



NAUTILUS, INC. EQUITY ANALYSIS

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Executive Summary

We performed an extensive financial forecast of Nautilus, Inc. – a publically-traded, fitness equipment producer – to price the firm using valuation models.

Before analyzing Nautilus, we quantitatively and qualitatively analyzed the sporting goods industry that Nautilus performs in. By researching the industry and then Nautilus, we predicted some of the driving factors that act as the performance differential for Nautilus compared to the industry. For the industry research, we selected six similar companies within the Industry to create an industry portfolio of stock performance. These companies were chosen based on their similar financial performance to Nautilus.

We created a Capital Asset Pricing Model (CAPM) and the Fama French Three Factor Model (FF3) as Market Model Regressions to predict the expected return of Nautilus compared to the industry and the market. These two expected return values were utilized in four of the five valuations.

Using our knowledge of the firm and its industry, we created a sales growth regression to predict the future revenue of Nautilus, based on macroeconomic factors. Sales were not the only important part of the company we wanted a better analysis of. We created a depreciation waterfall to chart the purchases and depreciation of different assets over a span of 20 years. Finally, we made financial ratios for the firm from the company financials. Now we could project the forecasted financial statements.

Throughout our analysis, we got a feel for the way management runs the business and the way the business cycle influences and destroys growth.

We noticed that Nautilus had strong sales growth before 2008 and it started to purchase millions of dollars of Property, Plant, and Equipment (PPE) each year since around 2000. The company acquired a lot of property and the company looked healthy and growing. But when the Great Recession hit, Nautilus was very distressed - it sold all its property and leased all its necessary buildings. Fitness Equipment is a luxury good and is very dependent on the business cycle. But after 2009, the company has had a very consistent sales growth and it seems to be approaching the same level it was at before the recession. We used this intuition about the company guidance for the next part of our analysis –forecasting and valuation.

For the valuation portion, we utilized five models to quantify Nautilus's expected price. A fair amount of assumptions were made for each model. Our assumptions are not perfect, but for each assumption we used quantitative data coupled with a fully detailed explanation on the thought processes that led us to that conclusion.

For the comparable valuation model, we selected six similar companies to Nautilus. Using the average of these six competitors, we computed six prices, which were weighted according to the indicator accuracy we projected. From this model, we ascertained a fair price of \$14.99, which was mostly driven by the P/S and PSG ratio.

The dividend discount model finds the present value of all present and future dividends, assuming Nautilus will start paying dividends in 2018 and continue indefinitely. Using the estimated expected rate of return for both the Fama French and CAPM, a fair price of \$16.81 and \$16.56 were calculated.

After forecasting Nautilus' Financials with our proforma statements from 2015-2019, we used the discounted cash flow model to find the present value of all the future cash flows from these future Income Statements and Balance Sheets. We had to also find the present value of the infinite cash flows of the company at an average growth. This yielded a fair price of \$10.72 for CAPM and \$7.40 for the DD3.

By calculating Nautilus's fair value price using three separate valuation methods and appropriately weighting each one according to its estimated accuracy, we computed our estimate for the fair value of Nautilus. We found the company to be slightly overvalued with a calculated value of \$12.61, which suggests that Nautilus's price of \$14.97 is overvalued by 18.73%.

Industry Overview

Nautilus belongs to the sporting goods industry within the consumer goods sector. Any company that sells products for sports or recreational activities make up the sporting goods industry. The National Sporting Goods Association estimated the sporting goods industry to receive \$64 billion annually in 2015. This industry can be broken up in three major product categories: equipment, footwear, and apparel.

In this industry, there are countless drivers that affect the annual sales but for simplicity purposes, only the three main drivers will be explained.

Gross Domestic Product:

The state of the economy has a direct relationship to the revenue of a company in the sporting goods industry. For example, in 2008, Nautilus's fourth quarter net sales were \$92.2 million compared to \$146.7 million in 2007's fourth quarter: a 37% decrease in sales. Similarly, Gaiam had a 51.8% decrease; the only company explained below whose sales increased was Lululemon Inc. This decrease in net sales can be attributed to the economic recession 2008.

The sporting goods industry is a function of time on both a macro scale and micro scale. This means that on a micro scale, <1 yr, the demand for different activity changes with respect to season. Similarly, over a macro scale timeline, 10 yrs <, the general attitude towards a specific sport can change. These two concepts can be attributed to seasonality and consumer choice, as outlined below.

Seasonality

Indubitably, a company focusing on winter gear will perform best in winter and a company based on summer activities will perform best during summer. This pattern can be applied to the overall sporting goods industry to explain its difference in performance quarter to quarter. It should be noted that location influences seasonality but generally seasonality is a prevalent pattern among all sport good companies. Nautilus reports its strongest sales in the first and fourth quarters.

Consumer Choices

Over time the popularity of specific sporting goods shift. Intuitively, the general attitude towards specific activities change with relation to time, yielding a strong function of demand based on a summation of societies attitude towards that activity. According to a recent survey conducted by the National Sporting Goods

Association, running, gym workouts and target shooting have gain prevalence while golf, in-line skating, skateboarding, and cross-country skiing have gone down in popularity (Cite #2).

Nautilus Overview

Founded in 1986, Nautilus is a consumer fitness product company based out of Vancouver, Washington. By focusing on high quality cardio and strength training products and marketing themselves as the leader of at home workout equipment, Nautilus has tapped into the niche consumer market of people who want to work out in the privacy of their own home. Nautilus acts as the corporate umbrella brand to four subsidiaries it owns: Bowflex brand, Octane Fitness brand, Schwinn brand, and Universal brand. These brands are differentiated through Nautilus's brand specific approach of direct and retail business.

Direct Business

In Nautilus's direct business, they market and sell their fitness and cardio products, specifically Bowflex, directly to consumers. Nautilus's direct marketing approach is through the use of television and internet advertising. To help facilitate consumer purchases, Nautilus strategically partnered with several third party credit providers to offer alternative payment plans.

Retail Business

On the other hand, Nautilus uses retail sales to increase brand recognition prevalence to hit target consumer pools that Nautilus's direct marketing doesn't reach. Nautilus offers price discounts to retail companies if they order container-sized shipments and/or early orders before the season.

Focus

While Nautilus continues to develop and produce strength products, the majority of Nautilus's revenue is from consumer cardio products: in 2015 this made up 82% of overall revenue. Naturally Nautilus explicitly stated in its 2016 10-k that it will focus its research expenditures on cardio development. This is supported by the recent closure of their nutrition division, and focus on cardio machine development.

Stock

Nautilus has common stock on the order of 31 million and a current market cap of \$552.12 Million. Trading under the ticker NLS at a price of \$17.45 per share (March 8th, 2015), Nautilus hasn't paid a dividend since 2007.

Competitor Positioning

Nautilus is well within the range for net sales and profit margins compared to its competitors. Although Nautilus is not a big player like Dick's Sporting Goods or Lululemon Inc., Nautilus has built multiple trusted brands in fitness, specifically Bowflex, which drive continued growth. In addition, Nautilus has reclaimed 2008's lost consumer pools resulting in accelerated growth of profit but also product innovation.

Nautilus Conference Call (February 22, 2016)

Performance- In the conference call, Nautilus discussed last year's performance with an emphasis on its fourth quarter. Nautilus' 2015 fourth quarter's revenue increased 15%, from 2014's fourth quarter with an overall growth of 22% compared to its performance in 2014. This overall increase was partially attributed to the continued momentum in the Bowflex Max Trainer as well as the TreadClimber product line.

Acquisition-Nautilus touched base on its recent acquisition of Octane Fitness which occurred on December 31, 2015. In 2015, Octane generated \$65 million in revenue, which Bruce Cazenave, the CEO, commented, "The acquisition is expected to be accretive to our earnings in 2016" (Cite #3).

Marketing Efforts-For the 2015 year, Nautilus spent a total of \$101.6 million on sales and marketing: 30.3% of net sales. Moreover, Cazenave verified that Nautilus will continue with direct and retail distribution.

Change in Products-Nautilus terminated their nutrition inventory, emphasizing there focus on strength and cardio machines. This isn't very consequential since Nautilus's emphasis has always been on strength and fitness equipment.

Competitors

Nautilus's direct competition stems from eight companies: Fitness Quest, ICON Health & Fitness, Johnson Health Tech, Weight Watchers, Beach Body, American Telecast, Life Fitness, and Precor. Of these eight companies, the only one traded publicly is Weight Watchers. Since one company isn't satisfactory in establishing industry benchmarks, five more publicly traded companies similar to Nautilus were selected. Gaiam, Lululemon, Athletica, Black Diamond, Johnson Outdoors, and Dick's Sporting Goods were selected based on their similar positioning within the sporting goods industry. Although these five companies may not be direct competitors with Nautilus and may even complement each other's business, they represent the best sample of companies in the sporting goods industry which we can ascertain comparisons from.

Weight Watchers International Inc. (NYSE: WTW) is a global leader in weight management products. Although Weight Watchers is focused on nutrition and dieting, their strategy of partnering with gyms directly competes with Nautilus's at home workout equipment. With this said, the majority of Weight Watchers products are weight managing guides such as dietary guides and videos. Weight Watchers predict that the number of overweight and obese adults "is estimated to reach over 3 billion by 2030", a 150% increase from 2013.

Weight Watchers has a market cap of \$700.47 Million and is currently trading for \$14.35 (March 8th, 2015).

Gaiam, Inc. (NASDAQ: GAIA) is a popular lifestyle company that targets lifestyle wellness. Gaiam Inc's "distribution network consists of approximately 38,000 retail doors, 18,000 store within stores, 5,000 category management locations" putting them at the forefront of fitness. Ranked in the top tiers of business ethics magazine's 100 best Corporate citizens list for three consecutive years, Gaiam focuses their products on the intersection between mental longevity and physical health. As stated in the ValueLine, Gaiam hosts the largest library of conscious media with over 7000 videos on various topics ranging from fitness to becoming happy in addition to their yoga, fitness and wellness products. This has positioned them as a leading company in not only fitness but also in digital information regarding mental and physical health.

Gaiam Inc. has a market cap of \$138.1 Million and is currently trading for \$5.40 (March 8th, 2015).

Lululemon Athletic Inc. (NASDAQ: LULU) is a high quality women's athletic apparel and fitness company. They utilize a strategic sales umbrella comprising of three different programs: wholesale, yoga hard goods program, team program. The wholesale program is designed to partner with gyms and studios who will sell Lululemon retail. Similarly, Lululemon athletic yoga hard goods program's focuses to teaming up with local yoga gyms to provide them with the necessary equipment such as yoga blocks and mats. Moreover, Lululemon works with approved teams to provide sports apparel at a discount rate. With over 302 corporate-owned stores along with direct e-commerce, showrooms, and outlet/warehouse sales, Lululemon's distribution network is far-reaching.

Lululemon has a market cap of \$8,425.44 Million, and is currently trading for \$62.22 (March 8th, 2015).

Johnson Outdoors Inc. (NASDAQ: JOUT) is an outdoor recreation with products in watercraft, diving, marine electronics, and outdoor gear. Johnson Outdoors network is very extensive penetrating 81 countries. Net Sales for 2015 were divided as following: 56% of net sales in marine electronics, 21% in diving equipment, and the remaining 23% in watercraft and outdoor gear. Their most recent acquisition of Humminbird, 8 years ago, has yielded profits with a 150% in revenue. The Value Line states that within the past 5 yrs., shareholder returns were 68.34% but only 0.89% for 3 yrs.

Johnson Outdoors has a market cap of \$218.08 million and is currently trading for \$22.50 (March 8th, 2015).

Big Five Sporting Goods (NASDAQ: BGFV) is a leading sporting goods retailer offering diverse equipment ranging from traditional sporting equipment to more specialized equipment. With 439 stores, most of which are located in the western United States, Big Five Sporting Goods is a direct retailer to consumers. Through the use of local newspaper, direct mailers and digital marketing, Big Five Sporting Goods marketing focuses on a more primitive style using less digital and more print compared to other competitors.

Big Five Sporting Goods has a market cap of 262.54 million and is currently trading for \$11.95 (March 8th, 2015).

Dick's Sporting Goods (NYSE: DKS) is a leading sporting goods retailer offering motley authentic, high-quality sports equipment, footwear and accessories. Dicks Sporting Goods is a direct competitor with Big Five Sporting Goods, both carrying Nautilus fitness equipment. With 603 stores in 46 states, Dick's Sporting Goods has penetrated the sporting goods market in the last few years and has become one of the major player in consumer sporting goods.

Dick's Sporting Goods has a market cap of 4.92 billion and is currently trading for \$44.56 (March 8th, 2015).

Firms to use in the Market Model Regression

Included Company in Market Model Regression	<input checked="" type="checkbox"/>
Not Included in Market Model Regression	<input type="checkbox"/>

Escalade Inc. (ESCA)

Escalade Inc. produces miscellaneous sporting goods equipment such as: archery, table tennis, billiards accessories, play systems, outdoor games and more. We incorporated this company within the market model regression because they focus on less popular sporting goods equipment

Jarden Corp. (JOUT)

Jarden Corp. produces sporting goods ranging from equipment in traditional competitive sports to camping gear. This was incorporated in the regression because they focus on a wide range of sporting goods equipment including fitness equipment.

Johnson Outdoors (JAH)

Johnson Outdoors produces outdoor gear specifically focusing in fishing and marine equipment. This was incorporated in the regression because it is similar in size and stock price.

Gaiam Inc. (GAIA)

Gaiam Inc. focuses on lifestyle wellness products that are both digital and tangible. Similar to Nautilus, Gaiam has various fitness products. Gaiam is a good company for the market model regression, because they capitalize on the growing demand for digital products.

By using a net two large sporting goods retail companies, we diversified our industry overview. Since Big Five Sporting Goods Corporation partners with specific sporting goods companies, its performance is only an indicator of the companies they partnered with. By adding a competitor- Dick's Sporting Goods, who also partner with certain companies, the industry representation is more diverse and umbrellas a more accurate performance of the industry.

