

# Macroeconomic Overview

## U.S. Markets

Index	Weekly % Change	YTD % Change
S&P 500	+0.20%	+0.99%
Dow Jones Industrial	+0.10%	-0.90%
NASDAQ Composite	+0.43%	+6.71%
Russell 2000	+0.36%	-3.54%
VIX	+4.22%	-21.51%

December, which sent financial shares soaring. Equities were also strongly lifted up by energy stocks, which followed oil sharply higher last week, as well as healthcare. The NASDAQ Composite was again the biggest gainer of the week, gaining 0.43% at 5,053.75 thanks to healthcare and tech, closely followed by the Russell



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

2000's 0.36% increase. The S&P 500 only gained 4.21 points or 0.2% after hitting a two-month high of 2093, while the DJIA's 0.1% gain did not suffice to bring the index back in positive year-to-date territory. Equities' performance was dragged down by several disappointing economic reports, such as US GDP growth, which slowed down to 1.5% for the third quarter, consumer spending which was up just 0.1% in September, and an 11.5%

decrease in new home sales for September. These disappointing figures provided the basis for an increase in volatility as measured by the VIX, which snapped its four-week losing streak and gained 4.22% to close at 15.07. Gold and silver lost -1.92% and -1.72% respectively, while crude oil finished the week sharply higher after Wednesday's EIA report, with Brent and WTI gaining 3.27% and 4.46% respectively. In corporate news, mergers keep on being announced at a record pace, with Walgreens (WBA) offering to buy competitor Rite Aid (RAD) for \$9.4 billion plus debt, while Pfizer (PFE) and Allergan (AGN) are said to be in talks over a merger that would create a healthcare juggernaut with a market capitalization in excess of \$300 billion. The deal could face tough scrutiny from regulators as it would result in a tax inversion for Pfizer, which would adopt Allergan's Irish nationality and underlying tax advantages. A slew of earnings were released last week, with over a third of the S&P 500 reporting third quarter earnings. Apple (AAPL) had another blowout quarter, while profits at energy companies plummeted, with Chevron (CVX) and Exxon Mobil (XOM) both reporting double-digit drops in their quarterly earnings. Next week's economic calendar is going to be lighter, with the October PMI and ISM Manufacturing Indices due on Monday, which are both expected to decrease slightly over the previous month. On Tuesday, investors will await the figures for October vehicle sales, which are expected to slow down from the 10-year high reached in September. A sharp decrease in vehicle sales would imply lower household spending, which could be a decisive factor in the Federal Reserve's decision to lift interest rates in December. Employment situation for October will be released on Friday, with nonfarm payrolls expected to increase 48,000 to 190,000, and unemployment expected to come in 10 bps lower at 5%. If this report comes in well below estimates, it could also be a critical factor in the Federal Reserve's decision.

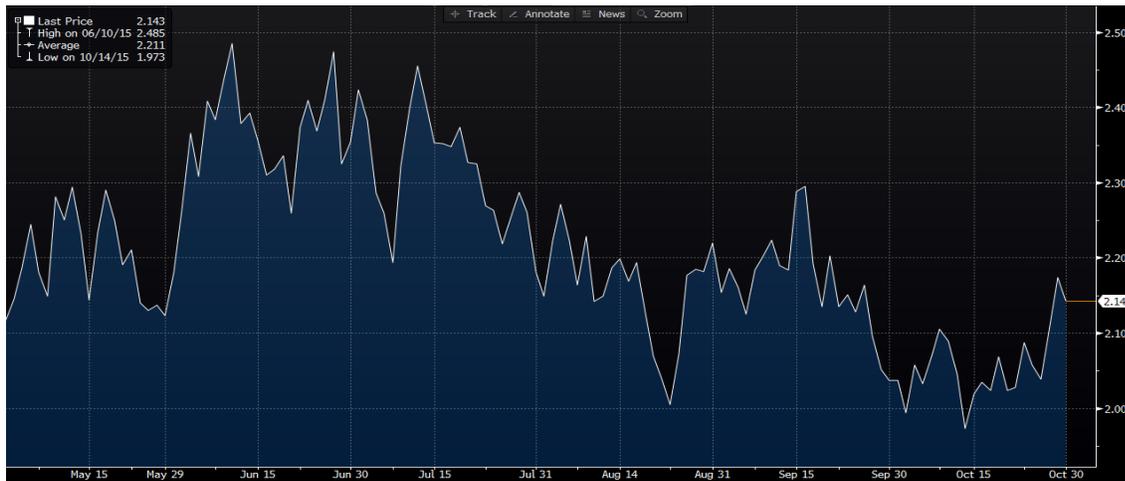
## **International Markets**

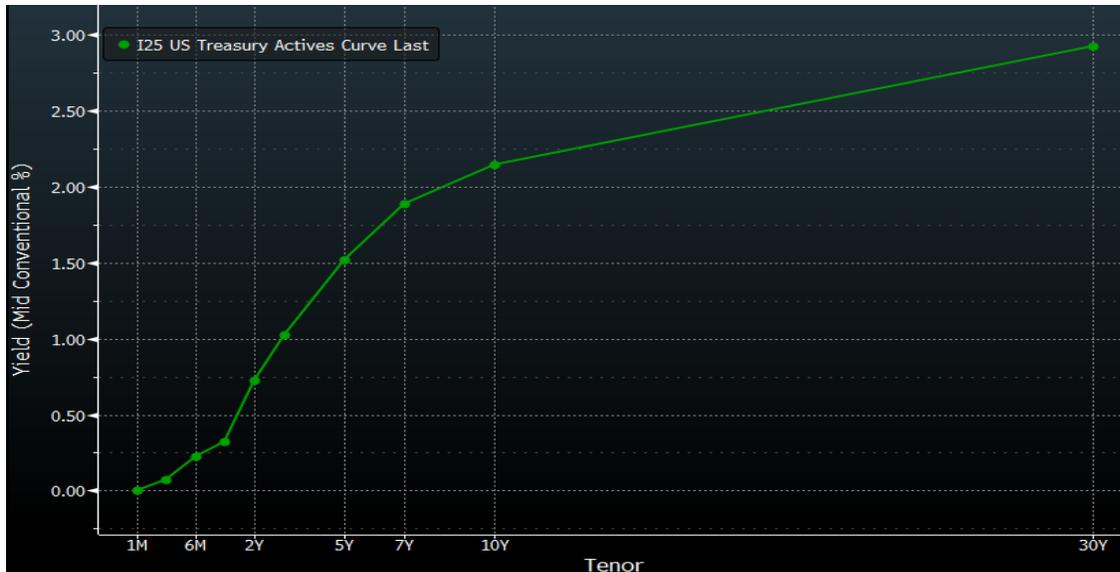
International equity markets had a better week than their U.S equivalents, with France's CAC 40 and Germany's DAX posting the largest gains of 1.45% and 3.43% respectively, while the U.K's FTSE 100 was dragged down by a disappointing GDP report. Economic output in the U.K increased 0.5% in the third quarter, coming short of the 0.6% consensus. The Bloomberg European 500 posted a loss of -0.32% due in part to Deutsche Bank and Barclay's heavy losses, while the Stoxx Europe 600 lost half a percentage point. Japan's Nikkei 225 gained 1.47% helped by a growth in the country's industrial output, as well as the Bank of Japan's announcement that it was leaving its monetary easing program unchanged. Chinese equity markets capped a four-week winning streak, with the Shanghai Composite and Shenzhen Composite losing -0.88% and -0.09% respectively. Japan will release its composite PMI on Tuesday, while the European Union will do so on Wednesday.

## Bond Report

---

U.S Treasury Bond prices have dropped this week, sending yields to their highest level for the month of October. The selloff of government bonds have come as a result of FED's FOMC meeting held on October 28<sup>th</sup>. The FED policy makers issued aggressive comments on Wednesday, rising the probability that the FED will rise rates at its December meeting. The yield of benchmark 10-year Treasury notes was nearby 2.08% on October 23<sup>rd</sup> and closed at 2.19% on Thursday 29<sup>th</sup> after the FED meeting. Short term maturities, which are the most vulnerable to changes in the FED-funds rates, posted their largest monthly increase since the month of February. The CME Group's FED Watch Tool, which tries to determine FED-fund future prices, calculate a 47% probability of a rate hike at the FED's December meeting. On Friday, U.S government debt prices slightly roses after the release of weaken data on both U.S. inflation and consumer spending sending the yield a little bit lower than Thursday. The 2-year treasury note finished the week at 0.73%, a 9.1 bps gained over the month, the 10-year treasury note closed Friday at 2.15%, a 9 bps increase over the month as well, and the long term treasury note closed the week at 2.93%, a 4.8 bps increase over the month. For now the market is in a wait and see approach and analysts are focusing on the coming economic data so as to anticipate the FED next moves.





## What's next and key earnings:

On Monday November 2<sup>nd</sup>, the PMI Manufacturing Index report will be released. It is expected to see its best reading since last May at a level of 54.1 from 53.1 in September. Both new orders and production are at a 7-month high.

On Wednesday November 4<sup>th</sup>, the International Trade report will be released. The trade deficit is expected to be around \$41.1 billion for the month a September from \$48.8 billion for August. We saw a wide increase in export, including consumer goods and a massive decline for imports. If the report is different from current expectation, would change the GDP estimation.

On Thursday November 5<sup>th</sup>, the Jobless Claims report will be released. It is expected to remain low at a consensus of 262,000 for October 24 week. This report have been signalling tense condition in the labour market for the last 6 months and it is expected to signal even more tense condition for the future.

On Friday November 6<sup>th</sup>, the Employment Situation report will be release. This report is important to be look at as it could be an indicator for the change in rate on the FED December meeting. Nonfarm payrolls are expected to increase by 50,000 to 190,000 in October which keep expectation positive for a rise in FED-fund rates. Unemployment rate is also expected to decrease from 5.1% to 5%, which is another factor in favour for a rate hike.

