing sizes of energy absorption products.

The expansion will come off the back of a complete move of facilities that took place in late 2014. The new space doubled the space they previously had and working with experts in plant layout they were able to create an optimal layout that produced an efficient flow from workstation to workstation. Because the size of the products needed to increase that meant that they often had to move large materials around the shop, which often travelled over other stations. Time to time they needed to shut down certain workstations to permit the movement of the large parts.

Moving the facility allowed Taylor Devices, Inc. to move products around without having to shut down stations, increasing production capability. Further expansion will only increase capability, not only the size of the product, but also with the throughput of the facility as they can increase the number of workstations.

Financially the impact has had positive implications. When the move in 2014 occurred revenues initially dropped due to the downtime that was required to move the machinery to the new location. This blip on the revenues is explainable relatively easily. FY2015 saw a 53% growth in sales and the LTM have seen 58% growth indicative that Taylor Devices, Inc. has not only seen increasing sales but has been able to act and produce the products requested. In FY2014 net margin was low at 6% of sales, in the LTM they have managed to increase that margin to 8%.

Competitive Advantage

There is no one competitive advantage that Taylor Devices, Inc. sticks to. Instead they managed to have diversified their advantage across the board. Earlier it was mentioned that the R&D for Taylor Devices, Inc. is mainly offsite at the nearby SUNY at Buffalo campus. The advantage of using fresh minds that are paid for with tax dollars presents an advantage to the bottom line as R&D expenses are reduced. R&D expenses reached a high in 2012 at \$540,000, 2% of total revenue for that year. The LTM has seen only \$320,000, 1% of total revenue, much less, translating to much more on the bottom line.

Taylor Devices, Inc. relies heavily on the name and recognition for sales. In an industry that requires heavy engineering it is imperative to have a track record before selling products. Often, firms like Taylor Devices, Inc. will need to test products in the field before they can sell the product, the customers need to know the specifications and whether or not the product really does what it says it will do. By partnering with SUNY at Buffalo they have the ability to simulate the products effects in the field. But for some customers that is not enough, published papers documenting the use of the Taylor Devices, Inc.'s products are necessary and that is often why customers choose TAYD; for their long standing tradition of providing a high quality product that works in the field.

The product itself is generally a cost that has tremendous value. The installation is quick and extends the life cycle of buildings by reducing the stress to the structures due to vibration and motion due to multiple effects. The products also need not to be installed during the initial construction, often the seismic dampers find themselves retrofitted into existing buildings without major redesign. At this time Taylor Devices, Inc. holds 13 patents expiring at different times until the year 2032. The interview Taylor had with Buffalo News indicated that more patents are on the way:

"I might go years without going for a patent. Then all of a sudden I'll get into patent mode, which is what I'm in now. We've got five of them that we're working on. Two have been issued and the other three are filed for, so you have to argue with the patent office why they're new and unique.

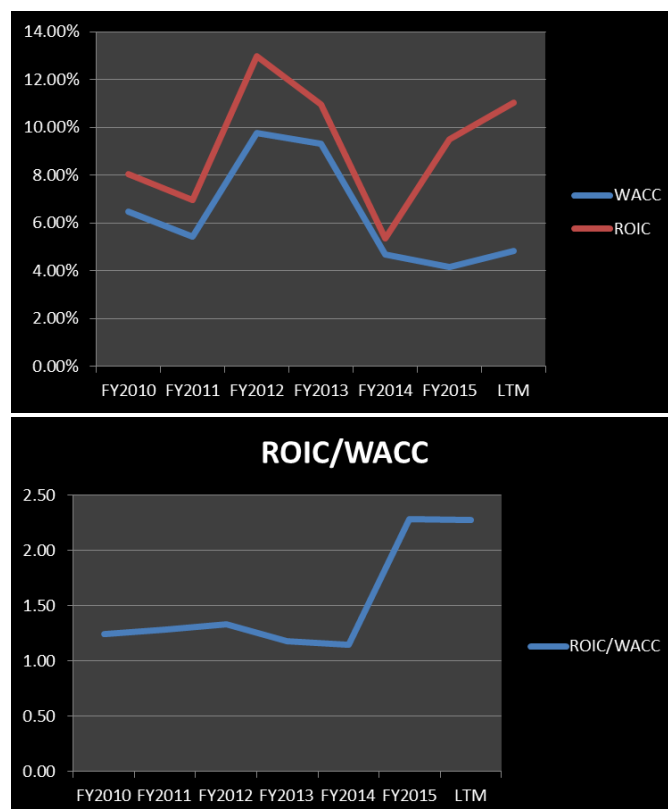
If it's a usable patent, something I can get sales generated from within five or seven years, we'll go for it."