Big Five Sporting Goods Corporation (BGFV)

Big Five Sporting Goods Corporation is a sporting goods retailer who sells all varieties of sporting goods products. This company is a good indicator of the overall sporting goods industry because it only sells products within the industry with a wide variety of products.

Dicks Sporting Goods (DKS)

Similar to the reasons explained in the big five sporting goods Dick's sporting goods is a good indicator because its company's focus is to sell products within the sporting goods industry

Weight Watchers International Inc. (WTW)

In Nautilus's 10 K, they explicitly stated Weight Watchers International Inc. as being one of their main competitors. This can be attributed to the fact that the company's focus is not on sporting goods equipment but rather nutrition and dieting plans which could act as a substitute for home fitness equipment. Since its main

focus is not sports and fitness equipment, Weight Watchers International Inc. is not part of the sporting goods industry.

Lululemon Athletica Inc. (LULU)

Lululemon Athletica Inc. was not included as a company in the market model regression because its revenue growth did not follow the same pattern as Nautilus's and the majority of the other companies within the industry. From 2008 to 2009 Lululemon experienced a 54.5% in net revenue for the fourth quarter and a 28.1% growth in overall net revenue for the year. This is not consistent with the Sporting Goods Industry. On the other hand, Nautilus experienced a 37% decrease in fourth quarter revenue and a 33.3% decrease in overall net revenue from 2008 to 2009. Overall, the sporting goods industry experienced a 22.6% decrease in net sales falling from \$8895047 million to \$6882605 million. This company experienced abnormal growth compared to the industry and therefore does not act as an accurate indicator for the industry.

Market Model Regressions

Using the Capital Asset Pricing model (CAPM) and the Fama-French Three Factor Model (FF3) as our Market Model Regressions (MMR), we analyzed the risk, price behavior, and industry behavior of Nautilus.

Capital Asset Pricing Model (CAPM)

$$E[r_x] = r_f + \beta_{mkt}(E[r_{mkt}] - r_f)$$

The CAPM models the price of a security in terms of the risk free rate of return and the market rate of return. To create the CAPM, we found the risk free rate of the three-month Treasury Bill from the U.S. Federal Reserve's website. Because these yields were reported annually, we had to divide them by 12 to make them effective monthly. All data used in our market Model Regression analysis is monthly data. We calculated the S&P 500 returns by listing the end-of-month prices from Yahoo! Finance. We then used the monthly trailing twelve months (TTM) dividend data from Multipl, divided each value by 12, to create the most accurate monthly returns for the market. Finally, we found the monthly returns for Nautilus by using the price, dividend, and split data from Yahoo! Finance as well. After subtracting the risk free rate from the market returns and the Nautilus returns, we ran a regression of the excess returns of NLS versus the excess returns of the market over a period of 60 months (5 years).

	Coefficients	Standard Error
Intercept	0.024429791	0.019331757
Mkt - Rfree	2.576392486	0.55100628

The Beta can be used in our CAPM. We will use the Alpha later on for analysis, but it does not belong in our expected return function.

$$E[r_{NLS}] = r_f + 2.5764(E[r_{mkt}] - r_f)$$

We also found the CAPM of the Nautilus' industry. To model the industry, we choose six firms with stable, consistent price behavior that are also in the Sporting Goods Stores industry, as defined by Mergent. After using price, dividend, and split factor data from Yahoo! Finance to create the monthly returns of the six companies,

we averaged all these returns to model the monthly industry returns. Then we subtracted the risk free rate from the market returns and the industry returns, so we could run a regression of the excess returns of the industry versus the excess returns of the market over a period of 60 months (5 years).

	<i>Coefficients</i>	<i>Standard Error</i>
Intercept	-0.000289031	0.006243928
Mkt - Rfree	0.961078557	0.177968495

The Beta can be used in our industry CAPM.

$$E[r_{indust.}] = r_f + .9611(E[r_{mkt}] - r_f)$$

Fama-French Three Factor Model (FF3)

$$E[r_x] = r_f + \beta_{mkt}(E[r_{mkt}] - r_f) + \beta_{size}(E[r_{smb}] - r_f) + \beta_{btm}(E[r_{btm}] - r_f)$$

The FF3 models the price of a security in terms of the risk free rate of return and the factors of the overall market, company size, and the book to market ratio of a company. To find the FF3 for Nautilus we used the Fama-French database of market returns for different combinations of company size and high or low book to market ratios. This database already has the risk free rate subtracted from the monthly returns so we did not need to do that again. We then found the monthly returns for the market minus the risk free rate, for the small companies minus big companies, and for high book to market companies minus low book to market companies. We regressed these three variables onto the excess return of Nautilus to create the following regression.

	<i>Coefficients</i>	<i>Standard Error</i>
Intercept	0.031960065	0.019903548
Mkt - Rfree	2.246997557	0.589592189
SMB	0.014677373	0.009690894
HML	0.005738167	0.009789235

The three Betas, corresponding to the Market, the Size, and the Book to Market ratio of the company can be used for our Nautilus FF3.

$$E[r_{NLS}] = r_f + 2.247(E[r_{mkt} - r_f]) + .01468(E[r_{SMB}]) + .005738(E[r_{HML}])$$

To find our FF3 for the industry, we ran the same regression but we used the excess returns of our industry (the same returns we used in our industry CAPM).

	<i>Coefficients</i>	<i>Standard Error</i>
Intercept	0.004516068	0.005760088

Mkt - Rfree	0.746697246	0.170628005
SMB	0.011229211	0.002804545
HML	0.002227951	0.002833005

The three Betas, corresponding to the Market, the Size, and the Book to Market ratio of the industry can be used for our Industry FF3.

$$E[r_{indust.}] = r_f + .7467(E[r_{mkt}] - r_f) + .01123(E[r_{SMB}]) + .002228(E[r_{HML}])$$

Note that we added the risk free rate on both sides of the equation so that we are solving for the expected return of the industry, not the excess expected return of the industry.

Tests

We can use the previously discussed data and regression models to analyze how the NLS's stock and the industry perform.

Beta

We ran several tests on the betas we generated to analyze the risk of our firm and industry. A beta on a regression of a single company or portfolio of companies against the market gives us an idea of risky the company is. A beta of 1 says that the company tracks in line with the risk of the market. Let's test if the betas of different regressions are different from 1.

Test 1.

Is the market Beta on the CAPM for NLS different from 1?

$$H_0: \beta_{mkt}^{CAPM} = 1$$

$$H_A: \beta_{mkt}^{CAPM} \neq 1$$

To test these hypotheses, we created a t-stat for the Beta on the CAPM. All t-stats in this report are found by subtracting the Null Hypothesis value (in this case, 1) from the reported coefficient (in this case, 2.5587), then divided by the Standard Error (in this case, .5432). We found the p-value by using Excel's =TDIST() function, setting the t-stat to the one we just calculated, the degrees of freedom to the reported degrees of freedom to amount reported by Excel's regression tool, then setting the number of tails on the test to 2.

We decided to compare our p-values to a significance level of $\alpha = .1$ because α 's are usually set equal to .05 for most statistical tests, but we do no need to be that confident because we are using imperfect data and making educated guesses. 95% and 99% confidence may be required in biological science and engineering, but 90% confidence is more than enough for finance.

	Coefficients	Standard Error	t Stat	P-value
Mkt - Rfree	2.576392486	0.55100628	2.860933791	0.005834192

Because the p-value is less than our significance level, we have significant evidence that the market Beta for the CAPM is different than 1.

These indicates that NLS's monthly returns are significantly more extreme than the monthly market returns. NLS is risky. Later on we will use this Beta to find exactly how risky it is.

Test 2.

Is the market Beta on the FF3 for NLS different than 1?

$$H_0: \beta_{mkt}^{FF3} = 1$$

$$H_A: \beta_{mkt}^{FF3} \neq 1$$

After creating t-stat for this Beta we found the corresponding p-value.

	Coefficients	Standard Error	t Stat	P-value
Mkt - Rfree	2.246997557	0.589592189	2.115017091	0.038812132

Because the p-value is less than our significance level, we have significant evidence that the market Beta for the FF3 is different than 1.

This also indicated that NLS's monthly returns are significantly more extreme than the monthly market returns.

Test 3.

Is the Beta on the CAPM for the industry different than 1?

$$H_0: \beta_{Indust.}^{CAPM} = 1$$

$$H_A: \beta_{Indust.}^{CAPM} \neq 1$$

After creating t-stat for this Beta we found the corresponding p-value.

	Coefficients	Standard Error	t Stat	P-value
Mkt - Rfree	0.961078557	0.177968495	1.218698499	0.227978574

Because the p-value is greater than our significance level, we DO NOT have significant evidence that the market Beta for the CAPM is different than 1.

This indicates that the industry's monthly returns are similar to the the monthly market returns. The industry is not that risky.

Test 4.

Is the market Beta on the FF3 for the industry different than 1?

$$H_0: \beta_{mkt}^{FF3} = 1$$

$$H_A: \beta_{mkt}^{FF3} \neq 1$$

	Coefficients	Standard Error	t Stat	P-value
Mkt - Rfree	0.746697246	0.170628005	2.484532116	0.015933194

Because the p-value is less than our significance level, we are confident that the market Beta for the FF3 is different than 1.

This indicates that the industry's monthly returns are significantly more extreme than the monthly market returns. The FF3 and the CAPM produce different estimates of the market Beta for the industry.

One point to note is that the returns used in the previous 4 regressions have the risk free rate subtracted from them. We could have also done these tests without having the monthly rates subtracted from them. We did both to double check and the p-values were virtually the same.

Comparing Beta Values

How closely related are NLS and its industry in terms of stock market performance? We can compare the Betas to see. Using the CAPM, the Beta for NLS is 2.56 while the Beta for the industry is .95. Our test showed that the Industry Beta is not significantly different than zero, while the NLS Beta is. We anticipated this as a possibility because we specifically chose companies for the industry with stable returns. NLS's stock price has grown and fallen often so we expect it to be riskier and more extreme than the market. Let's do some statistical testing to see how NLS has performed against the benchmark.

Alpha

Using the previous regressions, we can also test if NLS and the Industry have historically outperformed or underperformed the market. If Alpha, the intercept on the CAPM and FF3 regressions, is significantly different than zero, then the observed equity has historically greater or smaller returns than the market.

Test 5.

Is the Alpha on the CAPM for NLS different from 0?

$$H_0: \alpha^{CAPM} = 0$$

$$H_A: \alpha^{CAPM} \neq 0$$

After creating t-stat for this Alpha we found the corresponding p-value. Note that for this t-stat, we subtracted the Null Hypothesis value of 0, instead of 1, from the coefficient because we are testing equality to zero now.

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.024429791	0.019331757	1.263712918	0.211303521

Because the p-value is greater than our significance level, we DO NOT have significant evidence that the Alpha for the CAPM is different than 0.

Although the alpha is positive, it is not significantly different from 0, so we can't confidently say that the security performed above the market benchmark.

Test 6.

Is the Alpha on the FF3 for NLS different from 0?

$$H_0: \alpha^{FF3} = 0$$

$$H_A: \alpha^{FF3} \neq 0$$

After creating a t-stat for this Alpha we found the corresponding p-value.

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.031960065	0.019903548	1.605747107	0.113760999

Because the p-value is greater than our significance level, we DO NOT have significant evidence that the Alpha for the CAPM is different than 0.

Although the alpha is positive, it is not significantly different from 0, so we can't confidently say that the security performed above the market benchmark. It's interesting to note, however, that at a significance level .02 points lower at .88, we can reject the null hypothesis.

Test 7.

Is the Alpha on the CAPM for the Industry different from 0?

$$H_0: \alpha^{CAPM} = 0$$

$$H_A: \alpha^{CAPM} \neq 0$$

After creating a t-stat for this Alpha we found the corresponding p-value.

	Coefficients	Standard Error	t Stat	P-value
Intercept	-0.000289031	0.006243928	1.046289871	0.299768128

Because the p-value is greater than our significance level, we DO NOT have significant evidence that the Alpha for the CAPM is different than 0.

Since the Alpha is so close to zero, this means that the industry likely performed around the same as the market.

Test 8.

Is the Alpha on the FF3 for the Industry different from 0?

$$H_0: \alpha^{FF3} = 0$$

$$H_A: \alpha^{FF3} \neq 0$$

After creating a t-stat for this Alpha we found the corresponding p-value.

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.004516068	0.005760088	0.784027698	0.436214158

Because the p-value is greater than our significance level, we DO NOT have significant evidence that the Alpha for the FF3 is different than 0.

Since the Alpha is so close to zero, this means that the industry likely performed around the same as the market.

Risk

We can now calculate the total, systematic, and idiosyncratic risk of NLS, and also compare it to the industry. The total risk of NLS is just the variance of the returns: we used Excel's =VAR() function on the last 60 monthly returns of NLS to find its Total Risk over the last 5 years. The Systematic Risk is the Beta of the company versus the market, squared, then multiplied by the variance of the market. The Idiosyncratic risk is the variance of the residuals in the Market Model Regression, but we just computed it as the difference between the Total and Systematic Risk. We also found the Volatility by taking the square root of the Total Risk. We found the risk values using both the CAPM and the FF3 as our MMR, then converted the numbers to annualized percentage terms at the end of our calculations by multiplying by 12.

NLS Risk using the CAPM

Total Risk	Systematic Risk	Idiosyncratic Risk	Volatility
33.25%	9.10%	24.15%	57.67%
% of TR:	27.38%	72.62%	

There is no major difference between the numbers calculated using the CAPM and the numbers calculate using the FF3, so we will just include the CAPM risk values.

We also found the same risk calculations, but used the industry instead of NLS for comparison.

Industry Risk using the CAPM

Total Risk	Systematic Risk	Idiosyncratic Risk	Volatility
3.79%	1.27%	2.52%	19.46%

% of TR:	33.45%	66.55%	
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As expected, the Industry portfolio is much less risky because it is a more diversified portfolio.

Comparing NLS to the Industry

We also ran a regression of NLS versus the industry for additional analysis.