## Allied Motion Technologies, Inc.

NasdaqGM:AMOT

**Analyst:** Daniel Bacchi

**Sector:** Industrials

**BUY**

Price Target: \$ 22.14

### Key Statistics as of 10/29/2015

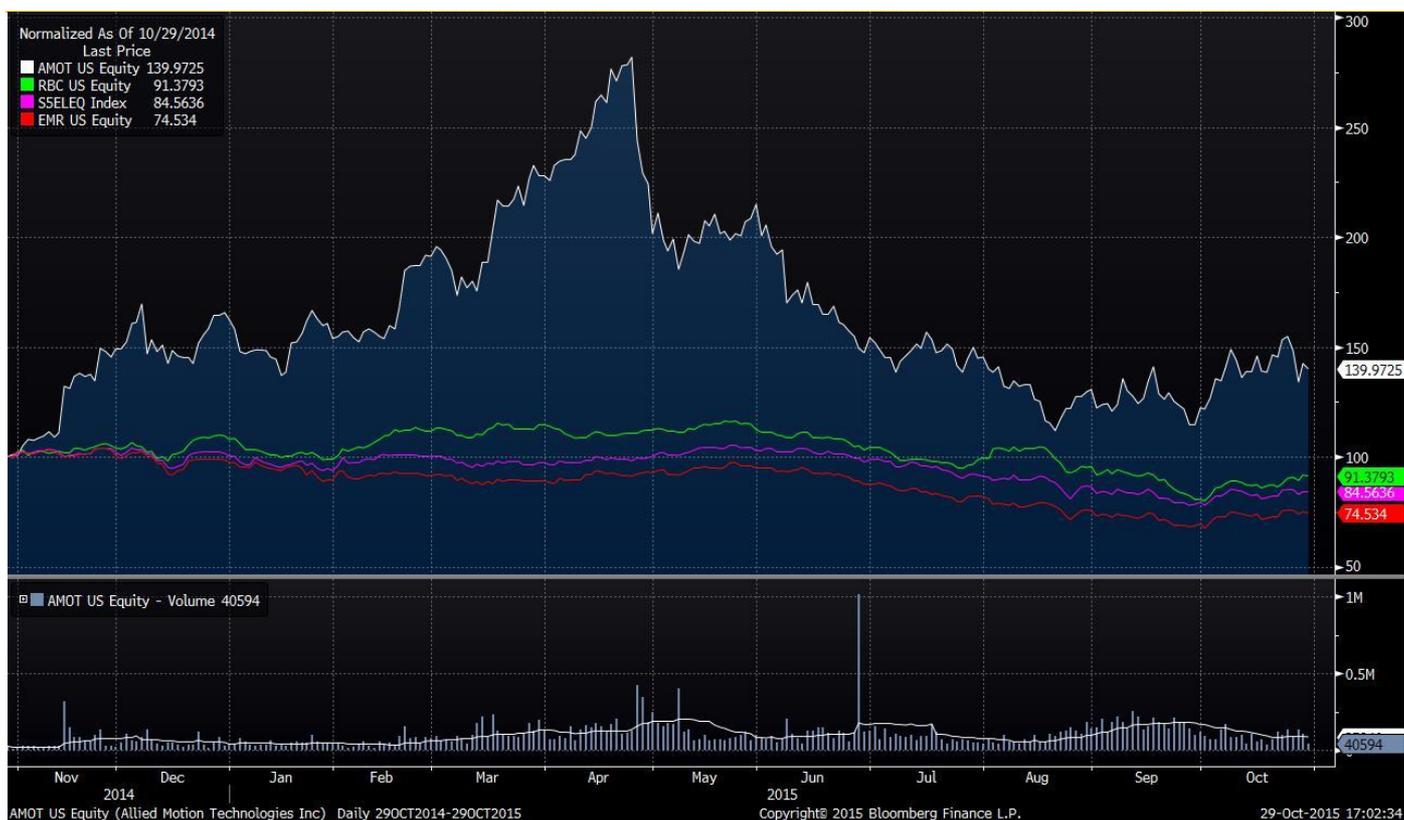
Market Price:	\$20.36
Industry:	Electrical Equipment
Market Cap:	\$192.9 B
52-Week Range:	\$14.28-42.63
5Y Beta:	1.92

### Thesis Points:

- Value creation through dynamic growth reinforced by innovative designs tailored to meet the current and emerging needs of customers
- Future possibility of inorganic growth through acquisitions
- Diversified customer base in multiple markets reduces risk to negative future earnings of the firm

### Company Description:

Allied Motion Technologies Inc. ("Allied Motion" or the "Company") was organized under the laws of Colorado in 1962 and operates in the United States, Europe and Asia. Allied Motion utilizes its underlying core "electro-magnetic, mechanical and electronic motion technology/know how" to provide compact, high performance products as solutions in a wide range of motion applications. The Company designs, manufactures and sells motors, electronic motion controls, gearing and optical encoders to a broad spectrum of customers throughout the world. The Company sells component and integrated motion control solutions to end customers and original equipment manufacturers ("OEM's") through its own direct sales force and manufacturers' reps and distributors. (Form 10-K, December 31, 2014)



## Thesis

Allied Motion has positioned themselves with an opportunity to growing dynamically through applied and design engineering solutions for electric motors and gearboxes in multiple markets throughout the world and inorganically through acquisitions. The past few years have shown their ability to implement their strategy and the future has a level of certainty of the continuation of implementation; it is therefore a recommended buy with a one-year target price of \$22.14. The potential of the one-year target to grow over the upcoming period is very likely, and future statements and actions of management will guide this assumption.

## Industry Outlook

Allied Motion Technologies Inc. operates in the electrical equipment industry, their key market segments include: Medical and Healthcare, Automotive, Aerospace and Defense, Electronics, and Industrial and Commercial. The past quarter saw an increase in sales from growth in the Aerospace and Defense, Medical and Electronics markets. As evident by exhibit 1, both Electrical Equipment and the Aerospace and Defense industry are in the accelerating growth phase of the business cycle as analyzed by experts. Other market segments occupied by Allied Motion are either in a decelerating growth phase, Medical and Industrial, or decelerating decline phase, Commercial Equipment and others. The future outcome of the markets will have an effect on the value of the firm; 86% of the value of the future firm is reliant on revenue and capturing the growth in sales is imperative. Fortunately, Allied Motion's diversified position in the markets has reduced the risk of negative outcomes and will serve them well in the coming months.

Exhibit 1

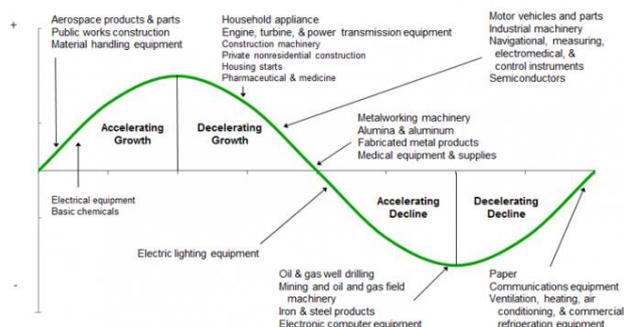


Exhibit 2



## Porter's Five Forces

The bargaining power of suppliers is low, due to a large number of suppliers available in the market. The cost of switching to another supplier for Allied Motion is very low as their diversified supplier base allows them to shift suppliers without changing price significantly.

The bargaining power of customers is medium low for Allied Motion even with the amount of suppliers in the market. Many customers are loyal to the supplier they currently purchase from, and although the cost of switching is relatively low, some corporations produce products that require modification to the application when switching suppliers. The products, overall, are very important to the operations of the customers reducing the overall bargaining power relative to price. Some customers require special customization that Allied Motion works to provide with advanced design and applied engineering.

The intensity of existing rivalry is medium high, the competition between firms to seize and retain customers is strong and the overall growth of the market is pinned to the growth of the markets supplied.

The threat of substitutes is low, the application of electric motors and gearboxes is ultimately the only solution for the majority of the markets Allied Motion serves. The advantage of using electric motors to the main substitute, combustion engines, is large. Electric motors provide a quieter operation with no substantial waste compared to other solutions; coupled with instant and perpetual torque, electric motors are the better solution and their value as a green alternative are seeing more popularity furthering the position of motors into the future. We have seen this in the automotive sector, where combustion engines have been the primary power plant of transportation. General consensus has

suggested that electrical motors are likely to be the new solution to the problems caused by combustion engines. The threat of new competition is low, the capital required to research, develop, and produce, in meaningful quantities, electrical motors is intense. The existing producers, on average, retain customers due to brand loyalty and the success of research and development in new, innovative applications of electric motors in both emerging sectors and existing sectors. Allied Motion's position in the market is firm based on qualitative and quantitative data. Management's prediction of the future, organic growth through innovative engineering, further solidifies the position of Allied Motion into the market.

## Strategy and Initiatives

Allied Motion's strategy will serve them well in a market entrenched with competition fighting to secure customers. Their current strategy is "Motion Solutions That Change the Game" and this approach will provide solutions to meet customer's current and emerging problems with applied and design engineering that will give them a step ahead of competition. Allied provides compact, differentiated products and systems that add value to the customers' operations and, ultimately, products. Allied Motion's local support provides an additional competitive advantage to retaining new and existing customers. Their initiative to create an Operational Excellence Team will implement Allied Systematic Tools<sup>SM</sup>, a lean program designed to "drive continuous improvement in quality, cost, delivery, and innovation throughout the company."

Exhibit 3



The acquisition of Globe Motors, Inc. in October of 2013 not only provided a percentage of the 99% increase in revenue but also the intangible assets and technology

of the R&D department of the target. Allied Motion, going forward, will have an increased ability to engineer applied and design solutions to customers, employing the work of the R&D teams from both firms.

Management noted that with the addition of several engineers as well as consultants, Allied is working on the development of a next-generation product line that will serve to not only attract new customers but retain the existing customer base.

With a strategic focus on motion technology and know-how, Allied Motion has implemented and will continue to implement initiatives that will complement the overall strategy, "Motion Solutions that Change the Game." Financially, the strategy will receive extensive investment for design, production and testing of new lines and products.