Overall no one real reason exists for Taylor Devices, Inc.'s growth and competitiveness. The diversified advantages help Taylor Devices, Inc. maintain their stake in the industry.

Financials

Taylor Devices, Inc. is a financially conservative corporation. They hold no debt and finance with all equity. This means that their cost of capital is their cost of equity. Year over year they have been able to create value. Looking at ROIC/WACC it is apparent that the management is able to manage this corporation with value creation in mind.

Exhibit 3



The second graph in Exhibit 3 shows that ROIC/WACC has ridden above 1 for the last 5 years, indicating value creation. In the period following the move to the larger facility, ROIC/WACC nearly doubled to well over 2. This represents the ability for Taylor Devices, Inc. to increase their economies of scale to further increase ROIC/WACC by reducing costs. In FY 2014, cost of revenue as a percentage of sales stood at 73% through the LTM they have managed to bring that cost down to 69% and it appears that they still have room to further reduce that number by expanding further; already in plan.

The Market is Undervaluing Taylor Devices, Inc.

I believe the market is unaware of Taylor Devices, Inc. and that belief is due to the low volume. The average 3M volume is only 11,481. Taylor Devices, Inc. is considered a microcap; their market cap is only 55M. The low volume will surely result in an undervaluation of Taylor Devices, Inc. Most of my assumption is based on quantitative data supported by qualitative data. Exhibit 3 above demonstrated that not only is value being created the amount of value creation is increasing.

The continuation of regulation for new and existing construction with an increased awareness for earthquakes will continue to grow the value of Taylor Devices, Inc. and the market's awareness of the corporation. The production of drones and their use in warfare or even civilian matters will also be a great catalyst for the growth and awareness of the corporation.

The question is when will the market become aware of Taylor Devices, Inc. The answer is not easily found but the corporations value is unlikely to drop; rather it is expected to grow into the future.

Valuation

The valuation of Taylor Devices, Inc. is computed by a pro forma using a discounted cash flow model and a main focus on invested capital. At the end of the report is attached a brief overview of assumptions and results of the pro forma.

When valuing Taylor Devices, Inc. a conservative approach has been applied. Because they are a microcap and have potential for growth a 10 year period to convergence was chosen. A fast decay from the LTM revenue growth was used to forecast the revenues into the continuing period where a 3% terminal growth was applied.

I assumed that all other forecast variables, such as operating costs, beta, capital structure, etc. will reflect the company's historical values. Indicative of "what will the company be if they do not change?". The market risk premium used was 7%, adding both a country risk premium as well as a premium for the micro status of Taylor Devices, Inc. Cash will not be reinvested into the business (This information was found in the 10-K) and will be placed into an excess cash account where it will produce interest income. R&D and rent expense were

both capitalized straight-line over 10 years.

The intrinsic value was computed as \$19.25 and the 1 year return will net \$19.77.

Summary

A qualitative and quantitative analysis has led me to believe that Taylor Devices, Inc. will become a cash cow. Value creation into the future is apparent, and the effectiveness of the management to capture the increasing market share in both Construction and Aerospace and Defense will play a large part in their ability to continue the growth of the corporation. I recommend at BUY at the current price of \$16.44.