	Coefficients	Standard Error
Intercept	0.039075952	0.019972209
Portfolio	1.243177066	0.353214814

Test 9

We can test if the Beta is different than 1 for another gauge of relative risk between NLS and the industry.

$$H_0: \beta = 1$$

$$H_A: \beta \neq 1$$

	Coefficients	Standard Error	t Stat	P-value
Portfolio	1.243177066	0.353214814	0.688467913	0.493856455

Because the p-value is greater than our significance level, we DO NOT have significant evidence that the Beta is different than 1.

Even though NLS and its industry have completely different values for risk, Beta analysis shows that the 2 securities follow similar return patterns. Both portfolios are relatively non-diversified compared to the market so this makes sense.

Test 10

We can also test the alpha of NLS against its industry to see how it performs relative to its related firms.

$$H_0: \alpha = 0$$

$$H_A: \alpha \neq 0$$

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.039075952	0.019972209	1.956516291	0.055142679

Because the p-value is less than our significance level, we have significant evidence that the Alpha is different than 0.

Since the Alpha for NLS is significantly positive, we can assume that it over-performs the industry. NLS and the Sporting Goods Stores Industry may not significantly over-perform the market, but NLS does perform superior to its industry.

Pricing Idiosyncratic Risk

The large market Beta coefficient and the relatively high risk percentage shows that NLS is a risky security. But were investors rewarded for taking such risk? The insignificantly positive alpha provided only little guidance. The annualized alphas (found from multiplying the monthly Alphas by 12) for NLS are $\alpha^{CAPM} = 29.32\%$ and $\alpha^{FF3} = 38.35\%$ which are definitely large. Unfortunately, the p-values are just a little too big for us to call these Alpha's significantly different from zero.

Figure 1.

Table of Betas, Alphas, Standard Errors, T-stats, P-Values, and R-squared for four models

Model	Coefficients (Alphas are Annualized)	Standard Error	T-stat	P-values	R- squared
CAPM: NLS					26.12%
Alpha	29.32%	0.019331757	1.263712918	0.211303521	
Beta	2.5764	0.55100628	2.860933791	0.005834192	
FF3: NLS					27.11%
Alpha	38.35%	0.019903548	1.605747107	0.113760999	
Beta: Mkt	2.2470	0.589592189	2.115017091	0.038812132	
Beta: SMB	0.0147	0.009690894	1.514553076	0.135411557	
Beta: HML	0.0057	0.009789235	0.58617118	0.560074623	
CAPM: Industry					32.31%
Alpha	-0.35%	0.006243928	1.046289871	0.299768128	
Beta	0.9611	0.177968495	1.218698499	0.227978574	
FF3: Industry					46.39%
Alpha	5.42%	0.005760088	0.215972302	0.829767098	

	Beta: Mkt	0.7467	0.170628005	2.484532116	0.015933194	
	Beta: SMB	0.0112	0.002804545	4.003933189	0.000182226	
	Beta: HML	0.0022	0.002833005	0.786426793	0.434874915	
NLS vs. Industry						16.18%
	Alpha	46.89%	0.0200	1.9565	5.51%	
	Beta	1.2432	0.3532	0.6885	49.39%	

Figure 2.

(in %)	Rfree	E[Rmkt]	E[Rsmb]	E[smb]
Eff. Annual	0.50%	7.00%	2.75%	3.70%
Eff. Monthly	0.04%	0.58%	0.22%	0.31%
	E[r] annual	E[r] monthly		
CAPM: NLS	17.25%	1.44%		
FF3:NLS	21.28%	1.77%		
CAPM: Industry	6.75%	0.56%		
FF3: Industry	9.27%	0.77%		

Stock Behavior of Nautilus

We can analyze the Betas of our FF3 regression for Nautilus to see if the company behaves like a growth, value, small, or big stock. If the β_{size} is positive, then the company behaves like a small cap stock. If the β_{btm} is positive, then the company is a value stock. We will test these Betas to 0, not 1 because we are analyzing the sign, not the size of the Betas.

Test 11

We can test if the Nautilus' FF3 Beta for size is different than 0.

$$H_0: \beta_{size} = 0$$

$H_A: \beta_{size} \neq 0$

	Coefficients	Standard Error	t Stat	P-value
Beta: SMB	0.0147	0.009690894	1.514553076	0.135411557

Because the p-value is greater than the significance level, we are NOT confident that the Beta for size is significantly different from 0.

Although the sign of the size Beta is positive, it is not statistically different from 0. We have some evidence that the company performs like a small cap stock, but are not quite confident at a 90% confidence level. This meets our expectations because NLS has a \$600m market cap which would be considered small cap.

Test 11

We can test if the FF3 Beta for Book to Market is different than 1

$H_0: \beta_{btm} = 0$

$H_A: \beta_{btm} \neq 0$

	Coefficients	Standard Error	t Stat	P-value
Beta: HML	0.0057	0.009789235	0.58617118	0.560074623

Because the p-value is greater than the significance level, we are NOT confident that the Beta for book to market is significantly different from 0.

The p-value is massive so we do not know if Nautilus acts as a growth or value stock.

Sales Growth Regression

To forecast the sales growth for Nautilus, we used econometric regression forecasting with macroeconomic variables. We found 15 variables that we thought could predict the past and future movement of Nautilus' sales.

Categorical Data

"Sales are typically strongest in the first and fourth quarters, followed by the third quarter, and are generally weakest in the second quarter." – Nautilus 2014, 10k

Seasonality strongly affects Nautilus' sales so we created dummy variables to explain this cyclical trend per quarter. Instead of creating four dummy variables for every quarter, we only used dummy variables for the fourth quarter, because we did not want to overload our model with categorical variables when we really want a model focused on numerical data. Also, we found that only the fourth quarter variables had the Beta signs and p-values we wanted.

4th Quarter Dummy: The Beta should be positive because sales are the highest in the fourth quarter compared to every other quarter.

2nd Quarter Dummy: The Beta should be negative because sales are the lowest in the second quarter compared to every other quarter.

Numerical Data

Inflation: Inflation is calculated by finding the change in CPI for all urban consumers on all items reported by FRED. We did not expect the Beta to be significantly positive or negative: inflation is influenced by many macroeconomic variables and influences many other macroeconomic variables so it by itself should not cause sales growth. Only hyperinflation would significantly affect sales.

Nominal GDP: Gross Domestic Product of the U.S. as found by the Federal Reserve Economic Database (FRED). We believe the sign of the Beta to be positive because GDP represents the overall economy and growing economies should result in growing sales.

Change in Nominal GDP: We found the growth rate between each quarter of Nominal GDP listed above.

Real GDP, 2014 Dollars: To find the Real GDP, we took each quarter of Nominal GDP and divided it by the product of all previous inflation rates plus one. This is the Real GDP in Q1 2005 dollars because we used 2005 as our base year in our inflation calculations. Because we wanted to eventually predict Real GDP in 2014 dollars, we multiplied our calculations by the ratio of the Q4 2014 CPI by Q1 2005 CPI.

Change in Real GDP: We found the growth rate between each quarter of Real GDP listed above

Proportion of Obese/Overweight Population: Proportion of the U.S. population that is both overweight and obese, as defined by the Organization of Economic Cooperation and Development (OECD). The Beta should be negative because higher proportions of obesity means lower health and lower health-related purchases.

Unemployment Rate: Percentage of the U.S. population unemployed (FRED). The Beta should be negative because people purchase luxury goods like fitness equipment when they have money and jobs.

Housing Starts: New Privately Owned Housing Units Started in Thousands of Units reported by FRED. We found this data lagged one year because when house purchases increases, it takes some time for homeowners to start buying large goods for their home like fitness equipment. We expect the Beta to be positive.

Change in Housing Starts: We found the growth rate between each quarter of Nominal GDP listed above.

Real Personal Consumption Expenditures: Durable Goods: Total spending on durable goods in the US (long term goods) reported from FRED. We expect the Beta to be positive because fitness equipment is a durable good.

Change in Durable Goods Consumption: We found the growth rate between each quarter of Durable Goods Consumption listed above.

Real Health Expend. Per Capita: Total health care expenditures per person reported by the World Bank. We expect the Beta to be positive because higher healthcare spending would mean a bigger focus on personal health and fitness.

10 Yr. T-Bill IRR Real: The interest rate on a 10-year Treasury Bill, adjusted for inflation reported by FRED. We expect the Beta to be negative because a 10-year rate represents the future forecast for interest rates and higher interest rates mean cash is more expensive to borrow and people spend less.

10 Yr. T-Bill IRR % Nominal: The interest rate on a 10-year Treasury Bill, not adjusted for inflation, reported by FRED. It also should have a negative Beta for the same reason as discussed above.

3 Month T-Bill IRR % Nominal: The interest rate on a 3-year Treasury Bill, not adjusted for inflation, reported by FRED. We expect the Beta to be negative because a 3-month rate represents the current situation for interest rates and higher interest rates mean cash is more expensive to borrow and people spend less.

Slope of Yield Curve Nominal: The slope of the yield curve is a popularly used measure for the market's predictions on the economy, reported by FRED. Negative yield curve slopes are rare only occur when investors think that the economy will crash soon. We expect the Beta to be positive because a negative view on the economy would mean that consumers are spending less.

Crude Oil Prices: The nominal price level of West Texas International oil, as reported by FRED. We thought the Beta should be negative because higher oil prices would mean less spending money for consumers and a decrease in the quantity of people driving to gyms, so spending on personal fitness equipment would increase.

Yuan/Dollar Exchange Rate: How many Yuan one U.S. dollar buys as reported by FRED. We predict the Beta to be positive because NLS has a presence in China, and a weak dollar help US companies that export abroad.

Regression Creation Process

To find the best fit regression for projecting sales growth, we used the strategy of running regressions with many variables then trimming them down from there. We soon realized that almost none of our explanatory variables significantly predicted NLS sales growth. Our first regression, shown below, uses a wide variety of explanatory variables to explain sales growth.

	Coefficients	Standard Error	t Stat	P-value	R Squared	0.0512
Intercept	-2.8400	5.0523	-0.5621	0.5777	Standard Error	0.3097
Inflation	-3.8405	10.2056	-0.3763	0.7090	Observations	40.0000
Real GDP	0.0002	0.0002	0.9146	0.3668		
3 Month T-Bill IRR %	0.0038	0.0877	0.0435	0.9655		
Yuan/1 US Dollar	0.0284	0.3420	0.0832	0.9342		
Nom. Crude Oil Prices	-0.0006	0.0043	-0.1414	0.8884		

The regression had an extremely poor r-squared of 5.1% and the lowest p-value of all 5 explanatory variables was .37 for Real GDP. We concluded that U.S. interest rate policy has been so abnormal that all interest rates must not be a predictor of NLS sales. Also, we found that the the Yuan/Dollar exchange rate is not a good predictor, possibly because the business done in China is not a significant portion of revenue. We will drop oil

prices as a predictor as well because the p-value is too large so it is unlikely high oil prices decrease spending on fitness equipment significantly.

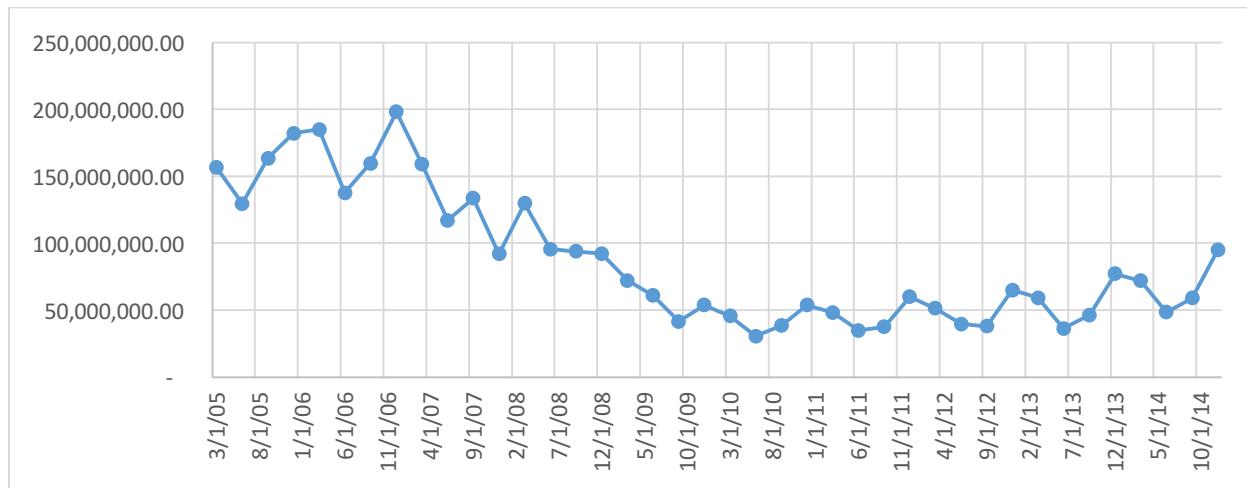
To test if inflation is a significant predictor, we used just inflation and real GDP as explanatory variables, to isolate the effect of inflation.

	Coefficients	Standard Error	t Stat	P-value	R Square	0.0271
Intercept	-2.0130	1.3659	-1.4737	0.1490	Standard Error	0.2979
Inflation	-4.0313	6.9618	-0.5791	0.5661	Observations	40.0000
Real GDP	0.0001	0.0001	1.5165	0.1379		

Inflation still had a p-value of .57 so we will drop it. We also discovered that Real GDP has a more favorable p-value of .13 so we will use this value in our regression. It makes sense for GDP to affect Nautilus' sales because GDP is such a general and effective measure of the overall health of the economy.

We then ran several more regressions where we added one other variable along with GDP to predict sales. We found that the slope of the yield curve, the unemployment rate, and the proportion of those obese/overweight in the U.S. population had p-values greater than .5 and were not at all significant. We also found that health expenditures per capita and housing starts had p-values around .3 so they may be significant. We ran regressions for both levels and changes in levels. However, the R-squares of all of these 2-explanatory variable regressions were all less than 5%. We needed a variable that described the variation of sales better. Nautilus has an extremely seasonal revenue cycle, as seen by the volatile revenue graph below.