## Stock Ownership for Non-Employee Directors and the Employee Stock Ownership Plan

The success of the company does not only affect customers, and shareholders; Allied requires that directors, management and employees own shares in the firm with the goal of generating positive actions and decisions due to an increased stake in the company for those individuals. Every action and decision made will not only affect the outside shareholders wealth but will have financial implications on the employees' and director's stake in the corporation.

This may scare some investors away knowing that insiders own shares in the firm. Often outside investors perceive the purchase and sale of shares by insiders as either a positive (outside investors purchase excess shares) or negative (outside investors fire sale to pull out of their position).

In the case of Allied, the requirement for the agents and principals to own shares muddles how outside investors should act. The action that outside investors should take in Allied Motion's case is definitely one of caution; however, it would be safer to maintain position until further financial data is released.

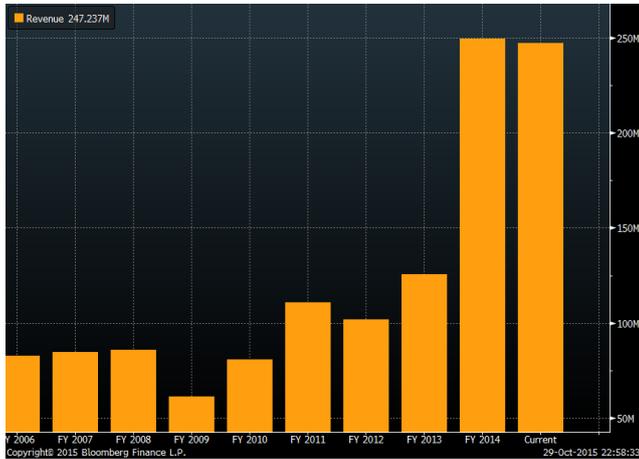
## Financials

The results from 2014 and the Last Twelve Months (LTM) has provided an insight into what can be

expected in the future if Allied Motion is able to effectively implement their strategy and initiatives.

The main catalyst for growth in 2014 was the acquisition of Globe Motors, Inc. Increases in Vehicle, and Aerospace and Defense markets driven from the acquisition provided a share of the 98.9% increase in sales. Sales for US customers, in the same period, also increased 130% while non-US customer sales increased 52%.

Exhibit 4



The acquisition of Glove also generated an increased cost but Allied managed, in the same period, to decrease selling expenses as a percentage of sales; demonstrating the result of Allied Motion’s lean initiative. As mentioned R&D was increased due to Globe’s own program; 2014 saw a 75% increase in R&D expenses. As a percentage of sales, however, this increase actually reduced from 2014’s R&D as a percentage of sales.

Exhibit 5



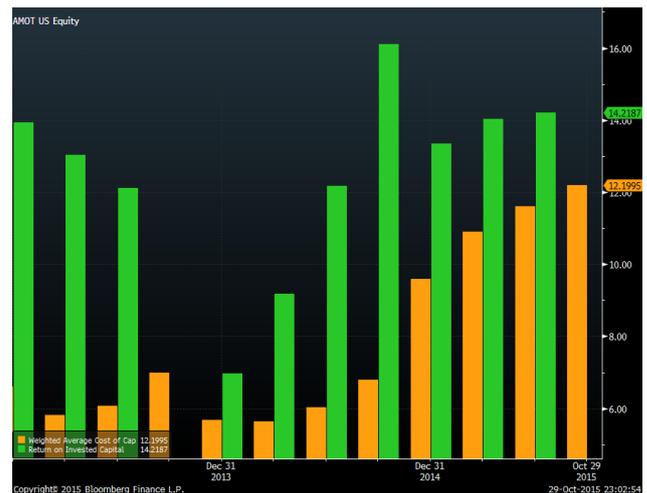
The balance sheet paints Allied in a safe position. The firm’s unadjusted D/E currently lies at 1.24, historically debt was not a large percentage compared to equity, the nearly 0% debt that was found prior to 2013 changed upon the financing of a portion of the cash price paid for Globe Motors, Inc. The debt financed matures in 2018. Total net debt over EBITDA is currently 2.00

times; with 3 years to pay off the full maturity of the debt, it is reasonable to assume that the loan will not require re-financing in the long term, coupled with the firm’s ability to generate cash leaves confidence in not worrying about the payment of debt. Total cash stands at 11.34M reduced from the previous period but well above historical total cash, which averaged 4.59M in the 7 year period starting in 2005.

A 25% growth of revenue was achieved in the LTM, which is nearly a -75% change in growth from the percentage attained in 2014, This provides insight into the length of the growth achieved with the acquisition. The growth was mainly produced in the first two or three quarters of 2014. The reasoning for the growth in the last period is mainly organic in contrast to the primarily inorganic growth found in 2013-2014 due to the acquisition of Globe. The key result of the acquisition was the explosion in Allied Motion’s growth in the Aerospace and Defense industry. The most striking metric, which is linked to growth in other margins, is NOPLAT as a percentage of revenue; in the LTM a NOPLAT of 10% was attained, matching the previous period (2014), and was well above NOPLAT in 2005 that stood at 4% of revenue. Linked to ROIC, NOPLAT, is a piece of the puzzle for the future to determine whether Allied Motion Technologies, Inc. is creating value.

Both WACC and ROIC have seen comparable growth, indicating Allied Motion Technologies, Inc. has shown historical attainment of value creation, and will likely continue into the convergence period. The increase in WACC is attributable to an increase in both cost of debt and cost of equity. Weights of equity and debt throughout the history of the company have been volatile. Equity reached a high weight in 2010 of 88.30%, but has been as low as 54%.

Exhibit 6



As compared to select peers in the current period Allied Motion has produced increased growth in key metrics. The average sales growth for the peers was 5.52%, Allied Motion attained growth, via acquisitions (inorganic) and organic growth through initiatives and increased exposure, of 25.18%. A 54% growth in EBITDA through similar reasons to sales was larger than the average of 8.21%. The growth in EBITDA is expected to rise, considering all firms converge to industry or peer averages. Allied Motion, currently produces a 13.31% EBITDA margin, below the 17.17% average margin achieved by peers. Increasing economies of scale and focus on reducing operating costs will be key for Allied Motion to mimic the peers. Return on Invested Capital, Return on Assets and Return on Equity are all above peer average from 4 to 9 percentage points each. Overall the firm has shown that the future convergence will mimic either peers or the sub-industry, with room to grow it is imperative that Allied Motion Technologies Inc. focuses on initiatives that, in the long term, will situate their ratios closer or above the averages.

## What is the Market Seeing or Not Seeing?

Average 3 month daily volume is only 114,224, according to YAHOO finance. Majority ownership is 50.76% by investment advisors; 7.66% of the shares outstanding are owned by Juniper Investment Company, focused on investments offering unique market opportunities, and providing alpha-driven returns provides some insight into perceived notions about Allied Motion. The ownership is divided even further, individuals account for 36.34% of ownership, the ESOP's share of ownership is 5.45%.

On June 26, 2014, a large volume of trading occurred, approximately 1.015 million shares were moved, compared to an average volume of .095 million that day's volume was a substantial percentage (968% increase). The only explanation provided is two SEC filings, from June 24, 2014, of Form 4 (Statement of Changes in Beneficial Ownership of Securities). The form, which relays notification of insider trading was filed as a result of instruction for tax reasons pertaining to the ESOP of Allied Motion. Interest in the firm may also have been generated as the end of Q2 of Allied Motion fell on June 30<sup>th</sup>, 2014.

I believe the market is not fully enticed by Allied Motion and for that reason, the firm is not being examined by investors. The firm is small, with a market cap of

192.88M it will be ignored by investors as being too small to examine. This theory is further developed by the lack of analyst coverage.

## Valuation

The valuation of Allied Motion Technologies Inc. is based on a valuation computed by a pro forma using a discounted cash flow model and a main focus on return on total capital. At the end of the report is attached a brief overview of assumptions and results of the pro forma.

When valuing Allied Motion a conservative approach has been applied. Because of the nature of the business and length of time Allied Motion has been in the industry a 5 year period to convergence was chosen.

Growth rate in the LTM was 98%, primarily as a result of the Globe acquisition in late 2013. No analyst's forecasts are available and management relayed no quantitative information as to future growth of the corporation. Based on further growth in the Aerospace and Defense, and Electrical Equipment markets it was apparent that a percentage of the growth attained in the LTM will continue in the upcoming periods. The diversification and large customer base will bode well in the organic growth of the firm.

The financial metrics of the firm were made to converge to peers, with some metrics chosen to stay constant due to a large difference in peer average compared to Allied Motion's current (LTM) value. These metrics were used to attain a valuation of the company converging to peer averages through the continuing period. The intrinsic value of the firm based on ROC and a market premium of 5.5% was too large of a gap to take serious. Two premiums, based on Fama-French concepts, were added to the market premium of 5.5%. A premium of .52% was added based on the benchmark factor, Small Minus Big (SMB), calculated from averaging returns of small cap and large cap firms from 1926 to the current period. .98% was unaccounted for but reasoning led to country risk, based on Allied Motion's operations and sales in foreign countries. The 7% market premium used in the final version of the pro forma computed a firm intrinsic value of \$20.47, 11 cents from the current price.

## Summary

Analytics leads me to believe that Allied Motion Technologies, Inc. is a true diamond in the rough that has managed to remain undetected – until the release of

this analysis – the remaining question, however is when interest will generate for the firm. I believe large organic or inorganic growth in sales will be the primary catalyst that will garner interest in the future value of the firm as a whole. Barring any future problems or negative outcomes, I see this firm growing further and surpassing the historical high, recorded on the last day in March of 2015, of \$33.19. The firm will be webcasting their Q3 Earnings Report on November 11, 2015, the outcome of the call will generate a new future value for the firm, the time to decide is short but currently the analysis and valuation presented for Allied Motion Technologies Inc. points only to one decision, BUY.