Other Sources:

- Taylor Devices, Inc. , 10-K
 - Capital IQ
 - Bloomberg
 - SEC
 - www.taylordevices.com
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Taylor Devices Inc.		TAYD	Analyst Daniel Bacchi	Current Price \$16.44	Intrinsic Value \$19.25	Target Value \$19.77	Dividend Yield 0%	1-y Return: 20.24%	NEUTRAL	
General Info			Peers		Market Cap.		Management			
Sector	Industrials		ITT Corporation	\$3,453.81	Professional	Title	Comp. FY2013	Comp. FY2014	Comp. FY2015	
Industry	Machinery		Parker-Hannifin Corporation	\$14,044.02	Taylor, Douglas	Founder, Chairman, Chief Executive Officer,	\$423,274	\$275,693	\$410,781	
Last Guidance	(Invalid Identifier)		Raytheon Company	\$38,170.19	McDonough, Mark	Chief Financial Officer and Treasurer	\$291,249	\$191,361	\$286,046	
Next earnings date	January 13, 2016				Hill, Richard	Executive Vice President, Director and Memb	\$344,063	\$229,374	\$336,863	
Market Data			Northrop Grumman Corporation	\$34,257.01	Newman, Reginald	Corporate Secretary, Independent Director, M	\$27,581	\$33,729	\$35,410	
Enterprise value	\$50.95		General Dynamics Corporation	\$45,708.97	Klembczyk, Alan	Vice President of Sales & Engineering	\$0	\$0	\$0	
Market Capitalization	\$55.45		Lockheed Martin Corporation	\$69,458.00	Metzger, John	Chief Engineer	\$0	\$0	\$0	
Daily volume	0.01		The Boeing Company	\$99,385.37	Past Earning Surprises					
Shares outstanding	3.37		Honeywell International Inc.	\$80,606.62	Revenue		EBITDA		Standard Error of "Surprise"	
Diluted shares outstanding	3.41		Leidos Holdings, Inc.	\$4,104.26	Last Quarter	0.00%	0.00%	0.00%	0.00%	
% shares held by institutions	6.72%		Current Capital Structure		Last Quarter-1	0.00%	0.00%	0.00%	0.00%	
% shares held by insiders	11.71%		Total debt / Common Equity (LTM)		Last Quarter -2	0.00%	0.00%	0.00%	0.00%	
Short interest	0.36%		Cost of Borrowing (LTM)		Last Quarter -3	0.00%	0.00%	0.00%	0.00%	
Days to cover short interest	1.05		Estimated Cost of new Borrowing		Last Quarter -4	0.00%	0.00%	0.00%	0.00%	
32-week high	\$17.44		Altman's Z		Standard error	0.0%	0.0%	0.0%	0.00%	
32-week low	\$9.39		Estimated Debt Rating		Standard Error of Revenues prediction	0.0%	Industry Outlook (Porter's Five Forces)			
5y Beta	0.49		Current levered Beta		Imputed Standard Error of Op. Cost prediction	0.0%	Bargaining Power of Suppliers (100th Percentile), Bargaining Power of Customers (71th Percentile), Intensity of Existing Rivalry (0th Percentile), Threat of Substitutes (100th Percentile), Threat of New Competition (100th Percentile), and Overall (90th Percentile).			
6-month volatility	33.60%		LTM WACC		Imputed Standard Error of Non Op. Cost prediction	0.0%				
Proforma Assumptions										
Convergence Assumptions		General Assumptions			Items' Forecast Assumptions			Other Assumptions		
All base year ratios linearly converge towards the Company ratios over an explicit period of 10 years		Money market rate (as of today)	0.41%		Base year (LTM)		Convergence period (Company)	Adjustment per year	Tobin's Q	80%