Figure 1



Therefore, we decided to add seasonality as an explanatory variable. We played around with different ways to model seasonality, but we found that creating a dummy variable for only fourth quarter sales was most significant.

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Regression Statistics</i>	
Intercept	-0.0622255	0.047666769	-1.30543	0.20078	R Square	0.3975
Chg. in Durable Goods Consumption	0.2862184	1.873654028	0.152759	0.87952	Standard Error	0.2362
Chg. in Housing Starts	0.8982074	0.457632637	1.962726	0.05815	Observations	37.0000
4th Quarter Dummy	0.3708703	0.091013732	4.074883	0.00027		

The R-square jumps up to 41%, but the P-value for Durable Goods Consumption is still too big. We added Real GDP back into the model again because it has been our only significant variable and switched Durable Goods Expenditures with Health Expenditures to see if a different type of expenditure would work.

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Regression Statistics</i>	
Intercept	-3.7748	1.9462	-1.9396	0.0613	R Square	0.3887
Real GDP	0.0003	0.0002	1.7445	0.0907	Standard Error	0.2413
Health Expend. Per Capita	-0.0001	0.0001	-0.9314	0.3586	Observations	36.0000
Seasonality – Q4 Dummy	0.3609	0.0934	3.8649	0.0005		

Health Expenditures is still too insignificant with a p-value of .35.

We ran many more regressions that included Real GDP, the fourth quarter dummy variable, and one other additional variable. We also tried using the Change in Real GDP which sometimes improved the p-value but sometimes did not. We even tried different types of dummy variables: we included both first quarter and forth quarter dummy variables because the NLS 10-k stated that both quarters had the highest sales. Nothing worked: our R-squared values ranged between 30% and 40% but we never got all 3 or more explanatory variables to have a p-value less than 20%. We tried 15 variables, the nominal and real versions of those variables, and the changes in the values and the actual values of those variables. It seems that Nautilus' sales growth is best modeled by simply the overall GDP and whether or not it is the fourth quarter. Exercise equipment is a very specific good and it seems that consumers will only really buy when the economy is doing well. The only regression we found that had all p-values under 20%, and R-squared greater than 30%, and made theoretical sense was the following.

	<i>Coefficient</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Regression Statistics</i>	
Intercept	-0.1018	0.0489	-2.0806	0.0444	R Square	0.3768
Change in Real GDP	7.4201	5.6594	1.3111	0.1979	Standard Error	0.2448

4th Quarter Dummy	0.4217	0.0902	4.6774	0.0000	Observations	40.0000
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Projecting Future Sales Growth:

To project the future sales growth of Nautilus, we used the aforementioned regression and the projected GDP forecast from the US Congressional Budget Office. To prepare our data for analysis, we had to make sure that all GDP data, past and future, was in real dollars of the same year. We took the historical nominal GDP data from FRED and scaled it by our quarterly inflation so the Real GDP was reported in 2014 prices. The forecasted GDP was already reported in 2014 prices. We then found the quarterly change in GDP, 2014 dollars. After, we used this data and the regression model to forecast sales.

Figure 2

Projected	Sales	Real GDP, 2014	4th Quarter Dummy
3/31/15	-3.45%	0.9071%	0
6/30/15	-3.48%	0.9034%	0
9/30/15	-1.38%	1.1862%	0
12/31/15	40.66%	1.1695%	1
3/31/16	-1.34%	1.1917%	0
6/30/16	-2.06%	1.0949%	0
9/30/16	-2.01%	1.1010%	0
12/31/16	40.50%	1.1480%	1
3/31/17	-1.25%	1.2037%	0
6/30/17	-2.02%	1.1001%	0
9/30/17	-2.25%	1.0699%	0
12/31/17	39.72%	1.0421%	1
3/31/18	-2.00%	1.1030%	0
6/30/18	-2.55%	1.0294%	0
9/30/18	-2.95%	0.9749%	0
12/31/18	39.18%	0.9698%	1
3/31/19	-2.24%	1.0710%	0
6/30/19	-2.73%	1.0043%	0
9/30/19	-2.65%	1.0157%	0
12/31/19	39.75%	1.0460%	1

Because the regression model is so simple, with only one source of numerical data and one source of categorical data, our forecasted growth rates look a little unrealistic. Fourth quarter growth rates are around 40% while other quarters have around a -2% rate. Quarter by quarter, these forecasts are inaccurate so let's look yearly so it makes more sense.

Figure 3

Year:	2015	2016	2017	2018	2019
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Annual Sales Growth	29.27%	33.03%	32.14%	29.00%	29.37%
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These annual revenue growth rates are unusable. Even though Nautilus' sales tripled from 2010 to 2015, this growth is not sustainable over another 5 years. The only regression model we could use does not even work because it is too simple and predicts a near linear growth.

A New Regression Model

Our hypothesis for the cause of our poor regression results is our usage of sales growth and not sales level. Predicting the change in sales growth is extremely difficult because Nautilus has volatile quarterly sales changes and these discrepancies are not driven by any major factors. As stated before, exercise equipment is a unique good. It is much easier to generate a regression for level of sales instead of sales changes because sales level naturally flows with the economy. We want sales drivers that do not increase linearly, so we need more variables. If we can find a regression for sales level that includes many variables that theoretically influence Nautilus' revenue, we may get better sales growth drivers. We used the factors with the lowest p-values and with the highest hypothesized influence on Fitness Equipment sales.

	Coefficients	Standard Error	t Stat	P-value	Regression Statistics	
Intercept	-711625422	329620618.5	-2.15892	0.03846	R Square	0.880754
2nd Quarter Dummy	-16012570	7273984.542	-2.20135	0.03504	Standard Error	18613227
Real GDP, 2014 dollars	68120.836	26831.61591	2.538827	0.01618	Observations	37
Housing Starts	80062.891	5940.521335	13.47742	9.7E-15		
Durable Good Consumption	-334000.32	97911.50341	-3.41125	0.00177		

Our R Square doubles to 88% and all our p-values are significant at the 95% level. This is expected because there is some correlation between the factors. All are cyclical trends. Even though this regression has flaws, let's try to forecast revenue growth and see what drivers we get. To project the Housing Starts and Durable Goods Expenditures data, we ran a regression over the previous 8 quarters (2 years) of the factor against time.

Figure 4

Projected								
	Date	Sales	Q2 Dummy	Real GDP, 2014 dollar	Housing Starts	Expenditures: Durable Goods		Sales Growth
38	6/30/2014	72,733,157	1	17328	1010.892857	1380.164286		
39	9/30/2014	100,971,628	0	17555	1039.035714	1396.603571		
40	12/31/2014	111,705,683	0	17760	1067.178571	1413.042857		
41	3/31/2015	119,442,422	0	17921	1095.321429	1429.482143		
42	6/30/2015	111,221,087	1	18083	1123.464286	1445.921429		
43	9/30/2015	138,608,048	0	18298	1151.607143	1462.360714		
44	12/31/2015	149,948,378	0	18512	1179.75	1478.8	0.342352276	
45	3/31/2016	161,738,306	0	18732	1207.892857	1495.239286		
46	6/30/2016	156,459,792	1	18938	1236.035714	1511.678571		
47	9/30/2016	183,438,028	0	19146	1264.178571	1528.117857		
48	12/31/2016	195,173,459	0	19366	1292.321429	1544.557143	0.301604333	
49	3/31/2017	207,814,897	0	19599	1320.464286	1560.996429		
50	6/30/2017	203,251,652	1	19815	1348.607143	1577.435714		
51	9/30/2017	230,468,310	0	20027	1376.75	1593.875		
52	12/31/2017	241,447,600	0	20235	1404.892857	1610.314286	0.237092388	
53	3/31/2018	253,414,643	0	20458	1433.035714	1626.753571		
54	6/30/2018	248,510,793	1	20669	1461.178571	1643.192857		
55	9/30/2018	275,012,182	0	20871	1489.321429	1659.632143		
56	12/31/2018	285,562,311	0	21073	1517.464286	1676.071429	0.182709254	
57	3/31/2019	297,699,656	0	21299	1545.607143	1692.510714		
58	6/30/2019	293,020,604	1	21513	1573.75	1708.95		
59	9/30/2019	320,680,048	0	21731	1601.892857	1725.389286		
60	12/31/2019	332,926,386	0	21958	1630.035714	1741.828571	0.165862486	

Figure 4 shows how we projected factors until the end of 2019 (our 5th year out), forecasts future sales level, then found the annual growth rate for each of the 5 future years. These growth rates make much more sense because they get smaller over time. Nautilus' sales continue to grow at 30% initially, but by year 5, that rate is halved.

Figure 5

Year:	2015	2016	2017	2018	2019
Annual Sales Growth	34.24%	30.16%	23.71%	18.27%	16.59%

By forecasting sales level instead of sales growth, we give up some fidelity to achieve more logical and useful numbers.

Depreciation Waterfall

For the depreciation waterfall, we dissected the depreciable amount based on the assets' useful life. Using three depreciation waterfalls for the 5, 10 and 20 yr. asset classes, we estimated the Purchase of PPE for the next five years.

Asset Class:

Nautilus's assets can be broken up based on its useful life. By examining Nautilus's 10k as well as its competition, the majority of assets can be divided as seen in the table below.

Asset:	Useful Life (MACRS):
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Computers, Machines, Equipment	5 yrs.
Furniture	10 yrs.
Buildings	20 yrs.

By using straight line depreciation, which was stated in the 10k, each asset depreciated by the same amount each year. For each year, the asset depreciates at a rate of (1/Asset life yrs.).

Historical PPE Significance

Nautilus sold off as much of its assets after the recession and has only started significantly purchasing again in 2014. From 2009 to 2013, Nautilus has consistently purchased around \$2.5m of PPE per year. This is probably the baseline PPE purchases – those needed to keep the company alive but not expanding. In 2014, Nautilus doubled its purchases to \$5.3m. We assume that this means the company has only just started to buy additional PPE for expansion. This means that Nautilus will not need be selling much PPE because they will try to get their PPE level back to what it was pre-recession.

Future PPE

Using the future values of Gross PPE Bought which is explained in detail in the Proforma Financial Statements section, we were able to forecast the next five years of Nautilus's asset depreciation. By using these estimated values for the Bought PPE while keeping the percent of each asset class to the total Net PPE constant, the values calculated were consistent with historical depreciation. Moreover, since in 2013 and 2014 the 20 yr. assets were 6% of the total Net PPE, we kept this rate constant for the forecast. However, during 1999 to 2002, when Nautilus was experiencing high growth, they invested north of 30% of total PPE in buildings/property. This was not incorporated into the forecast because that was over ten years ago. In addition, Nautilus sold off all owned buildings and property from 2008 to 2010 and has been leasing ever since. Even though this was not applied to the forecast, it is important to note that Nautilus may invest in buildings/property in the next five years.

Salvage Value

In using the depreciation waterfall, we categorized equipment by their useful life as seen above. In using this method, every item assumed to have the same salvage value as a percent of the purchase price. Since most of the items depreciate to nearly zero, we assumed that all items with a depreciation life of 5 and 10 have a 0% salvage value. However, for 20 year depreciable assets, a 10% salvage value was used because building assets don't depreciate to zero but will rather lose most of its value over the 20-year life span.

Holding Period

We used a holding period of 3 years for 5 year assets and 8 years for 10 year assets. These holding periods were based on the assumption that the holding period is something just a little less than the salvage life. Furthermore, we experimented with values based on this assumption to find a viable holding period for 5 and 10 yr. assets. On the other hand, 20 yr. building asset holding periods changed with respect to time. By

analyzing Nautilus's 10k's from 2000 to present, we discovered that in 2008 and 2009, Nautilus sold all of its owned property. Knowing this, we backtracked every single owned property from the sold date to when Nautilus acquired it. Some of the properties were not explicitly stated of being bought or sold, so using deductive logic, we found the buying and selling date by looking at Nautilus's 10k time progression, from 2000 to 2014. When the property was listed for the first time, we assumed it was acquired, and when the property was removed for the 10k, we assumed the property was sold. By finding the dates acquired and dates sold, we found an average date of holding time per year which we plugged in for the 20 yr. Assets on a per year basis.

Reflection

In building the depreciation waterfall and comparing the results of the constructed depreciation waterfall to the depreciated amount posted in the I/S yields an average margin of error of 4%. This error can be attributed to the assumptions made in the drivers. It is important to note that while this depreciation waterfall is a good estimation for future depreciation, it assumes that Nautilus will continue to operate in the same fashion as 2014. Since our model accurately reflected, with 4% error margin, historical performance of Nautilus, we are confident in our predictions for the future Net PPE as seen in the table below.

Year:	2015	2016	2017	2018	2019
Net PPE	13,136,478.00	16,501,675.00	20,163,459.00	23,200,734.00	27,355,952.00

Intuitively, our predicted Net PPE keeps growing which is consistent with the previous growth Nautilus has experienced within the past 3 yrs. However, this may not be accurate since Nautilus is growing at an accelerated rate that is not sustainable.

Ratio Analysis

A company's performance can be measured relative to the industry it's performing in. For the ratio analysis, we compared Nautilus's most influential ratios to the average industry ratios. These ratios were selected based on how well they gauge Nautilus's performance.

Altman Z:

Using the Altman Z ratio, we calculated the likelihood of Nautilus going bankrupt. Using the formula below yielded the values as seen in the Altman-Z table.