Exhibit 7

Sensitivity Analysis Results	Attribution
Revenue Variation	82.4%
Market Risk Premium (Long term country risk estim	-12.5%
Op. Costs Variation	-4.7%
Continuing period growth in revenues	0.3%

Sources:

- Allied Motion Technologies Inc. , 10-K
- Capital IQ
- Bloomberg
- SEC
- www.alliedmotion.com
- Seeking Alpha AMOT Q2 2015 results – Earnings Call Transcript
- Fama-French data was found at <http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/>
- <https://www.mapi.net/research/publications/us-industrial-outlook-september-2015>



## Cabot Corporation

CBT: NYSE

Analyst: Mark Papuzza

Sector: Materials

**BUY**

Price Target: \$44.36

### Key Statistics as of 10/27/15

Market Price:	\$35.82
Industry:	Chemicals
Market Cap:	\$2.32 B
52-Week Range:	\$30.70-49.69
Beta:	1.15

### Thesis Points:

- Leading Producers
- Margin Restoration
- Financials – EBITDA margins, Free Cash Flow

### Company Description:

Cabot Corporation operates as a specialty chemicals and performance materials company. The company manufactures and sells carbon black, fumed silica, plastics, ink jet colorants, tantalum, niobium, and germanium. Cabot Corporation's specialty fluids business produces and markets cesium formate as a drilling and completion fluid for use in oil and gas well operations. Cabot was founded in 1882 and is headquartered in Boston, Massachusetts.



## Thesis

---

Cabot Corporation is a leading global specialty chemicals and performance materials company. The company produces a wide range of products for customers all over the world, and serves several industries including transportation, infrastructure and environment. Being the leading producer for several of their key products, combined with their current margin restoration process, Cabot Corporation will continue to improve their EBITDA margins and continue to create value for the company and increase the price of their stock.

## Leading Producers

---

The specialty chemicals field is a highly competitive market. In order to succeed in this industry, it is essential to have a competitive advantage over the competition, and Cabot has just that. Cabot's competitive advantages includes their global manufacturing presence, product differentiation and technological leadership. With 46 facilities in 21 countries, Cabot's global presence is known. As for their product differentiation, the company has four major product segments: Reinforcement Materials, Purification Solutions, Performance Chemicals, and Specialty Fluids. Reinforcement materials is the largest segment, accounting for 58.6% of their revenue. Performance chemicals comes in next at 26.7% of their revenue, followed by purification solutions at 8.9% and lastly specialty fluids at 2.8%.

The reinforcement materials segment is the largest due to their production of carbon black, and Cabot is one of the leading manufacturers of carbon black in the world. Carbon black is a form of elemental carbon that is manufactured to produce particles of varied structure and surface chemistry, and ultimately serves a wide range of end results. It is made from the residual heavy oils derived from petroleum refining operations, from the distillation of coal tars, and natural gas. Cabot mainly focuses on rubber black products, which are used heavily in the tire industry. Rubber blacks act as a rubber reinforcement and improve the quality and performance in industrial products. Being that the majority of the company's production of rubber blacks goes into automotive

products, the success of this product and the reinforcement materials sector depends on the demand of the automotive industry. Currently, the outlook on the automotive and tire industry looks strong. Overall mobility trends have been growing, and so the tire industry has followed suit. Demand has been growing fastest in North America and Europe, which can be credited to several factors including the decrease in oil and gas prices. Being one of the leading producers of a product essential to an industry that is growing can only lead to success for Cabot.

On top of carbon black, Cabot is also a leading producer of two other products needed worldwide. The company is a top producer of specialty compounds in Europe, the Middle East and Asia, and also of the product fumed silica. Fumed silica serves as a thickening agent in powders, and is essential for well-known products such as paint, printing ink and toothpaste.

## Margin Restoration

---

Being that reinforcement materials is Cabot's key product segment, having a poor year profitability wise has taken a toll on the company. The reasons for the decline in profitability this year include the negative feedstock effects, the decrease in oil prices, and the negotiation of last year's contracts. This is the company's number one priority to take care of, and they have a margin restoration plan set to get back on the right path immediately. The price of carbon black will be increased to keep up with the rising costs of sustainability for the product. Cabot focuses on a "value over volume" approach, and so the price adjustment for carbon black is necessary. The benefit from the rise in price will be evident in the first quarter of 2016. This increase in price will not hurt Cabot's sales, as this product continues to grow in demand. With this demand, Cabot is in a stronger contract position and so contracts are expected to be more favorable this year. The full effect from the new contract negotiations will show in 2016.

This past week, Cabot made an announcement of their new restructure plan. This plan is expected to terminate approximately 300 positions globally, saving

approximately \$50 million. These savings will make an impact in the second quarter of 2016. This change in cost structure is intended to improve the company's competitiveness and will further help the margin restoration process.

## Financials – EBITDA margins, Free Cash Flow

---

One of the most notable aspects on Cabot Corporation's balance sheet is the EBITDA margins. Cabot's EBITDA margins have consistently outgrown their revenue growth in each of the past four years, and is estimated to continue this trend in the upcoming years. This validates that the company is creating value, and eliminating operating expenses that are eating into their bottom line.

Another notable feature on Cabot's balance sheet is the company's free cash flow. Cabot has been tightly managing their CAPEX to maximize their free cash flow for the margin restoration process. They have had positive cash flow each of the past four years, and currently have a free cash flow of \$249 million; the highest amount they have had in twenty-six years. At the rate they are going, Cabot is expected to finish the year with free cash flow of approximately \$352 million, which would be the most the company has ever had.

Cabot's ratios are also worth noting when viewing their financials. The P/E ratio of the company is 16.45, compared to its peer's average P/E ratio of 21.97. This lower ratio can be used to view the company as undervalued. The P/E ratio does not take into account debt, however, and so the next ratio to look at will be the EV/EBITDA ratio. Cabot's EV/EBITDA ratio is 7.58, compared to its peer's average ratio of 11.24. While taking debt into account, this ratio determines the value of a company, and being that Cabot has a lower ratio than its peers the company can be viewed as undervalued. Another key ratio to view is the company's ROIC/WACC. This ratio comes out to 1.63, proving that the company is creating value.

This past quarter, Cabot repurchased 575,000 shares

---

from the market for \$24 million. The company has now repurchased 1,800,000 shares this year for a total of \$80 million. At this time, Cabot believes the best investment they can make is in themselves. With the amount of shares Cabot has reduced from the market this year, it indicates that they believe the shares are undervalued. Also noteworthy, Cabot has consistently paid dividends each quarter they have operated. This goes hand in hand with the company's key objective of creating value for their shareholders.

## Conclusion

---

I am recommending a buy on Cabot Corporation because they will continue to grow financially as a result of being the leading producers of the product carbon black, and as a result of their margin restoration process. The company will continue to grow their EBITDA margins, and will continue to make the necessary adjustments in their cost pricing and cost structure in order to create value for the company and increase the price of their share.