		Risk-Free rate (long term estimate)	3.00%	Operating Cash/ Rev.	0.00%	0.00%	0.0%	Excess cash reinvestment	Money market rate	
		Annual increase (decrease) in interest rates	0.1%	NWV/ Rev.	41.00%	50.22%	0.9%	Other claims on the firm's assets	\$0.00	
		Marginal Tax Rate	37.5%	NPPE/ Rev.	23.81%	22.03%	-0.2%	Capitalization		
		Country Risk Premium	7.0%	Dper/NPPE	9.39%	10.23%	0.1%	100% of all rent expenses are capitalized and amortized 'straightline' over 10 years		
Forecast Year		Revenue Growth Forecast		Revenue (\$) Forecast		NOPAT MARGIN	8.13%	-0.68%	100% of all R&D expenses are capitalized and amortized 'straightline' over 10 years	
LTM				Op. Exp./ Rev.	85.38%	87.98%	0.3%	E&P expenses are not capitalized		
FY2016	25.0%		\$33.51	SBC/ Rev.	0.42%	0.42%	0.0%	SG&A expenses are not capitalized		
FY2017	15.0%		\$41.89	Rent Exp./ Rev.	0.03%	0.00%	0.0%	Valuation Focus		
FY2018	9.0%		\$48.17	R&D/ Rev.	0.95%	1.05%	0.0%	DCF Valuation	100%	
FY2019	6.0%		\$52.51	E&D/ Rev.	0.00%	0.00%	0.0%	Relative valuation	0%	
FY2020	4.5%		\$55.66	SG&A/ Rev.	19.17%	21.42%	0.2%	Distress Valuation	0%	
FY2021	3.8%		\$58.16	ROIC	11%	8.04%	-0.30%	Monte Carlo Simulation Assumptions		
FY2022	3.4%		\$60.34	EV/ Rev.	1.19x	1.29x	0.01x	Revenue Growth deviation	Normal (0%, 1%)	
FY2023	3.2%		\$62.38	EV/ EBITA	9.46x	12.07x	0.26x	Operating expense deviation	Normal (0%, 1%)	
FY2024	3.1%		\$64.37	Debt/ Equity	0%	0%	0.0%	Continuing Period growth	Triangular (6.79%, 7%, 7.21%)	
FY2025	3.0%		\$66.36	Unlevered beta	0.26	0.31	0.00	Country risk premium	Triangular (2.91%, 3%, 3.09%)	
Continuing Period	3.0%		\$68.38	Dividends/ REV	0%	0%	0.0%	Intrinsic value σ(s)	\$0.09	
			\$70.43					1-year target price σ(s)	\$0.10	
Valuation										
Forecast Year	ROIC	WACC	Invested Capital	Implied Enterprise Value	Net Claims on Assets and Dilution Costs	Shares Outstanding	Price per Share	Monte Carlo Simulation Results		
LTM	11.0%	4.8%	\$23.69	\$39.05	\$0.26	3.37	\$19.16	The 3σ(s)-adjusted intrinsic value is \$19.25; the 3σ(s)-adjusted target price is \$19.78; and the analysts' median target price is \$0		
FY2016	15.6%	5.0%	\$29.84	\$64.45	\$3.91	3.37	\$19.56			
FY2017	13.0%	5.1%	\$34.63	\$68.65	\$4.63	3.37	\$20.45			
FY2018	12.0%	5.2%	\$38.11	\$71.57	\$3.93	3.37	\$21.45			
FY2019	11.3%	5.4%	\$40.80	\$73.80	\$0.73	3.37	\$22.80			
FY2020	10.8%	5.5%	\$43.07	\$75.71	-\$1.30	3.37	\$24.00			
FY2021	10.4%	5.6%	\$45.13	\$77.55	-\$3.59	3.37	\$25.28	Sensitivity Analysis		
FY2022	10.0%	5.8%	\$47.12	\$79.48	-\$6.18	3.37	\$26.67	Revenue growth variations account for 95.9% of total variance		
FY2023	9.7%	5.9%	\$49.10	\$81.57	-\$8.96	3.37	\$28.16	Risk premium's variations account for 2.5% of total variance		
FY2024	9.4%	6.0%	\$51.12	\$83.90	-\$12.37	3.37	\$29.84	Operating expenses' variations account for 1.4% of total variance		
FY2025	9.1%	6.1%	\$53.19	\$86.49	-\$14.87	3.37	\$31.34	Continuing period growth variations account for 0.2% of total variance		
Continuing Period	8.0%	6.2%	\$58.37							