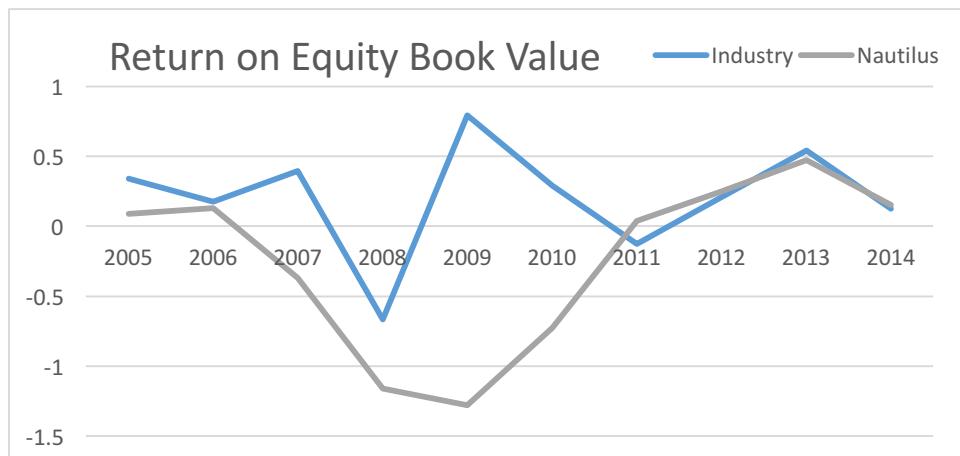
$$= 1.2 * \frac{\text{Working Capital}}{\text{Total Assets}} + 1.4 * \frac{\text{Retained Earnings}}{\text{Total Assets}} + 3.3 * \frac{\text{EBITDA}}{\text{Total Assets}} + 0.6 * \frac{\text{Mkt Value Equity}}{\text{Total Liabilities}} + 1.0 * \frac{\text{Net Sales}}{\text{Total Assets}}$$

	Historical				
Year:	2010	2011	2012	2013	2014
Altman Z:	2.770	3.306	4.005	5.642	6.656

Since Nautilus's ratio is consistently well above 1.8- the threshold for likely bankruptcy- Nautilus is not likely to go bankrupt.

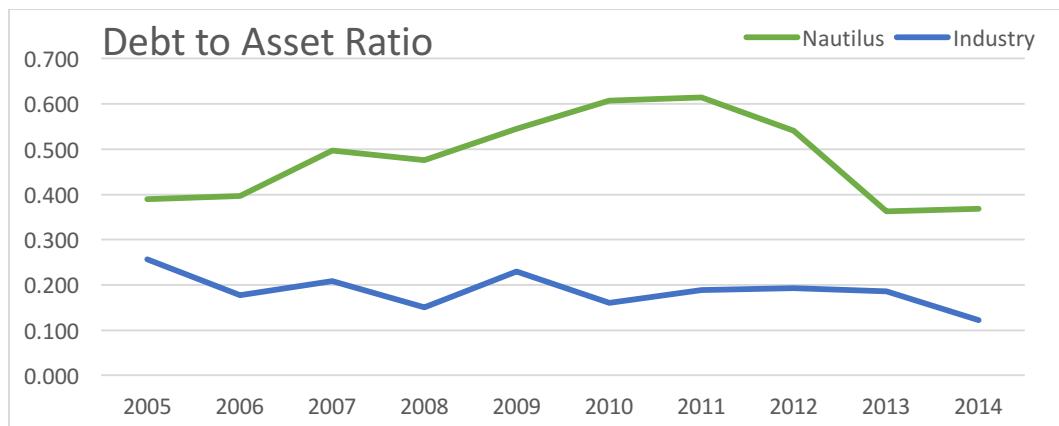
ROE

The return on equity, or net income returned as a percent of shareholder equity, is a good indicator on the health of the company. For the return on equity (ROE), the industry ratio report from the RMA University database did not include the ROE. To calculate the industry average, I used the ROE for Dick's Sporting Goods, Gaiam Inc., Escalade Inc., and Johnson Outdoors. These companies were specifically picked because they are most similar to Nautilus's revenue size. As seen on the graph below, Nautilus's ROE has been well below the industry average from 2006 to 2011. Then starting around 2011, Nautilus is performing on par with the industry. Moreover, during this time period, 2006-2011, Nautilus experienced a decrease in sales. This is supported by the fact that Nautilus's ROE on equity was negative during this period.



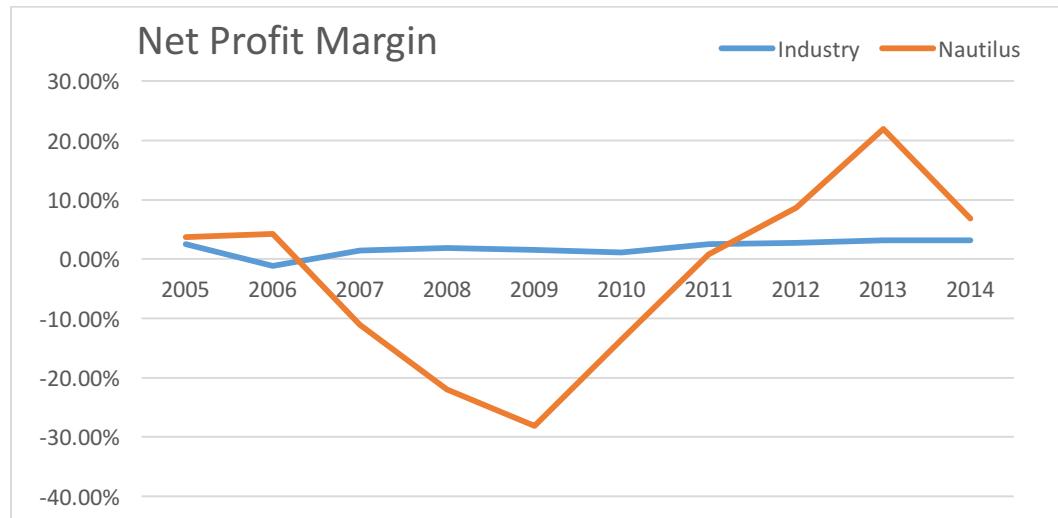
Debt to Assets

This ratio is the degree of leverage compared to total assets. As seen in the graph below, Nautilus has historically had a higher debt to asset ratio. While at first glance, this may seem like a negative indicator, further dissection proves otherwise. Nautilus has grown at nearly a rate of 50% within the past three years. This may be attributed to the high leverage rate which Nautilus has historically been operating at.



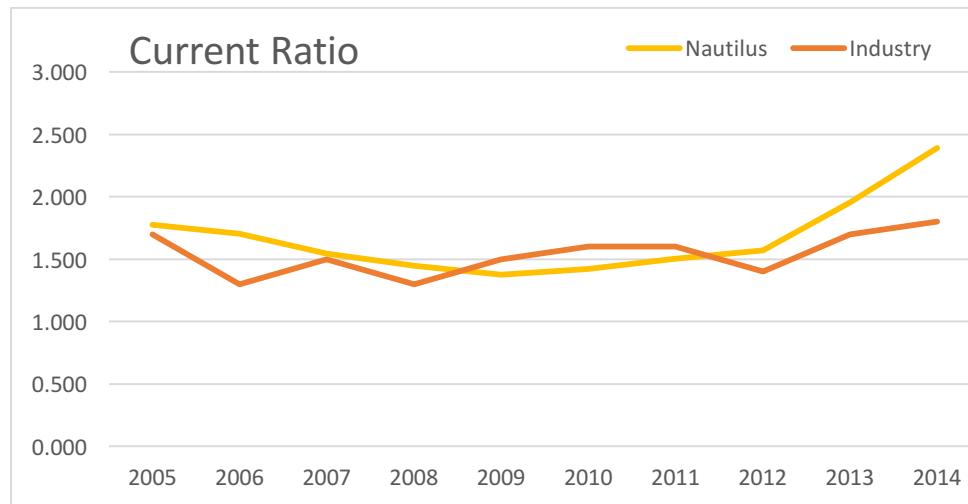
Net Profit Margin

The net profit margin is the amount of profit remaining after all expenses have been deducted divided by total sales. The graph below illustrates the high net profit margin volatility that Nautilus experiences. This can be attributed to the changes in economic performance which is a major driver for Nautilus. While changes in economic performance heavily affects Nautilus, for some companies it does not. This can be demonstrated by Lululemon's performance during the recession in 2009. While most sporting goods companies were downsizing, Lululemon experienced a 54.9% growth. Companies like Lululemon average out the Net Profit Margin for the industry which is why it is close to zero.



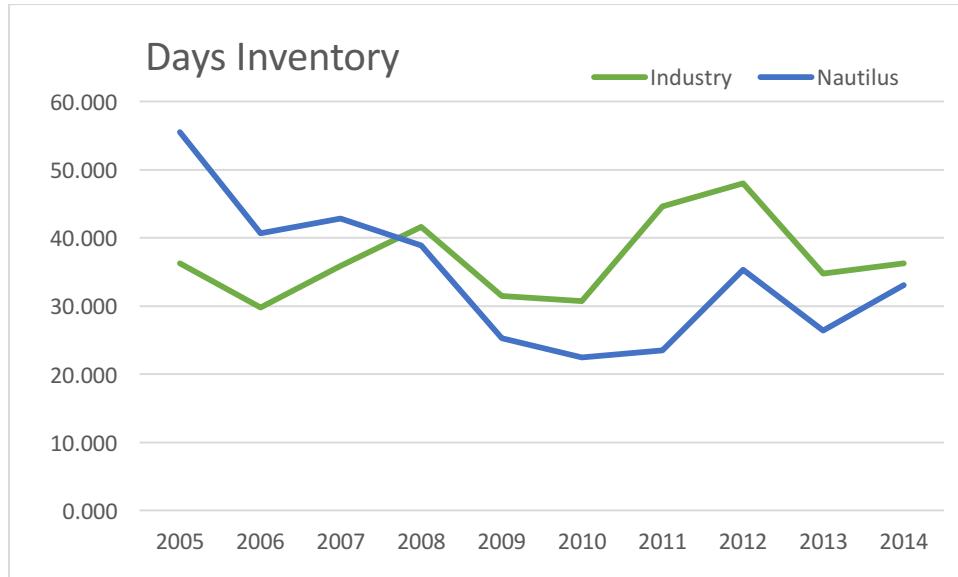
Current Ratio

The current ratio measures the company's ability to pay its short and long term obligations. Nautilus is on par with the industry average as seen below.



Days Inventory

Days inventory refers to how long it takes a company to turn inventory into sales. Below shows the graph of Nautilus's days' inventory versus the industry average. While Nautilus is well within the industry average range, during 2008 Nautilus transitioned from above the industry average to below. Personally, I believe this happened due to the downsizing of Nautilus during the recession. With a decrease in sales / inventory, Nautilus managed less inventory. With less inventory, Nautilus could distribute quicker yielding a decrease in the current ratio.



Forecasting Proforma Financials

Our Forecasting Intuition

To forecast Nautilus' financial statements five years – 2015 to 2019 – we used a series of drivers based on historical trends and intuition about the company. Throughout the whole forecasting process and company research, we have developed a conclusion that Nautilus is in the middle of a major growth cycle. It grew strongly up until the recession where its demand fell, revenue sank and the stock price crashed. But in the last 5 years, from 2009 to 2014, the company has been consistently rebuilding its sales steadily, as seen in Figure 1. During the recession, the company sold much of its long term PPE (buildings) but it just started its PPE purchases again. Because nothing else detrimental in the company seems to have changed over the past decade, we have reason to believe that Nautilus will reach its previous sales level again and potentially surpass it. The 500% increase in stock price over the last 5 years shows that professional investors share our sentiments.

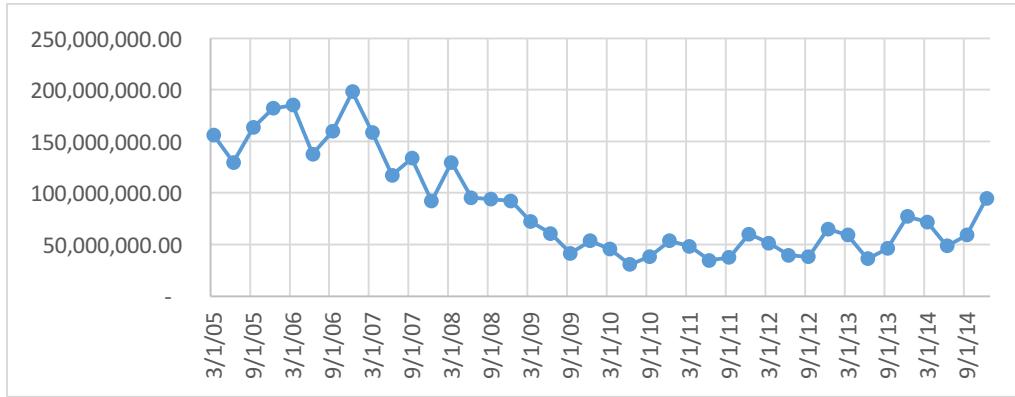


Figure 1.

We also believe that the best way to create proforma financial statements is to focus the forecast on only the most important factors. If we analyzed every single ratio and tried to perfectly predict it for all five future years, we would have too many moving parts. The economy, demand, and Nautilus' internal decisions are so uncertain that increased prediction will not lead to significantly increased accuracy. We tried to keep many ratios constant in the future and only used predictive analysis on the most important and most dynamic drivers. We used these two intuitions as conceptual guidance to our forecasts.

Forecasting Drivers

Figure 2.