---

**CENTER FOR GLOBAL FINANCIAL STUDIES**

<b>Cabot Corporation</b>		<b>cbt</b>	<b>Analyst</b> Mark Papuzza	<b>Current Price</b> \$35.82	<b>Intrinsic Value</b> \$39.02	<b>Target Value</b> \$44.36	<b>Dividend</b> 2%	<b>1-y Return: 26.2%</b>	<b>NEUTRAL</b>	
<b>General Info</b>		<b>Peers</b>		<b>Market Cap.</b>		<b>Management</b>				
Sector	Materials	Albemarle Corporation		\$5,910.79		<b>Professional</b>	<b>Title</b>	<b>Comp. FY2012</b>	<b>Comp. FY2013</b>	<b>Comp. FY2014</b>
Industry	Chemicals	Axiell Corporation		\$1,382.51		Prevost, Patrick	Chief Executive Officer, President, Dir	\$6,327,852	\$5,781,798	\$6,309,405
Last Guidance	August 4, 2015	Celanese Corporation		\$10,253.66		Cordeiro, Eduardo	Chief Financial Officer, Executive Vice	\$1,931,357	\$1,784,558	\$2,028,843
Next earnings date	November 2, 2015	RPM International Inc.		\$5,392.33		Berube, Brian	Senior Vice President and General Cou	\$1,440,305	\$1,285,120	\$1,428,715
<b>Market Data</b>		Koppers Holdings Inc.		\$390.10		Keohane, Sean	Executive Vice President and President	\$1,565,274	\$1,353,952	\$1,542,243
Enterprise value	\$3,513.70	Eastman Chemical Co.		\$10,656.26		Kelly, James	Principal Accounting Officer, Vice Pres	\$0	\$0	\$0
Market Capitalization	\$43.77	Air Products & Chemicals Inc.		\$30,048.10		Kutsovsky, Yakov	Chief Technology Officer and Senior V	\$0	\$0	\$0
Daily volume	0.02	Trinseo SA		\$1,518.46		<b>Past Earnings Surprises</b>				
Shares outstanding	62.91	E. I. du Pont de Nemours and Com		\$54,625.07		<b>Revenue</b>	<b>EBITDA</b>	<b>Norm. EPS</b>	<b>Standard Error of "Surprise"</b>	
Diluted shares outstanding	63.95	<b>Current Capital Structure</b>				Last Quarter	-10.44%	0.00%	-12.33%	3.83%
% shares held by institution:	7.43%	Total debt/Common Equity (LTM)		1.10		Last Quarter-1	-15.77%	-58.29%	-15.87%	14.16%
% shares held by insiders	1.10%	Cost of Borrowing (LTM)		4.61%		Last Quarter -2	-7.31%	3.91%	25.00%	9.47%
Short interest	1.16%	Estimated Cost of new Borrowing		6.36%		Last Quarter -3	-2.15%	7.04%	3.66%	2.68%
Days to cover short interes	2.03	Altman's Z		3.09		Last Quarter -4	-0.21%	0.00%	-2.22%	0.70%
52 week high	\$48.40	Estimated Debt Rating		CCC		Standard error	2.8%	12.3%	7.2%	4.60%
52-week low	\$30.70	Current levered Beta		1.37		Standard Error of Revenues prediction	2.8%	<b>Industry Outlook (Porter's Five Forces)</b>		
5y Beta	1.63	LTM WACC		6.35%		Imputed Standard Error of Op. Cost predicti	12.0%	Bargaining Power of Suppliers (25th Percentile), Bargaining Power of Customers (43th Percentile), Intensity of Existing Rivalry (33th Percentile), Threat of Substitutes (100th Percentile), Threat of New Competition (100th		
6-month volatility	29.43%					Imputed Standard Error of Non Op. Cost prc	NM			
<b>Proforma Assumptions</b>										
<b>Divergence Assumption</b>		<b>General Assumptions</b>			<b>Items' Forecast Assumptions</b>				<b>Other Assumptions</b>	
<b>All base year ratios linearly converge towards the Sub-industry ratios over an explicit period of 5 years</b>		Money market rate (as of today)	0.35%	Operating Cash/Rev.	0.00%	<b>Base year (LTM)</b>	<b>Divergence period (Sub-industry adjustment per year)</b>	Tobin's Q	80%	
		Risk-Free rate (long term estimate)	2.87%	NWV/Rev.	21.83%			Excess cash reinvestment	Money market rate	
		Annual increase (decrease) in interest rates	0.1%	NPPE/Rev.	45.87%			Other claims on the firm's asset	\$0.00	
		Marginal Tax Rate	37.5%	Dpr/NPPE	12.26%			<b>Capitalization</b>		
		Country Risk Premium	5.5%	NOPAT MARGIN	7.33%			100% of all rent expenses are capitalized and amortized 'straightline' over 10 years		
<b>Forecast Year</b>	<b>Revenue Growth Forecast</b>	<b>Revenue (\$)</b> Forecast		Op. Exp./Rev.	83.33%			100% of all R&D expenses are capitalized and amortized 'straightline' over 10 years		
LTM		\$3,111.00		SBC/Rev.	0.48%			E&P expenses are not capitalized		
FY2015	-6.4%	\$2,911.30		Rent Exp./Rev.	0.84%			SG&A expenses are not capitalized		
FY2016	1.9%	\$2,367.22		R&D/Rev.	1.83%			<b>Valuation Focus</b>		
FY2017	2.9%	\$3,053.27		E&D/Rev.	0.00%			DCF Valuation	100%	
FY2018	7.7%	\$3,288.37		SG&A/Rev.	8.78%			Relative valuation	0%	
FY2019	4.7%	\$3,442.93		ROIC	8%			Distress Valuation	0%	
FY2020	3.9%	\$3,575.48		EV/Rev.	1.14x			<b>Monte Carlo Simulation Assumptions</b>		
FY2021	3.4%	\$3,697.34		EV/EBITDA	10.40x			Revenue Growth deviation	Normal (0%, 1%)	
FY2022	3.2%	\$3,816.74		Debt/Equity	110%			Operating expense deviation	Normal (0%, 1%)	
FY2023	3.1%	\$3,935.29		Unlevered beta	0.81			Continuing Period growth	Triangular (5.33%, 5.5%, 5.66%)	
FY2024	3.1%	\$4,055.44		Dividends/REV	2%			Country risk premium	Triangular (2.31%, 3%, 3.09%)	
Continuing Period	3.0%	\$4,177.11						Intrinsic value of (€)	\$0.03	
								1-year target price of (€)	\$0.10	
<b>Valuation</b>										
<b>Forecast Year</b>	<b>ROIC</b>	<b>WACC</b>	<b>Invested Capital</b>	<b>Implied Enterprise Value</b>	<b>Claims on Assets and Dilution</b>	<b>Shares Outstanding</b>	<b>Price per Share</b>	<b>Monte Carlo Simulation Results</b>		
LTM	8.3%	6.3%	\$2,663.37	\$3,838.87	\$1,475.02	62.31	\$62.66			
FY2015	8.0%	6.8%	\$2,381.98	\$3,605.45	\$891.83	62.31	\$43.91			
FY2016	9.4%	7.0%	\$2,338.30	\$3,591.58	\$803.69	62.31	\$45.29			
FY2017	9.8%	7.2%	\$2,329.72	\$3,612.07	\$666.10	62.31	\$48.58			
FY2018	10.5%	7.3%	\$2,436.65	\$3,739.61	\$579.24	62.31	\$51.48			
FY2019	10.4%	7.5%	\$2,478.24	\$3,807.47	\$400.07	62.31	\$49.76			
FY2020	10.6%	7.9%	\$2,573.63	\$3,941.01	\$353.28	62.31	\$52.28			
FY2021	10.6%	8.0%	\$2,662.47	\$4,073.86	\$285.07	62.31	\$55.06			
FY2022	10.5%	8.1%	\$2,749.06	\$4,210.80	\$222.35	62.31	\$57.92			
FY2023	10.5%	8.2%	\$2,835.63	\$4,354.73	\$154.35	62.31	\$60.93			
FY2024	10.5%	8.3%	\$2,923.59	\$4,507.86	\$80.60	62.31	\$64.26			
Continuing Period	12.5%	8.4%	\$2,040.30							

**The 3σ(-)-adjusted intrinsic value is \$39.02; the 3σ(-)-adjusted target price is \$44.36; and the analysts' median target price is \$46.4**

**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

## Span-America Medical Systems Inc.

NasdaqGM:SPAN

**Analyst:** Coralie Cornern

**Sector:** Healthcare

**BUY**

Price Target: \$33.74

### Key Statistics as of 10/29/2015

Market Price:	\$18.10
Industry:	Medical Appliances and Equipment
Market Cap:	\$52.60 M
52-Week Range:	\$16.44-\$21.62
Beta:	0.13

### Thesis Points:

- Share repurchase Program and raise in quarterly dividends
- Strong financial position, 100% equity composition
- Broad product portfolio with continuous products innovation

### Company Description:

Span-America Medical Systems Inc. was founded in 1970 and is headquartered in Greenville, South Carolina. It manufactures and distributes various therapeutic support surfaces and related products for the medical, consumer, and industrial markets in the United States and Canada. It operates through two segments, Medical and Custom Products. The Medical segment offers various medical products consisting of polyurethane foam mattress overlays, non-powered and powered therapeutic support surfaces, patient positioners, medical beds, and tables and related in-room furnishings, as well as seating, skin care, and fall protection products to acute care hospitals, long-term care facilities, and home health care providers. The Custom Products segment provides consumer bedding products comprising convoluted and contour-cut mattress overlays, and specially designed pillows for the consumer bedding market; and engineered industrial products, including engineered foam products that are used in various markets, such as automotive, packaging, durable goods, electronics, and water sports equipment industries. The company went public in July 1983.



## Thesis

---

Span-America Medical Systems Inc. provides medical, consumer, and industrial markets with polyurethane foam based surfaces for the prevention and treatment of pressure ulcers. Pressure ulcers are all kind of injuries to skin and underlying tissue resulting from prolonged pressure on the skin. Span has a very large portfolio of product, mostly patented, that management is willing to improve regularly. Innovation and improvements are key to Span. The company is in a very strong financial position with cash on hand and a hundred percent equity structure. Furthermore, the CEO announced in last earning calls a raise in quarterly dividends. Adding that to the repurchase program announced on 2<sup>nd</sup> October, it is clear that management believes that the company is currently undervalued. Moreover, the latest ROIC/WACC ratio was 2.78x which shows that Span is creating value.

A buy of Span-America Medical Systems Inc. is therefore recommended with a one-year target price of \$33.77. Currently trading at \$18.10, it has an upside potential of 92.27%.

## Product Portfolio

---

Span America is providing products to healthcare professionals as well as to private users through retailers. The company develops manufactures and markets beds, surfaces, seating, positioners, skin care fall protections and furniture. Most of their product are polyurethane foam based. Span's medical sales including mainly therapeutic support surfaces, Medical bed frames and patient positioners accounted for 76% of their total sales end of 2014. The 24% remaining is the custom products segment that includes consumer bedding and industrial products. The company product line include several patented medical technologies. Those patented products are continually improved year on year. The Pressure Guard technology for example was first acquired in 1993 and was polyurethane foam shell and static air cylinders to form a replacement mattress that incorporates the comfort and pressure relieving features of both mattress overlays and more sophisticated dynamic mattresses. This design has been upgraded several times and was the base of today's Pressure Guard, which is an industry-leading air therapy powered solution providing alternating

pressure and lateral

rotation in one surface. Many of the patented technology that Span created, such as the Pressure Guard but also Span-Aids (patient positioner) or TerryFoam comfort products are designed for long term care, either hospice, home or rehab care. Another part of Span's long term care business is M.C Healthcare. Span acquired M.C in 2011 to add medical bedframes to their portfolio. Span decided to maintain M.C Healthcare as the name of the subsidiary. The demand for medical bedding as well as seating products is unlikely to fall in the future. Indeed, the population is aging and has increased access to Health insurance, which should create further demands for span products in the future. Another factors corroborating that demand will remain stable is that there will always be people in need of medical bedding or custom foam products to improve their life conditions; for example tetraplegic and paraplegic young people are to use those kind of products, which provide lateral rotation their whole life in order to improve blood circulation. Span America's newest product is called Encor, and is a long term care premium bed that offers superior fall prevention, staff protection and protection from shearing, which has been driving sales up the last quarter and should continue to gain momentum among Span's customer.

## Porter's Five Forces

---

The bargaining power of suppliers can be classified as relatively low. Span's basic raw materials are in adequate supply and are available from many suppliers at competitive prices. This implies a high level of competition among suppliers which acts to reduce prices.

The bargaining power of customers on the other hand is medium. Span as quite a large number of competitors so clients have choices available and can decide to pay less for lowest quality products. The bargaining power of customer is measured as medium rather than low because when customer cherish one particular product they are likely to pay a premium for this product. Span has the competitive advantage of offering very high quality products. It is also mentioned in Span's annual report tan they have rapid delivery capabilities and responsiveness to customer requirements. Moreover, the firm offer customizable products which is another competitive

advantage to meet customer demand. A lot of Span's products are

patented and therefore unique. The company does not normally have to fear a loss in customers' number, but it might be more difficult to gain new customers due to competition.

The intensity of existing rivalry is high as mentioned in the above paragraph. Most of Span's competitors have greater resources and are larger than them. But the Medical Appliances and Equipment industry is large which allows multiple firm to prosper without having to steal market share to each other. The threat of competition exist but is not the major concern of the company.

The threat of substitutes is low as customers cannot easily find other products that would meet their need.

The threat of new competitors is low. Span America holds patents that will protect their products and technologies. The barriers to entry as well as the learning curve are high. Potential competitors would spent tremendous amount of time and money trying to compete with already patented methods.

## Management

---

James Ferguson joined the company in 1990 as a materials manager and is now CEO, President and Director of Span America Medical Systems. During his 25 years inside the company he serve as materials manager, plant manager, director of contract packaging and VP of operations before being appointed CEO in 1996. It is very valuable to have operation people serving as CEO, especially when they have been in a company for a long time as they would know the business perfectly. Thomas Henrion is the chairman, a member of compensation committee and a member of nominating committee of the company since 1996. He has been chosen for his extensive experience in several industry rather than for any expertise in Healthcare or Medical Appliances and Equipment industry. Henrion has more than 30 years of experience in executive management in corporate finance and investment field. Richard Coggins, CFO of the company joined in 1986 as a controller, just like Ferguson he occupied different position among Span before becoming CFO. The fact that the company is able to keep its senior executives and highly skilled employees over the years is a catalyst

for the company's growth.

It has been announced the 2<sup>nd</sup> October 2015 that Span had repurchased 261,310 shares of its common stock

from Robert Johnston and his affiliate, The Jerry Zucker Revocable Trust, for \$4.6 million. The decision of repurchasing has been made as management believe in the stock current undervaluation. Following this event, Johnston resigned from the board of directors as he does not own stocks in the company anymore.

## Financials

---

2014 has been a deceiving year for the company has sales decreased 24% compared to 2013. The stock price therefore dropped after 2014 results. The poor performance was mainly due to the loss of a large retail customers in February that the company regained at the end of the same year. Before the deceiving year of 2014, Span had two years of record revenues and the company has been profitable for 25 years.

Last quarter showed solid sales and earnings. Even though it is compared to a weak year, last quarter performance were strong on an absolute basis too. Sales went up 19%, 13% increased for medical sales and 40% for custom sales. The growth in sales is a very healthy sign for the business as it was not driven by any large corporate orders as one could have believed. Earnings increased 155% compare to Q3 2014 driven by the higher sales volume and by a more profitable medical sales mix. During the last quarter, M.C Healthcare sales improved 39% and led the Gross Profit to increase 25%. The reason why the gross profit increased this much is because most of M.C's costs are fixed. Operating profit last quarter was up 130% compared to Q3 2014 thanks to the combination of increase in sales, more profitable sales mix and lowered rate of growth in operating expense.

Concerning the balance sheet, Span is in excellent shape as in previous years. The company has always had comfortable amount of cash on hand. The firm had \$6.2 million on hand the latest quarter, recording a 10% decrease compared to last year due only to special dividends paid, those were the fifth special dividends, and 102<sup>nd</sup> consecutive quarterly dividend. Moreover, Span's CEO announced during the last earning call that the company was going to increase dividend from \$0.15 to \$0.16, which is a sign that management truly believes that Span is a growing, healthy firm and that

they are able to sustain this level of dividend. It is important to note that the company does not have any debt, and absolutely no financial risk. A company

composed of one hundred percent equity is very attractive, especially when the company is managing its cash so well.

## Bullish guidance from management

More than the share repurchase program and the dividend increase, the bullish guidance from management during the last earning call was very clear. Announcing increases only, CEO and CFO were both very confident about the future growth in Q4. Jim Ferguson declared that there were some opportunities for large corporate orders in the medical business that would add sales on top of the normal sales growth. Moreover, new products will be introduced in Q4 to further compete with the current competitors. One of them is the Topper Micro Environment manager, a patented pressure redistributing support surface.

## Valuation

The valuation of Span America 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.

A 2% premium has been added to the market risk premium consisting of market premium and country risk premium due to the number and size superiority of competitors. Span is also selling in Canada (10.8% of sales) but the country has the same risk premium as the United States, which does not further impact the market risk.

When valuing Span America, a fast decay growth rate has been utilized to determine the speed of reversion toward long term stability as the company is likely to reach long term stability in a few years only. James Ferguson, the CEO, has been working for 25 years to help the company reach long term stability.

Another important assumption made in the proforma is that the company will not be able to significantly decrease its operating cost. The company is in the business since 1970, and the CEO has been present for 25 years so he probably knows the business and has already been able to negotiate

with the suppliers. It is unlikely that management engage in cost cutting strategy.

There is not any analysts' estimates concerning Span growth so the industry average growth has been utilized to forecast growth rate for FY 2016. In the following years, revenue growth has been set to decline year-over-year to reach a revenue growth for the long-term of 3% in 2020.

Both Net and NOPAT margins are due to increase in the future. From 6.24% to 7.14% and 6.02% to 7.22% respectively in the long term.

The below ratios further proves that Span is undervalued. The company is traded at lower levels than its competitors.

	Span America	Peers	Δ
EV/Revenue	0.83x	2.04x	146%
EV/EBITDA	9.44x	11.14x	18%

Furthermore, the Debt to Equity impact on Weighted average cost of capital is almost the same (9.4% and 9.5%) at the end of the explicit period and at the beginning of the continuing period. This implies smooth and healthy growth for Span, which further justifies the used of an ROIC model for the valuation.

Following the assumptions used in the proforma, the stock has an upside potential of 92.27%, with a one year target price of \$33.74.

## Summary

Span-America Medical Systems Inc. is currently creating value as per their latest ROIC/WACC ratio of 2.78. Management is very confident in the firm's ability to further grow. One of the future growth catalyst is the fact that American and Canadian population is aging and getting heavier which should increase demand for Span product. Moreover Span management decided to repurchase 5% of its shares outstanding and increased its quarterly dividend. Those are very positive signals. The company has a strong and diversified patented product portfolio that is significantly better than competition.

Sources:

- Span America Medical Systems , 10-K
- Capital IQ
- Bloomberg
- Yahoo finance

- <http://www.businesswire.com>.
- <http://www.ibisworld.com>

CENTER FOR GLOBAL FINANCIAL STUDIES									
Span-America Medical Systems Inc.		Analyst	Current Price	Intrinsic Value	Target Value	Divident Yield	1-y Return: 92.27%	<b>BULLISH</b>	
span		Coralie Cornern	\$17.88	\$33.77	\$33.74	4%			
General Info		Peers	Market Cap.	Professional	Title	Comp. FY2012	Comp. FY2013	Comp. FY2014	Management
Sector	Healthcare	Hill-Rom Holdings, Inc	\$2,965.87	Henion, Thomas	Chairman, Member of Compensation Comm	\$41,180	\$43,600	\$47,700	
Industry	Healthcare Equipment and Supplies			Ferguson, James	Chief Executive Officer, President and Direct	\$397,420	\$357,757	\$338,616	
Last Guidance	August 8, 2015			Coggins, Richard	Chief Financial Officer, Chief Accounting Offi	\$255,596	\$232,528	\$220,389	
Next earnings date	November 6, 2015	Invaare Corporation	\$603.93	Shew, Clyde	Vice President of Medical Sales and Marketing	\$266,962	\$242,326	\$230,347	
Market Data		Peers	Market Cap.	Management					
Enterprise value	\$47.28	Stenis Corp.	\$4,250.92	Ackley, Robert	Vice President of Custom Products	\$229,354	\$207,837	\$195,188	
Market Capitalization	\$291,281.98	West Pharmaceutical Services, Inc.	\$4,317.34	O'Reagan, James	Vice President of Research & Development an	\$213,497	\$192,308	\$182,861	
Daily volume	65.52	The Cooper Companies Inc	\$7,243.47	Past Earning Surprises					
Shares outstanding	2.99	Alere Inc	\$3,943.51	Revenue	EBITDA	Norm. EPS	Standard Error of "Surprise"		
Diluted shares outstanding	3.00	Integra LifeSciences Holdings Corporati	\$2,141.50	Last Quarter	-17.65%	0.00%	-61.76%	18.37%	
% shares held by institutions	57.59%	Current Capital Structure		Last Quarter-1	-8.46%	0.00%	-11.76%	3.50%	
% shares held by insiders	14.74%	Total debt/Common Equity (LTM)	0.11	Last Quarter-2	-6.19%	0.00%	-26.67%	8.06%	
Short interest	0.13%	Cost of Borrowing (LTM)	0.00%	Last Quarter-3	0.00%	0.00%	0.00%	0.00%	
Days to cover short interest	1.69	Estimated Cost of new Borrowing	2.63%	Last Quarter-4	0.00%	0.00%	0.00%	0.00%	
52 week high	\$21.62	Altman's Z	8.80	Standard error	3.3%	0.0%	11.5%	4.32%	
52 week low	\$16.44	Standard Error of Revenues prediction	AAA	Imputed Standard Error of Op. Cost prediction	NM	Industry Outlook (Porter's Five Forces) Bargaining Power of Suppliers (88th Percentile), Bargaining Power of Customers (43th Percentile), Intensity of Existing Rivalry (67th Percentile), Threat of Substitutes (67th Percentile), Threat of New Competition (100th Percentile), and Overall (88th Percentile).			
5y Beta	0.28	Current Levered Beta	-0.42	Imputed Standard Error of Non Op. Cost prediction	11.5%				
6-month volatility	35.02%	LTM WACC	-0.11%	Proforma Assumptions					
Convergence Assumptions		General Assumptions		Items' Forecast Assumptions			Other Assumptions		
	Money market rate (as of today)	0.32%		Base year (LTM)	Convergence period (Peers)	Adjustment per year	Tobin's Q	80%	
	Risk-Free rate (long term estimate)	2.92%	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.	15.55%	20.16%	0.4%	Other claims on the firm's assets	\$0.00	
	Marginal Tax Rate	37.5%	NPPE/Rev.	7.85%	26.32%	1.5%	Capitalization		
	Country Risk Premium	7.5%	Dpr/NPPE	12.09%	15.75%	0.3%	100% of all rent expenses are capitalized and amortized 'straightline' over 10 years		
			NOPAT MARGIN	6.02%	12.06%	0.5%	100% of all R&D expenses are capitalized and amortized 'straightline' over 10 years		
Forecast Year	Revenue Growth Forecast	Revenue (\$) Forecast	Op. Exp./Rev.	90.68%	90.00%	-0.1%	E&P expenses are not capitalized		
LTM		\$59.61	SBC/Rev.	0.04%	0.96%	0.1%	SG&A expenses are not capitalized		
FY2015	1.8%	\$60.69	Rent Exp./Rev.	0.63%	1.51%	0.1%	Valuation Focus		
FY2016	2.4%	\$62.14	R&D/Rev.	1.90%	3.54%	0.1%	DCF Valuation	100%	
FY2017	2.7%	\$63.82	E&D/Rev.	0.00%	0.00%	0.0%	Relative valuation	0%	
FY2018	2.9%	\$65.64	SG&A/Rev.	24.92%	30.64%	0.5%	Distress Valuation	0%	
FY2019	2.9%	\$67.56	ROIC	13%	16.19%	0.23%	Monte Carlo Simulation Assumptions		
FY2020	3.0%	\$69.56	EV/Rev.	0.83x	1.54x	0.06x	Revenue Growth deviation	Normal (0%, 1%)	
FY2021	3.0%	\$71.63	EV/EBITDA	9.44x	7.98x	-0.12x	Operating expense deviation	Normal (0%, 1%)	
FY2022	3.0%	\$73.78	Debt/Equity	11%	74.7%	61.3%	Continuing Period growth	Triangular (5.335%, 7.5%, 5.665%)	
FY2023	3.0%	\$75.99	Unlevered beta	-0.40	0.80	0.10	Country risk premium	Triangular (2.91%, 3%, 3.09%)	
FY2024	3.0%	\$78.26	Dividends/REV	3%	1%	-0.1%	Intrinsic value of(e)	\$0.38	
Continuing Period	3.0%	\$80.61					1-year target price of(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	13.5%	-0.1%	\$25.21	\$86.94	-\$1.42	2.99	\$33.73		
FY2015	14.3%	0.7%	\$27.28	\$86.04	-\$2.66	2.99	\$33.84		
FY2016	13.7%	1.5%	\$29.73	\$86.07	-\$1.91	2.99	\$33.54		
FY2017	12.9%	2.4%	\$32.44	\$86.98	-\$1.87	2.99	\$33.56		
FY2018	12.1%	3.2%	\$35.38	\$88.72	-\$0.77	2.99	\$33.61		
FY2019	11.4%	4.0%	\$38.50	\$91.31	\$0.43	2.99	\$33.85		
FY2020	10.7%	4.7%	\$41.80	\$94.82	\$1.70	2.99	\$34.30		
FY2021	10.1%	5.5%	\$45.28	\$99.31	\$2.93	2.99	\$34.99		
FY2022	9.5%	6.3%	\$48.94	\$104.91	\$4.43	2.99	\$36.65		
FY2023	9.1%	9.2%	\$50.34	\$111.53	\$4.05	2.99	\$38.50		
FY2024	9.1%	9.3%	\$51.79	\$118.78	\$3.64	2.99	\$40.51		
Continuing Period	16.2%	9.4%	\$60.06						
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									