Forecasted Year:	2015	2016	2017	2018	2019
Fix. Asset Turnover at MAX Sales Capacity	42.68877	42.68877	42.68877	42.68877	42.68877
Capacity Utilization	75.8%	75.8%	75.8%	75.8%	75.8%
Sales Growth	34.2%	30.2%	23.7%	18.3%	16.6%
<i>Income Statement:</i>					
COGS / Sales	47.9%	46.2%	44.6%	42.9%	41.3%
SG&A / Sales	38.9%	38.9%	38.9%	38.9%	38.9%
Other Op Exp's / Sales	2.2%	2.2%	2.2%	2.2%	2.2%
<i>Rates:</i>					
Short Term Interest Rate	3.5%	3.5%	3.5%	3.5%	3.5%
Long Term Interest Rate	7.0%	7.0%	7.0%	7.0%	7.0%
Tax Rate	39.1%	39.1%	39.1%	39.1%	39.1%
<i>Balance Sheet:</i>					
Days A/R	57.22	57.22	57.22	57.22	57.22

Days Inventory	28.15	28.15	281.5	281.5	281.5
Days A/P	111.11	111.11	111.11	111.11	111.11
Cash to Sales Ratio	22.5%	25.9%	29.3%	32.8%	36.2%
Current Tax Assets/Sales	4.0%	4.0%	4.0%	4.0%	4.0%
Other Current Assets/Sales	2.7%	2.7%	2.7%	2.7%	2.7%
Intangible Assets/Sales	2.9%	2.9%	2.9%	2.9%	2.9%
Accrued Exps. & Other / COGS	10.5%	10.5%	10.5%	10.5%	10.5%
Deferred LT & Other Liab./ COGS	5.4%	5.4%	5.4%	5.4%	5.4%

The most important driver, sales growth, was discussed earlier and is based on outside macroeconomic trends.

Another important set of drivers are the Capacity Utilization (CU) and Fixed Asset Turnover at Max Sales Capacity (FA MAX). These two are correlated with each other so we first found the CU from a FRED dataset for the Manufacturing Industry. The CU for 2012, 2013, and 2014 were 74.6%, 76%, 76.8%, respectively so since these numbers are so close together and don't significantly trend in any direction, we averaged these three historical values and set the average of 75.8% as the CU for the forecast 5 years. We then found the historical FA MAX by using the historical CU and assuming we were maximizing Net PPE in the three years before. By implementing Excel's Goal Seek function, we set the Net PPE required for a max Sales Level equal to the Actual Net PPE and used the fixed CU to find the historical FA MAX.

Figure 3.

	2012	2013	2014	2015
Some Interim Calculations:				
Max Sales Possible at Full production Capacity:	259,954,424	287,898,684	357,352,865	486,021,840
Expected Revenue:				
Fixed Asset Turnover Ratio (using average Net PPE)				
	36.7876	29.8972	30.2704	32.3581
Fixed Asset Turnover at MAX Sales Capacity				
Average Net PPE needed at max Sales Level:	49.31	39.34	39.41	42.69
Net PPE required at EOY for Max Sales Level	5,271,500	7,318,500	9,066,500	11,385,239
	6,138,000	8,499,000	9,634,000	13,136,478

After finding the historical values for FA MAX, we took the average, 42.69, and used it for the next 5 years. Even though the FA MAX and CU have changed historically, it makes sense to keep them constant for the future because we have no major evidence that Nautilus will be

We also found the interest rates and tax rate from outside sources. The short term rate is simply the U.S. prime rate, found on fedprimerate.com. This is the standard short term interest rate. Long term rates vary and Nautilus does not even use long term debt often so we just used the 7% from the website Chron.com. We also used the current US Corporate Tax rate.

We have no dividend payout rates because Nautilus has not paid a dividend since 2007.

To predict Cost of Goods Sold (COGS), we used the COGS/Sales ratio. Because COGS is the largest expense on the Income Statement, we wanted an accurate forecast so we predicted it by taking a regression of the COGS/Sales ratio over the last 5 years. We used 5 years as our predictor period for several reasons. First, six and

more years earlier was the Great Recession and that gave us outlier numbers. Also, the last five years have produced consistent numbers for Nautilus. We used the regression line to forecast the ratios for the next five years and found that the ratio declines just 19% (.479 to .413) from the year 2015 to 2019. That trend seems consistent with the idea that Nautilus get slightly more cost-efficient at producing each unit over time.

For Sales, General & Administrative expenses (SG&A) and other operating expenses – which mostly just include Research & Development (R&D), we used the SG&A/Sales and R&D/Sales ratios. These expenses are smaller than COGS and do not trend very much so we simply used average ratios as our forecasts. We averaged R&D/Sales over the last 5 years, but we averaged SG&A/Sales over the last 4 years because of an abnormally large value in 2010. We could have used a regression or moving averages to more accurately predict SG&A, but because it is such a relatively small expense (2.2% of sales), further accuracy will not change the forecasted profit much.

To forecast Cash on the balance sheet, we can compare it to sales – revenue drives both income statement and balance sheet items – through the Cash/Sales ratio. Like COGS, cash is a large account and should be forecasted through regression for further accuracy. We took a regression over the last 5 years and used the equation to forecast the next 5 years. The Cash/Sales ratio grows by 61% (from .225 to .362) which is expected because as Nautilus get more sales every year, their accumulated cash balance will keep getting bigger ever year.

For predicting A/R, Inventory, and A/P, we used Days A/R, Days Inventory, and Days A/P and found the average from 2010 to 2014, and because it did not majorly trend in any direction, we used the average as our forecasted value for every year. Because these drivers are not ratio percentages, but instead are a number of days, we had to break down the days outstanding formula in order to use these values for prediction. We forecasted A/R, Inventory, and A/P by multiplying the corresponding driver by the sales for the year, doubled that, divided it by days in a year (we used 360), then subtracted the level from the year before.

To forecast the other assets, we used the Current Tax Assets/Sales Ratio, the Other Current Assets/Sales Ratios, and Intangible Assets/Sales ratios. These assets are relatively small and have little trend so we used the same averaging and forecast process as before.

To forecast the liabilities, we compared the accounts to COGS instead of sales because liabilities are created more by the costs of production rather than by the revenue. We used the Accrued Expenses & Other Expenses / COGS ratio and the Deferred LT & Other Liabilities/COGS ratio to forecast the other liabilities using our averaging technique.

Finding Future PPE Purchases

Because Nautilus is in the middle of a growth cycle and has a consistently increasing revenue, the company needs to purchase more PPE to sustain their business. Using our Sales Growth and FA MAX drivers, we can derive the Net PPE required at a maximum sales level – where our CU is at 100% and we are producing as much as we can give our amount of PPE.

Figure 4

	2015	2016	2017	2018	2019
Some Interim Calculations:					
Max Sales Possible at Full production Capacity:	486,021,840	632,608,133	782,594,706	925,582,001	1,079,101,333
Expected Revenue:					
Fixed Asset Turnover Ratio (using average Net PPE)	32.3581	32.3581	32.3581	32.3581	32.3581
Fixed Asset Turnover at MAX Sales Capacity	42.69	42.69	42.69	42.69	42.69
Average Net PPE needed at max Sales Level:	11,385,239	14,819,077	18,332,567	21,682,097	25,278,343
Net PPE required at EOY for Max Sales Level	13,136,478	16,501,675	20,163,459	23,200,734	27,355,952

Figure 4 shows the projected continuation of the information found in Figure 2. The Average PPE at Max Sales is found by dividing the Max Sales Possible (which is based on CU) by the FA Max. By using this average along with the last year's Net PPE level, we can find the Net PPE required for Max sales at our current year.

We know how much PPE we need at the end of the year to be growing our company along with sales, but how do we get to that level? We can use our Depreciation Waterfall to estimate the PPE purchased needed. Using Excel's Goal Seek tool, we set the Estimated net PPE levels equal to the ones generated in Figure 4 and change the PPE Gross Purchases/Year.

Figure 5

Year:	2015	2016	2017	2018	2019
PPE Gross Purchases/year (Known via 10k)	11,159,523.29	9,838,712.18	12,807,019.85	14,924,783.48	17,145,285.97
Estimated Net PPE:	13,136,478.00	16,501,675.00	20,163,459.00	23,200,734.00	27,355,952.00
Gross PPE	18,888,637.59	25,460,901.65	32,244,215.29	36,110,552.78	43,128,340.60
Acc. Deprec.	5,752,159.59	8,959,226.65	12,080,756.29	12,909,818.78	15,772,388.60
Total Deprec. per Year	3,543,030.77	4,817,073.59	6,146,963.65	6,851,016.62	8,186,222.33

Figure 5 shows the PPE gross purchases required per year to keep up with our projected sales growth.

At this point we need to ask ourselves if these projections make sense. This part of our project links the sales growth – which we created using our macro-facing analyses of industry overview and sales growth regressions – to our PPE purchases – which estimate our micro-facing estimates of cash flows and the share price projection. Through referencing the historical PPE purchases (found in Appendix), we can see Nautilus kept increasing its PPE purchases over its early growth cycle, and was even purchasing over \$30 million of PPE in both 2002 and 2005. Our projections of PPE purchases are all between \$10-20 million and grow at a reasonable rate per year, so they look very reasonable context of historical data. One other context clue we have for this projection in growth is that our PPE purchases almost double in 2014 from \$2.9m to 5.3\$. Revenue is growing consistently, there are no red flags in the financials (excessive debt, poor net income), and Nautilus has achieved these forecasted levels previously: we are confident that our analysis is accurate so far.

Predicting the Rest of the Accounts in Our Statements

After using the drivers to forecast most of the accounts, we still need to fill in a few of the missing entries.

Gross PPE and Accumulated Depreciation are inputted from the depreciation waterfall. Subtract the two and receive Net PPE.

Accumulated Other Comprehensive Income is not directly related to operations so we just set it equal to the average of itself in the last 5 years. We do not use ratios because it is not driven by changes in sales or cost of goods sold. It is a relatively small part of the total equity so we should not overthink this account.

Depreciation and Amortization on the Income Statement come directly from the forecasted values on the Depreciation Waterfall, as estimated in Figure 5

Interest income comes from the interest income minus the interest expense. Interest expense is the average short term debt multiplied by the short term interest rate and the average long term debt multiplied by the long term interest rate combined.

Current Debt (the short term debt) and Long Term Debt & Leases (the long term debt) are left blank for now – we will change these when we balance the Balance Sheet.

Common Share Capital is set equal to last year's level of Common Share Capital. The only way this changes is if Nautilus makes the call to conduct share purchases or sales. We need to decide if Nautilus will perform this financial action in the future.

Choosing a Financing Method

Common share capital has changed in the past, but it is a relatively small part of the right side of the balance sheet. As mentioned before, in the years leading up to the Great Recession, we had another growth cycle that we are trying to replicate for the future. Figure 6 shows that Nautilus primarily used Short Term Debt as a source of financing.

Figure 6

Year	12/31/2005	12/31/2006	12/31/2007	12/31/2008
Increase (decrease) in short-term borrowings	40,147,000	7,353,000	31,500,000	-61,056,000
Stock repurchases	-15,636,000	-16,653,000	-	-5,320,000

The changes in Common Share Capital – Stock Repurchases – are not as large as the changes in Short Term Debt that Nautilus has. We will assume the Common Share Capital does not change over the projected 5 years. This is not accurate, but we will instead focus our forecast for financing on Current Debt for simplicity. An increase in current debt also make more sense for Nautilus because we are forecasting they will purchase assets with shorter depreciation lives. A stock repurchase is also a less direct way of funding purchase activity.

Balancing the Balance Sheet

After projecting every relevant account on the Income Statement and Balance Sheet except the Short Term Liabilities, we had more assets than liabilities. This was expected so we used Excel's Goal Seek tool one year at a time to balance the statement. We first created a balance of short term liabilities that would set the difference equal to zero. This worked, but when we used Goal Seek on the next year (2016), it unbalanced the last year. This is due to the fact that some of the drivers in Figure 4 are referencing an average balance of PPE over the current year and previous year. So we had to use Goal Seek on the Depreciation Schedule to re-forecast PPE Purchases per year. Then we used Goal Seek to balance the year's statement again. We kept up this process of repeatedly using Goal Seek to balance the statements for each year until all were balanced.

Figure 5 – PPE Purchases (from Proforma Financials in Appendix)

2015	2016	2017	2018	2019
8,638,821	10,744,406	52,802,381	40,629,114	67,954,077

The number we obtained are believable because at the end of the last growth cycle, the Current Debt peaked at \$79 million in 2007. We are soon reaching that peak.

Statement of Cash Flows

Perfectly forecasting the Statement of Cash Flows was difficult for us because the forecasted closing cash value will always be different from the forecasted Cash Balance on the Balance Sheet. Cash is forecasted using just Cash/Sales driver, but the Cash Flow closing balance is based on many more drivers. But we still did forecast the major cash flows to prepare us for the DCF analysis.

For the Operating activities, we start off with the Net Income as our first cash flow. We then found the Change in Working Capital by adding up the difference in A/R, Inventories, and A/P from each projected year and the one before. We also ensured that the signs of our values were correct: so increases in the assets are negative cash flows and increases in the liabilities are positive cash flows. Nautilus' Operating cash flows also include a line called Adjustments from Income to Cash. This account can include many different cash flow adjustments but we only included depreciation because that is the largest adjustment to our income. Although Depreciation is not actually a cash flow, it is a positive value in the Operating Activities section because we subtracting it from our Net income.

The only significant cash flow we included for Investing Activities were the purchases of PPE. This is negative because it is an expense.

Our Financing cash flows include the change in the Short Term debt we calculated earlier to sustain our Purchases of PPE. Increases in debt are positive cash flows – this is how we raise capital to expand operations.

We will use some of our cash flows to project future sales growth.

Discounted Cash Flow Valuation

After forecasting our proforma financial statements, we can find the most important future cash flows of Nautilus and discount them using the Weighted Average Cost of Capital (WACC).

Cash Flows from Operations

To find the cash flows from operations, we will use the EBITDA adjusted for depreciation and taxes. We take the forecasted EBITDA as a positive cash flow and subtract the EBITDA multiplied by our corporate tax rate of 31.9% so we have EBITDA after taxes. Then we add back the year's depreciation calculation because depreciation is not actually a cash flow.

Cash Flows from Capital Spending

Next, we estimate our cash flows from capital spending which are based off the changes in PPE. Our purchases of PPE – found from our Depreciation Waterfall – are a negative cash flow. We would add in sales of PPE but we

do not expect a significant level of PPE sales in the next 5 years for Nautilus. As off 2013 and 2014, Nautilus does not own any assets with a salvage value. The only assets that Nautilus sold in the past for proceeds were property. The company already sold its property in the past and only leases its buildings now.