## U.S. Physical Therapy, Inc.

NYSE:USPH

**Analyst:** Andrew Varone

**Sector:** Healthcare

**BUY**

Price Target: \$55.11

### Key Statistics as of 10/29/2015

Market Price:	\$49.47
Industry:	Specialized Health Services
Market Cap:	\$614.47
52-Week Range:	\$37.44-\$56.37
Beta:	1.05

### Thesis Points:

- Growing Industry Due to Aging Demographics
- Diversification of Sources of Revenues
- Lower Operating Margins than Peers

### Company Description:

U.S. Physical Therapy, Inc., through its subsidiaries, operates outpatient physical therapy clinics that provide pre-and post-operative care and treatment for orthopedic-related disorders, sports-related injuries, preventative care, rehabilitation of injured workers and neurological-related injuries. The Company provides services at its clinics on an outpatient basis. Patients are treated for approximately one hour per day, two to three times a week for two to six weeks. The Company operates approximately 489 clinics in 42 states of the United States.



## Thesis

U.S. Physical Therapy (USPH) is a BUY as the industry is speculated to be one of the fastest growing sectors in the economy through 2016. The annual growth is expected to be 5%. The growth is driven by a higher rate of the population above the age of 65 and a more active society. USPH grows inorganically as well through the use of acquisitions that later become partnerships with physical therapy clinics. Being in a highly fragmented industry, USPH tries to capture the growth in the industry. By partnering with startup clinics, they try and grow the clinic's clientele while keeping their brand on facilities. This is done to keep previous relationships that the rehabilitation clinics have built up. Also, the company's only goes for acquisitions that they believe will increase their EPS. There has been a push to diversify their revenues by making a push for worker's comp. This has been evident as their revenues from worker's comp has increased to 20%.

The company currently has a one year upside potential of 11% and a 1.2% dividend that makes a one year return of 12%.

## Growth Opportunities

The physical therapy market is a \$19B industry. The projected annual growth for this industry is between 5%. The growth for this industry is fueled by an aging demographics and more self-awareness for physical health. U.S. Physical Therapy can capture this organic growth due to no company having over 6% market share. What sets U.S. Physical Therapy apart from the other 16,000 clinics is that they own or operated 489 clinics throughout 42 states.



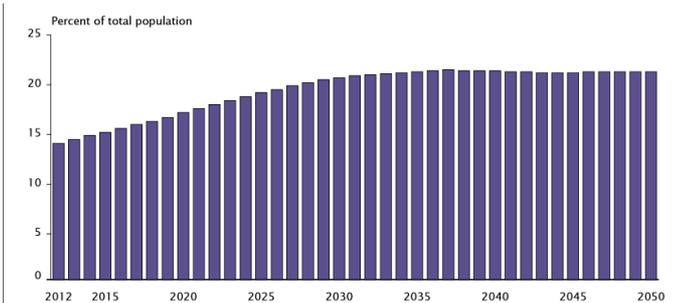
This ranks third most for physical therapy clinics in the United States. What sets them apart from other competitors is their coverage and their focus. Despite Select Medical having 400 more clinics than U.S. Physical

Therapy, they do not have the same coverage. Currently USPH is offered in 12 more states than Select Medical. This allows them to capture growth throughout the United States and not just in selected parts. Select Medical also practices in inpatient rehabilitation hospitals and occupational health. USPH is just focused on physical therapy and will be more aggressive when growing their company.

Another area of growth that USPH takes advantage of is inorganic growth. Since 2005, USPH has acquired 21 clinic groups that included anywhere from 3 to 52 facilities. When acquiring another clinical group, USPH has them continue to operate the clinics. Also, USPH only acquires clinics that reflect in their earnings. This is done by them only going for acquisitions that they believe are accretive. USPH is consistently seeking de novo growth opportunities which can continue to fuel inorganic growth as gain new clinics.

## Aging and Active Demographics

The driver for growth is the aging demographics that the United States have. Though physical therapy is for all ages as anyone can receive musculoskeletal injuries, the older generations are more prone to have these injuries. As the population continues to grow, there will be more potential patients for the physical therapy industry. Another driving factor is not only is the number of people above the 65 growing, the percent of population above the age of 65 is also growing.



Source: U.S. Census Bureau, 2012 Population Estimates and 2012 National Projections.

Citizens over the age of 65 made up around 14% of the total population in 2012. By the year 2030, it is estimated that those over the age of 65 will be around 20%. This increase can drive growth due to the higher need for patient rehabilitation.

Another big role that plays into an increase in growth for physical therapy is the activeness of the general public. There has been a push for people to eat healthier and do physical activity to lower health risk. This has been reflected in an 8% increase in those going to health clubs. When putting extra strain on the body or exposing

it to more activity than it is use to, there is an increase risk in injury. This injury can be repaired through physical therapy through the number of rehabilitating programs that they offer.

## Insurance and Revenues

USPH have a diverse area where they collect their revenues from. 50% come from private insurance & managed care, 25% from Medicare & Medicaid, 20% from worker's comp and 5% from other sources. USPH have made a push to grown their worker's comp to 20% of company's patient revenues. They have done this through treating, educating, assessing and preventing work related injuries. It is important to have multiple payers for your patients due to the practice. Many insurances will put a cap on the amount they will pay annually for physical therapy. If it goes over the cap, then the case then must be reviewed and approved for the patient to receive the higher cost of physical therapy. The greater percentage of workers comp in the payer's mix allows for the patient to not be as reliance on one form of paying.

There has been a push for universal healthcare which will give more insurance coverage throughout the United States. This is good news for physical therapy as this brings in new patients that would otherwise be unable to go. Also, there has been a push for cost-effective alternatives such as physical therapy rather than having people receive surgery on their musculoskeletal inconveniences. Those that do receive surgeries may also need to have some form of rehabilitation. When replacing areas such as joints, they body must be worked to insure that the joints can move in every natural position in the future. This means as there is technological increases that help bring back functionality to different parts of the body, a greater demand for rehabilitation will be needed.

The Medicare legislation that came out in April kept rates flat. In the next few years, there is an anticipated 0.5% increase in Medicare which would result in no negative impacts from the Medicare legislation.

## Porter Five Forces

The threat of new entrants is low. This is due to high capital requirements and customer loyalty to established brands. When starting a new clinic, high amounts of capital are needed for a building and the

different equipment that are needed. Another area that is hard to obtain is customer loyalty. Most patients for physical therapy either continue at their current clinics or they take recommendations from their doctor to where go. It can be tough for new clinics to get their name out as most patients going to physical therapy will already have a relationship with their clinics.

The threat of substitutes is neutral. The rehabilitation in physical therapy in cost-effective, this is due to patients returning to full ability once they finish their treatment. Other treatments, such as surgery, require rehabilitation after the surgery is done. A reason for the neutral is that there is a low barrier of entry to operate in this environment. There are continuous breakthroughs in the medical field that can pose better competition for the cost-effective strategy.

The bargaining power of customers is low-neutral. The industry is susceptible to the rates that insurance providers are willing to pay. This could be positive or negative. It could be positive if rehabilitation is found to be the most cost effective, making other alternatives not feasible. On the other side, insurance companies may limit the amount a person can spend on rehabilitation without being proven. Depending on the injury that is sustained, outpatient rehabilitation could be a necessarily which would reduce bargaining power of the buyers. Customers are not likely to switch physical therapist if they already are established with one. This would lower the bargaining power of customers.

The bargaining power of suppliers is neutral. Depending on the insurance provider, the main supplier for rehabilitation could be doctors through referrals. Other insurances may just need the patient to file a form expressing their form of injury and the ways it limits their daily activity. If no referral is needed, the limits the bargaining power of the supplier as the patient can receive treatment when is needed.

The threat of rivals is high. The industry is very fragmented with no clinics having above 6% market share. Because of this, a competitive advantage is needed to obtain sustainable growth. The competitive advantage that is needed is customer loyalty. All clinics offer the same services, the relationships that are gained through the patients is what drives growth.

---

## Financials

---

The revenue growth from 2012 has been increasing as it was 15.5% for 2014. The margin has decreased, this could do to a lower rate that insurance companies are giving them or by taking on more debt. If insurance companies are giving them a lower rate, this is a macroeconomic issue as all clinics will experience lower rates. What is a positive going forward is that operating cost are 82%, comparing this to their peers which is 85%. USPH can capture larger margin than their peers. This is important as the operating cost were what made pricing most sensitive. USPH has also had growing and positive cash from operating activities. A continual trend of positive cash flows can be used to pay off or refinance long-term debt. The long-term debt is 42.1M which is about 6% of their capital structure.

USPH also has a dividend policy in place that is currently 1.2%. It has been continually growing to this point.

There has been an overestimate on the decrease of the stock because of revenues not making estimated revenues. The previous four quarters, USPH had exceeded the estimates that were set. USPH has an earnings call on November 5<sup>th</sup>, surpassing expectations will cause the stock to raise.

---

## Conclusion

---

U.S. Physical Therapy (USPH) is a BUY due to the business of the firm. USPH is the only public firm that specializes in physical therapy which has forecasted annual growth of 5%. This growth will be sustainable as there is a growth of aging demographics until 2030. An increase of demand will also be incurred from a higher rate of those insured in the United States. The push for worker's comp has also allowed USPH to not be dependent on restrictions that are set by insurance companies. Lastly, USPH has positive net cash flows that they can payoff future debts and a dividend policy that adds to the returns of the stock.

**CENTER FOR GLOBAL FINANCIAL STUDIES**

<b>US Physical Therapy Inc.</b>	<b>USPH</b>	<b>Analyst</b> Andrew Varone	<b>Current Price</b> \$49.47	<b>Intrinsic Value</b> \$54.51	<b>Target Value</b> \$55.11	<b>Dividend Yield</b> 1%	<b>1-y Return: 12.58%</b>	<b>NEUTRAL</b>
<b>General Info</b>		<b>Peers</b>		<b>Market Cap.</b>		<b>Management</b>		
Sector	Healthcare	Adeptus Health Inc.	\$956.68	Professional	Title	Comp. FY2012	Comp. FY2013	Comp. FY2014
Industry	Healthcare Providers and Services	Capital Senior Living Corp.	\$666.71	Reading, Christopher	Chief Executive Officer, President and Director	\$1,825,932	\$1,903,888	\$2,850,384
Last Guidance	August 6, 2015	BioScrip, Inc.	\$136.09	McAfee, Lawrence	Chief Financial Officer, Executive Vice President	\$1,164,629	\$1,177,979	\$1,722,653
Next earnings date	November 5, 2015	Surgical Care Affiliates, Inc.	\$1,167.40	McDowell, Glenn	Chief Operating Officer	\$1,044,882	\$1,083,872	\$1,625,749
<b>Market Data</b>		Select Medical Holdings Corporation		<b>Past Earning Surprises</b>				
Enterprise value	\$681.68	Acadia Healthcare Company, Inc.	\$4,442.93	Bates, Jon	Vice President and Corporate Controller	\$0	\$0	\$0
Market Capitalization	\$614.47	Five Star Quality Care Inc.	\$158.42	Binstein, Richard	Secretary	\$0	\$0	\$0
Daily volume	0.10	The Ensign Group, Inc.	\$1,097.50	Kaiser, Lester	Vice President of Contract Development	\$0	\$0	\$0
Shares outstanding	12.42	AmSug Corp.	\$3,464.28					
Diluted shares outstanding	12.31	Brookdale Senior Living Inc.	\$3,865.63					
% shares held by institutions	96.09%	<b>Current Capital Structure</b>						
% shares held by insiders	4.43%	Total debt / Common Equity (LTM)	0.36					
Short interest	4.03%	Cost of Borrowing (LTM)	2.27%					
Days to cover short interest	5.34	Estimated Cost of new Borrowing	3.65%					
52 week high	\$56.37	Altman's Z	6.67					
52-week low	\$37.44	Estimated Debt Rating	AA					
5y Beta	0.96	Current levered Beta	0.88					
6-month volatility	29.51%	LTM WACC	0.54%					

<b>Convergence Assumptions</b>									
<b>General Assumptions</b>			<b>Items' Forecast Assumptions</b>				<b>Other Assumptions</b>		
Money market rate (as of today)		0.37%	<b>Base year (LTM)</b>			<b>Convergence period (Industry)</b>	<b>Adjustment per year</b>	Tobin's Q	80%
<b>All base year ratios linearly converge towards the industry ratios over an explicit period of 10 years</b>	Risk-Free rate (long term estimate)	2.87%	Operating Cash / Rev.	0.00%	1.04%	0.1%	Excess cash reinvestment	Money market rate	\$0.00
	Annual increase (decrease) in interest rates	0.1%	NWV / Rev.	6.95%	7.91%	0.1%	Other claims on the firm's assets		
	Marginal Tax Rate	37.5%	NPPE / Rev.	5.26%	5.30%	0.0%	<b>Capitalization</b>		
	Country Risk Premium	7.0%	Dpr / NPPE	34.77%	34.80%	0.0%	100% of all rent expenses are capitalized and amortized 'straightline' over 10 years		
			NET MARGIN	10.59%	10.60%	0.0%	R&D expenses are not capitalized		
<b>Forecast Year</b>	<b>Revenue Growth Forecast</b>	<b>Revenue (\$) Forecast</b>	Op. Exp. / Rev.	81.97%	82.00%	0.0%	E&P expenses are not capitalized		
LTM		\$313.48	SBC / Rev.	1.27%	0.67%	-0.1%	SG&A expenses are not capitalized		
FY2015	4.9%	\$328.86	Rent Exp. / Rev.	8.17%	0.87%	-0.7%	<b>Valuation Focus</b>		
FY2016	6.1%	\$348.99	R&D / Rev.	0.00%	3.09%	0.3%	DCF Valuation	100%	
FY2017	4.6%	\$364.91	E&D / Rev.	0.00%	0.00%	0.0%	Relative valuation	0%	
FY2018	3.8%	\$378.71	SG&A / Rev.	8.79%	15.49%	0.7%	Distress Valuation	0%	
FY2019	3.4%	\$391.55	ROE	-70%	28.44%	9.87%	<b>Monte Carlo Simulation Assumptions</b>		
FY2020	3.2%	\$404.06	P/E	20.45x	13.10x	-0.74x	Revenue Growth deviation	Normal (0%, 1%)	
FY2021	3.1%	\$416.58	P/BV	NA	3.72x	0.00x	Operating expense deviation	Normal (0%, 1%)	
FY2022	3.0%	\$429.28	Debt/Equity	36%	98%	6.2%	Continuing Period growth	Triangular (5.335%, 7%, 5.665%)	
FY2023	3.0%	\$442.26	Unlevered beta	0.71	0.68	0.00	Country risk premium	Triangular (2.91%, 3%, 3.09%)	
FY2024	3.0%	\$455.58	Dividends / REV	2%	1%	-0.1%	Intrinsic value σ(ε)	\$3.72	
Continuing Period	3.0%	\$469.25					1-year target price σ(ε)	\$3.97	
<b>Valuation</b>									
<b>Forecast Year</b>	<b>ROE</b>	<b>Ke</b>	<b>Common Equity</b>	<b>Implied Equity Value</b>	<b>Other Claims on Assets and Dilution Costs</b>	<b>Shares Outstanding</b>	<b>Price per Share</b>	<b>Monte Carlo Simulation Results</b>	
LTM	-70.2%	9.0%	-\$39.80	\$326.53	\$4.97	12.42	\$54.37		
FY2015	-140.5%	9.1%	-\$31.23	\$308.85	\$4.97	12.42	\$54.79		
FY2016	-126.2%	9.2%	-\$6.01	\$322.92	\$5.01	12.42	\$55.75		
FY2017	-683.1%	9.2%	\$21.69	\$339.35	\$4.96	12.42	\$56.56		
FY2018	195.8%	9.3%	\$51.34	\$358.07	\$4.87	12.42	\$57.35		
FY2019	85.3%	9.4%	\$82.68	\$379.18	\$4.74	12.42	\$58.18		
FY2020	54.4%	9.4%	\$115.61	\$402.91	\$4.59	12.42	\$59.07		
FY2021	40.0%	9.5%	\$150.11	\$429.51	\$4.42	12.42	\$60.06		
FY2022	31.6%	9.6%	\$186.20	\$459.30	\$4.23	12.42	\$61.15		
FY2023	26.2%	9.7%	\$223.93	\$492.65	\$0.00	12.42	\$62.37		
FY2024	22.3%	9.7%	\$263.34	\$529.98	\$0.00	12.42	\$64.46		
Continuing Period	23.0%	9.8%	\$132.00						

The 3σ(ε)-adjusted intrinsic value is \$54.51; the 3σ(ε)-adjusted target price is \$55.11; and the analysts' median target price is \$52.17

**Sensitivity Analysis**  
Revenue growth variations account for 47.7% of total variance  
Risk premium's variations account for 2.1% of total variance  
Operating expenses' variations account for 48.6% of total variance  
Continuing period growth variations account for 1.6% of total variance