Also, the company sold off as much of its assets after the recession and has only started significantly purchasing again purchasing in 2014. From 2009 to 2013, Nautilus has consistently purchased around \$2.5m of PPE per year. This is probably the baseline PPE purchases – those needed to keep the company alive but not expanding. In 2014, Nautilus doubled its purchases to \$5.3m. We assume that this means the company has only just started to buy additional PPE for expansion. This means that Nautilus will not need be selling much PPE because they will try to get their PPE level back to what it was pre-recession.

Cash Flow from Changes in Working Capital

Changes in working capital represent how cash flows in and out of the assets and liabilities relevant to current operations. To model this, we found the difference in A/R, Inventory, and A/P because these are the largest accounts in the current liabilities and current assets of Nautilus. The cash flows we project are the same as the ones we projected in our proforma statement of cash flows for change in working capital.

Cash Flows from Changes in Cash Maintenance Levels

When Nautilus starts a new project, it pays expenses plus a portion of those expenses so that it has a cash buffer. To calculate the change in cash maintenance levels for Nautilus, we found the difference in its COGS, SG&A expense, and R&D expense – every operating expense – over the current and previous year. Then we multiplied this level by 1/12 which represents one month out of the year. The resulting cash flow is a negative number that represents the extra cash Nautilus spends to buffer its annual expense for 1 months out of the year. We choose 1 as our number of months because it is small number and it worked better for our valuation rather than a large number of months.

WACC

To discount our cash flows, we used the WACC which represents to investors the expected cost of capital into the firm. The formula used is below.

$$WACC = \left(\frac{Equity}{(Equity + Liabilities)} * E[r_{mmr}] \right) + \left(\frac{Liabilities}{(Equity + Liabilities)} * (1 - r_{tax}) * r_{prime} \right)$$

The tax rate is the standard US corporate tax rate and the Equity and Liabilities come from the 2014 Balance Sheet.

Cost of Equity

The cost of equity is the expected return of Nautilus using the FF3 or the CAPM. Traditionally the FF3 is used more often.

Cost of Debt

Because most of Nautilus' debt is short term, we just used the the US prime rate which is the standard interest rate benchmark for short term loans.

Growth Rate

We used the average Real GDP growth because Real GDP is a consistent indicator of Nautilus' growth. After running an average on the growth rates of Real GDP found on FRED, we found that the long term average is about 3% per year.

Perpetuity Cash Flow

We can forecast our cash flows up until 2019, and discount them with our WACC, but we also need to forecast our perpetual cash flows from 2020 onwards using the growth rate of cash flows. We used the perpetuity equation $CF = \frac{A(1+g)}{r-g}$ to find the value at 2019 of our infinite cash flows. Then we discounted them to their value at 2014.

Once we add up all our cash flows and subtract the total value of debt (found on the 2014 balance sheet), we find the present value of equity which we divide by our total shares outstanding so that we have stock price per share.

Sensitivity Table Results

Figure 1

	WACC:	FF3: NLS	CAPM: NLS	FF3: Industry
Growth CF:		14.240%	11.691%	6.65%
E[GDP growth]	0.02	\$ 6.77	\$ 9.61	\$ 24.59
	0.03	\$ 7.40	\$ 10.72	\$ 31.25
	0.04	\$ 8.14	\$ 12.12	\$ 42.94
Balancing growth	0.08603	\$ 14.97	\$ 31.33	N/A

Our sensitivity table shows our price per share for different WACCs and growth rates. We also used Goal Seek to find the growth rate that makes our estimate equal to the actual price, given the FF3 based WACC. The rate of 8.6% means that cash flows have to grow at over twice the rate of the GDP for the company to be fairly valued at this large WACC.

Using the FF3 model, our price per share is **\$7.40** which is -102.43% less than the actual stock price at January 2nd 2015. We compare our values to the first trading day after 2014. Because our analysis uses 2014 financials, we can't use the current trading price at 2016 as a comparison. We have to view this analysis as a historical look at the past, rather than as an up-to date comparison to the market.

Using the CAPM, we have a closer price per share of **\$10.72**. This is due to the fact that the CAPM is smaller than the FF3 and creates a smaller WACC.

We also used the Industry FF3, but our prices were too high because the Industry has a relatively small expected return compared to Nautilus.

Dividend Discount Model

For our second valuation, we utilized the dividend discount model or DDM. This model is based on the assumption that a stock's fair price is the sum of all future dividend payouts. The fair price is calculated for a present value in 2014, since the most recent balance statement only included data until 12/31/2014.

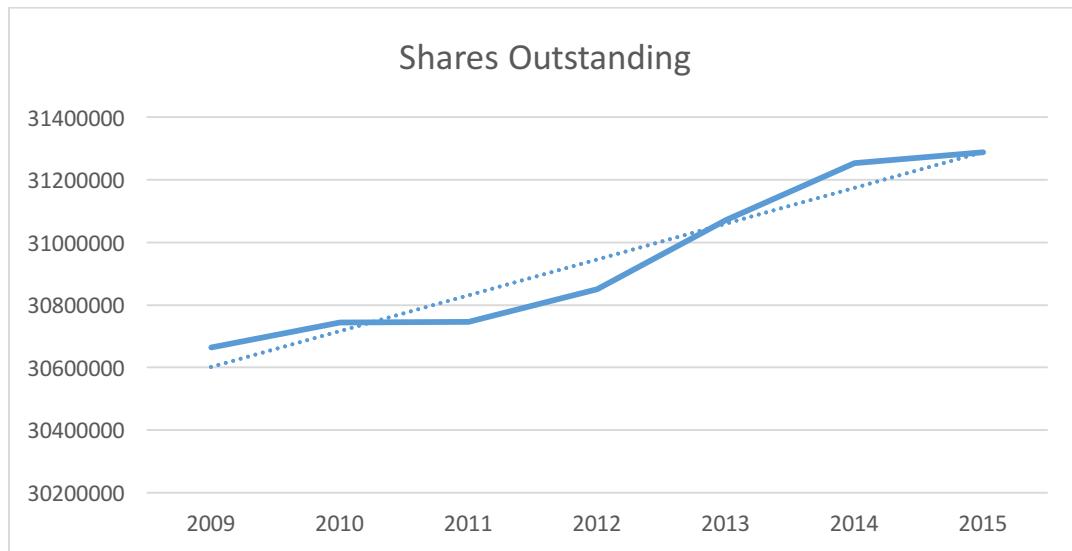
Return on Equity:

The first driver we addressed was the forecasted return on equity. To begin with, we calculated 2014's ROE which was 15.14%. From here, using four calculated ROES- FF3 industry, CAPM industry, FF3 Nautilus, CAPM Nautilus- which we used as our last ROE in year 2026. Knowing these two values, an estimated change in ROE per year, or slope, was calculated. Since a constant change in ROE per year is used, we assumed that over the 10-year period, Nautilus would, on average, correct itself to the ROE that we calculated.

In comparing the ROE estimates found above to the DuPont analysis, we found that both ROE sets, are well within Nautilus's historical performance. For years 2013, 2014 and 2015, Nautilus had an ROE of 47.33%, 15.14% and 14.78% respectively. Comparing these historical yields to CAPM's ROE range of 15.14% to 21.28% and FF3's ROE range of 15.14% to 17.28% verifies that the projections are well within the historical ROE range

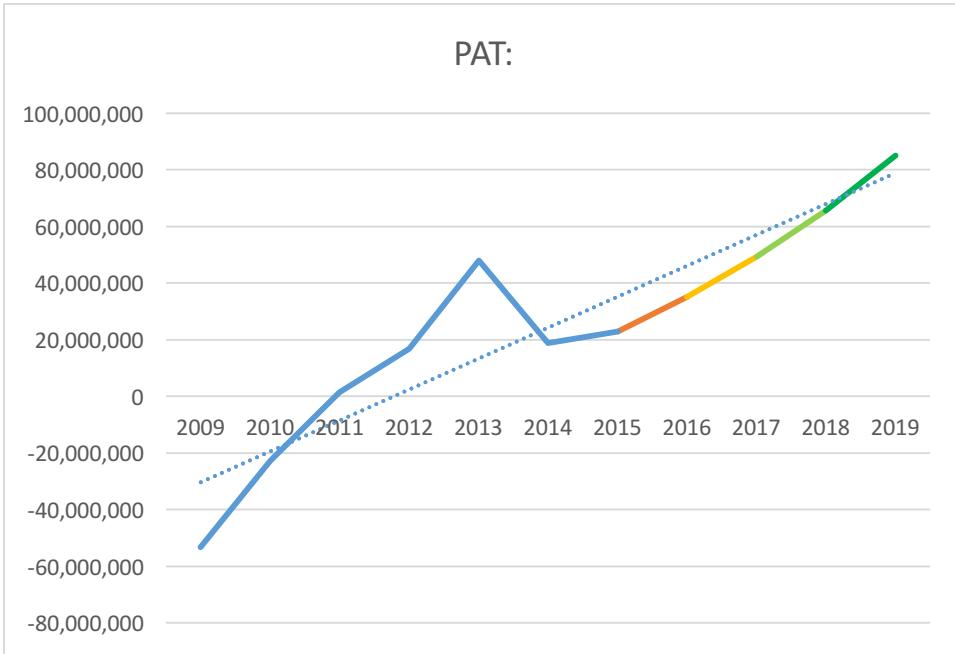
Shares Outstanding:

For estimating the outstanding shares, we used Nautilus's average change in outstanding shares from 2009 to 2015. Finding this change of shares on a per year basis yielded a value which could be added to each year's previous shares. Starting from 2015, we added the average change in shares which gave us a value for 2016. Using this method, all values from 2016 to 2026 were found.



Profit After Tax:

For the profit after tax driver, we split up the 10 yr. timeframe into two parts. The first range, 2015 to 2019, used a PAT that was estimated in the proforma income statement. These values are shown below in motley colors. After this step, we needed to find the PAT for years 2020 to 2026. Using the average change in PAT over time, illustrated by the slope of the dashed line below, we were able to forecast the second half of the timeline. Using this method, we assumed Nautilus's PAT would increase at a constant value. While Nautilus's growth within the past three years has been increasing, this acceleration won't be sustainable.



Payout Ratio:

For the payout ratio driver, the estimation was based on qualitative observations gleaned from Nautilus's performance in the last 15 yrs. Nautilus began paying quarterly dividends in 2003 which lasted until 2007 when the recession started to affect the sales performance of Nautilus. With this in mind, I predicted Nautilus would start to pay dividends in 2018 based on Nautilus's accelerated increase in revenue. Using a payout ratio of 20%, based on previous dividends to earnings per share.

For each of the four dividend discount models, we used a different expected discount rate calculated in the market model regression section. Although the DDM is usually specific to the company, using the industry discount rates yielded a fair price to compare the Nautilus specific fair price to.

FF3 Industry:	Value:	Fair Price:
Expected Rate of Return	9.27%	N/A

CAPM Industry:	Value:	Fair Price:
Expected Rate of Return	6.75%	\$11.08

FF3 Nautilus:	Value:	Fair Price:
Expected Rate of Return	21.28%	\$16.56

CAPM Nautilus:	Value:	Fair Price:
Expected Rate of Return	17.25%	\$16.81

Using the four expected rate of return, the fair price was calculated by summing the present values of each dividend. Since this model is only forecasting 10 yrs. into the future, the dividend value for yr. 10 is a perpetuity of all future dividends. Using the perpetuity equation, $P_{10} = \frac{D_{11}}{r-g}$, all future dividends after 10 yrs. are accounted for. The fair price is then calculated by summing all the dividend present values. As seen in the table above, there is no value of the FF3 fair price. This is because the discount rate was less than the growth, which is one of the equation limitations for perpetuity.

Compared to Nautilus's price in 2014 of \$15.25, the Nautilus specific fair prices for the CAPM and FF3 values, \$16.56 and \$16.81 have a discrepancy 8.59% and 10.23% respectfully. Intuitively this makes sense because the discount rate of equity is a high estimate. Nautilus's accelerated performance in the past 3 yrs. cannot be sustained, resulting in a lower discount rate. For this reason, the fair price using the Nautilus specific CAPM and FF3 rate yields a higher fair price than the trading price in 2014 of \$15.25. On the contrary, the industry rate of return is undervalued which results in a fair price of \$11.08.

Comparison Valuation

Comparable Analysis

For the comparable analysis, Nautilus was compared to five other companies within the sporting goods industry. The foundation for this analysis is based solely on how Nautilus compares with other similar companies based on five ratios. These ratios are as following: P/E (Price per Earnings), PEG (Price per Earnings to Growth), P/S (Price per Sales), PSG (Price per Sales to Growth), P/B (Price to Book Value).

Companies Picked

In selecting the companies to compare Nautilus to, there were two main factors that we focused on. Companies that were similar to size and target alike consumer niche markets to Nautilus. To begin with, we analyzed the Consumer Niche Market of companies that were listed as competitors on various finance websites. From here, we eliminated companies that were not heavily involved or related to fitness products. From here, we analyzed the remaining companies by their Net Sales and present selling price of their stock. However, it is important to note that we wanted companies that were bigger AND smaller than Nautilus so we could calculate an industry average that isn't treating Nautilus as an outlier. With that said, we decided on five companies: Gaiam Inc., Dicks Sporting Goods, Escalade Inc., Big Five Sporting Goods, and Lululemon. These are all consistent with that companies outlined in the industry analysis above, so we proceeded.

From here, we compiled a spreadsheet of shares outstanding, Net Sales, Book Value of Equity, Price per Share, and Earnings per share for Nautilus and the five competitors- all of which could be found on the companies 10k report.

Growth of Earnings per Share

In order to calculate the PEG ratio, the growth of the earnings per share (EPS) was needed. For this part, we compiled the annual historical earnings per share for five years for each company. After importing all the EPS for the six companies, we were ready to find the growth rate.

$$G (\%) = \left\{ \left(\frac{EPS_n}{EPS_m} \right)^{\frac{1}{(n-m)}} - 1 \right\} * 100$$

Since the data we compiled was from 2011 to 2015, n was respectfully 2015, and m was 2011, with the EPS that correspond to those years. From this, we gleaned a growth rate for the earnings per share.

Note: Since we use a 4 yr. period to calculate the growth rate, we assume that over the next 4 yrs., the EPS will follow a similar pattern. While many sources noted that the growth rate can be found in a one year period using $G (\%) = \left\{ \left(\frac{EPS_n - EPS_m}{EPS_m} \right) * 100 \right\}$, I found this equation to be very unreliable since a company's earnings can be very volatile year to year.

Growth of Sales

Contrary to the equation used in finding the EPS growth, we utilized the more general growth rate formula $G (\%) = \left\{ \left(\frac{Sales_n - Sales_m}{Sales_m} \right) * 100 \right\}$. Since sales are less volatile over a year period, this equation was a good fit. By using the sales of a company in 2015, m, and 2014, n, we calculated the growth of sales for each company.

P/E Price Valuation

Using the average of the P/E ratio from the five competing firms multiplied times the Earnings per share, a fair price of \$11.33 was calculated for Nautilus. Compared to the current trading price of \$14.97, this fair price is undervalued by 24.3%.

PEG Price Valuation

Similar to the P/E, outlined above, the PEG price valuation accounts for the estimated growth rate of earnings per share. When multiplying the average PEG ratio by the earning per share and its growth rate, a fair price of \$7.92 was found which is 37.12% undervalued.

Note: For both the P/E and PEG valuation, the fair price had an error greater than 20%. This can be traced back to the P/E and PEG ratio used. These industry P/E and PEG is an average of the competitor's P/E. Moreover, Gaiam Inc.'s price per earnings is negative which weighted down the average industry P/E and PEG used. When the industry P/E and PEG were calculated without Gaiam Inc., a fair price of \$16.24 (P/E) and \$12.19 (PEG) were calculated. This corresponds to 8.5% (P/E) and 18.5% (PEG) difference to the actual value of Nautilus. For the purposes of the valuation, these corrected values will be used.

P/S Price Valuation:

This price valuation employs the industry average ratio of Price to Sales multiplied by Nautilus specific Sales to Share. This yielded a fair price of \$16.06 with a 7.27% difference from the actual price of Nautilus.

PSG Price Valuation

Similar to the P/S valuation, the PSG fair value uses the industry average ratio of Price to Sales multiplied by Nautilus specific Sales to Share and growth of sales. A fair price of \$18.26 with a 21.96% percent overvalue. Similar to the PEG, this is a steep difference in fair vs current price. Since the PSG valuation is based the P/S valuation with incorporated growth, which was found to only have a 9.7% difference, the differential factor is Nautilus's growth rate of 23.89%. While this growth rate is very high compared to the competing firms and industry average, this growth is not necessarily a math error. Instead, it could be attributed to Nautilus's accelerated sales growth in recapitalizing the sales they lost during the recession of 2008 which resulted in more than a 54% decrease in net sales.

P/B Price Valuation:

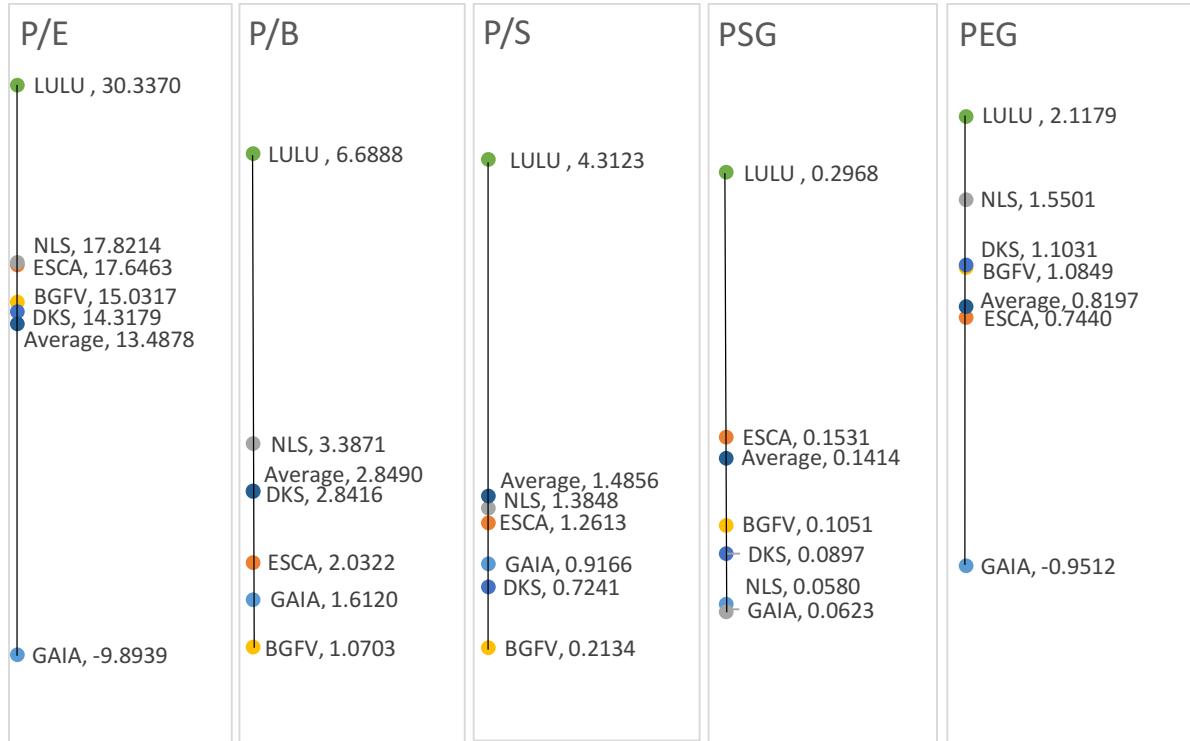
For the Price to book valuation, we multiplied the industry average price to book ratio by Nautilus's book value. This yielded a \$12.59 fair price with a 15.89% difference from the current stock price.

Weight Factors:

For the overall fair price, we assigned the weight factors to each price valuation ratio as seen in the table below.

Ratio:	Weight Factor
P/E	0.257
PEG	0.386
P/S	0.0643
PSG	0.193
P/B	0.1

In assigning a weight factor to each ratio, we had to go back and analyze Nautilus's historical performance. In comparing historical performance, PEG was given the most weight. Since price to earnings, historically, has been a fairly accurate indicator on the health of the stock coupled with Nautilus's high growth rate, PEG was given a factor of 6 to P/S. That said, P/E wasn't far behind with a factor of 4 times PSG. For example, in from 2007 to 2009, Nautilus had a record low on P/E of -\$2.99 due to the recession which resulted in a stock price of \$0.50 in March of 2009. Additionally, we weighted PSG a factor of 3 of P/S because Nautilus's revenue growth has proved to increase the value of the stock in the last 6 yrs. Since the recession, Nautilus's revenue has been steadily increasing along with the stock price. For this reason, P/S is given the lowest weighting because it does not incorporate expected growth.



Results:

Using the weight factors outlined above, we calculated the fair value by multiplying the assigned weight factor by the specific ratio and summing these values up. We calculated a fair price of \$14.99 which is a 0.13% difference from the true stock price.

Conclusions

Now that we have valued Nautilus and have 5 different stock price estimates, we can weight our valuations and determine if the company is overvalued or undervalued.

Weights

We believe that our DCF has the best better estimate of stock price. Industry uses DCFs the most often and these models allow for the deepest analysis. However, because there are so many drivers, there is much room for error. Even though we reasoned through every single driver, our valuations are much lower than the actual stock price, so our analysis may be off. Therefore, we weight the DCF just twice as high as the other two models.

Even though we tried to provide accurate and thought-out analysis to the DDM and Comps, we think these two valuation models have fundamental flaws. Nautilus has not paid dividends since 2007, but we have to predict that they start paying them again and this is a major assumption. Also, our comparable firms are still very different than Nautilus: Nautilus has much higher expected returns compared to its industry. Therefore, we will weight these models the same.

We calculated the DCF and DDM with both the CAPM and the FF3 and we believe the FF3 provides a slightly better discount rate. The FF3 for Nautilus has an R-squared 1% higher and an alpha with a more significant p-value. We will weigh the usage of the FF3 1.5 (50%) higher than the usage of the CAPM.

Model	Weights	Price per Share
Comps	0.25	\$ 14.99
DDM: CAPM	0.1	\$ 16.81
DDM: FF3	0.15	\$ 16.56
DCF: CAPM	0.3	\$ 10.72
DCF: FF3	0.2	\$ 7.40

Final Weighted Valuation:	\$ 12.61
Overvalued by:	18.73%
Price of Stock:	\$ 14.97

We have valuations both higher and lower than the price of the stock so we get a weighted valuation close to that of the stock. We hypothesize that the DCFs provide lower predictions than that of the DDMs because the DCFs do a better job at predicting cash flows and they highlight some of the negative cash flows that Nautilus must undertake to grow its company to meet its sales expectations. Thus, our valuation is lower than that of the market and Nautilus is a slightly overvalued stock.

III. Sales Growth Regressions

Regression 1 (let's see what happens)	Regression 6
Regression 2 (let's see if inflation is significant)	Regression 7
Regression 3	Regression 8
Regression 4	Regression 9
Regression 5	Regression 10
Regression 11 - "Seasonality: Sales are typically strongest in the first and fourth quarter"	Regression Statistics
Regression 12	Regression 16 - add inflation
Regression 13	Regression Statistics
Regression 14 - dropped Housing	Regression Statistics
Regression 15 - added interest rates back in	Regression Statistics
Regression 16 - add inflation	Regression Statistics
Regression 17 - add housing prices	Regression Statistics
Regression 18 - Made the Seasonality Variable into a 2 Dummy variables	Regression Statistics
Regression 19 - No health expenditures, replaced with consumer expenditures	Regression Statistics
Regression 20 - Replace Expenditures with Obesity Again	Regression Statistics

-0.22%	0	0	1	16455.98833	0.43%	16297.3	780	5.55%
0.53%	0	0	0	16543.96234	0.88%	16440.7	908	16.41%
0.56%	0	1	0	16636.503	0.52%	16526.8	952	4.85%
0.65%	1	0	0	16744.23773	1.21%	16727.5	866	-9.03%
1.02%	0	0	1	16914.84856	1.38%	16957.6	883	1.96%
-0.36%	0	0	0	16854.26406	0.16%	16984.3	1012	14.61%
1.07%	0	1	0	17034.9314	1.68%	17270.0	934	-7.71%
1.16%	1	0	0	17232.83797	1.46%	17522.1		
0.75%	0	0	1	17362.29277	0.54%	17615.9		
0.97%	0	0	0	17530.82793	0.19%	17649.3		

-	-	+	+	+	+	-
Proportion of obese/overweight pop.	Unemployment Rate (in %)	Real Durable Goods Consumption	Change in Real Durable Goods Consumption	Health Expend. Per Capita Real	10 Yr T-Bill IRR Real	
0.607	5.1	1055.4		6775.93	0.368930684	
0.607	5.0	1067.3	0.0112753458	6775.93	0.362992077	
0.607	5.0	1038.8	-0.0267028952	6775.93	0.395171571	
0.607	4.7	1081.3	0.0409125915	6775.93	0.409026191	
0.610	4.6	1080.2	-0.0010172940	7155.70	0.447843657	
0.610	4.6	1095.1	0.0137937419	7155.70	0.43103617	
0.610	4.4	1109.6	0.0132407999	7155.70	0.42676127	
0.610	4.5	1122.0	0.0111751983	7155.70	0.411615136	
0.619	4.5	1138.3	0.0145276292	7538.26	0.424772772	
0.619	4.7	1150.9	0.0110691382	7538.26	0.421908234	
0.619	4.8	1155.5	0.0039968720	7538.26	0.371360142	
0.619	5.0	1122.5	-0.0285590653	7538.26	0.319345366	

0.635	8.0	1242.2	0.0164470993	8845.18	0.144065295
0.635	7.8	1266.7	0.0197230720	8845.18	0.147948589
0.635	7.7	1293.6	0.0212362833	8845.18	0.173243078
0.632	7.5	1300.8	0.0055658627	9145.83	0.18132803
0.632	7.3	1311.2	0.0079950800	9145.83	0.239383875
0.632	6.9	1324.6	0.0102196461	9145.83	0.244696395
0.632	6.7	1333.2	0.0064925260	9145.83	0.245373642
	6.2	1377.2	0.030033003		0.230751382
	6.1	1402.5	0.0183706070		0.223668223
	5.7	1423.5	0.0149732620		0.209865183
	5.6	1430.4	0.0048472076		0.188283301

-	-	+	+	-	Proportion of obese/overweight pop.	CPI	Inflation +1	Inflation	0
10 Yr T-Bill IRR % Nom	3 Month T-Bill IRR % No	Slope of Yield Curve Nom.	Yuan/1 US Dollar	Nominal Crude Oil Prices	Proportion of obese/overweight pop.	CPI	Inflation +1	Inflation	0
4.16	2.93	1.23	8.2765	53.11	60.7	0.888153093	1.006757928	0.0067579276	
4.22	3.44	0.78	8.1367	63.31	60.7	0.901605325	1.015146299	0.0151462995	
4.49	3.91	0.58	8.0829	60.03	60.7	0.910012971	1.009325195	0.0093251950	
4.58	4.51	0.07	8.0498	63.27	60.7	0.914751825	1.005207458	0.0052074584	
5.07	4.83	0.24	8.0104	70.46	61.0	0.923006605	1.009024064	0.0090240642	
4.89	5.04	-0.15	7.9654	70.48	61.0	0.931719983	1.009440212	0.0094402120	
4.63	5.03	-0.4	7.8626	59.94	61.0	0.927898326	0.995898277	-0.0041017227	
4.68	5.11	-0.43	7.7582	58.08	61.0	0.936995398	1.009803954	0.0098039539	
4.85	4.87	-0.02	7.6784	64.97	61.9	0.947607375	1.011325538	0.0113255383	
4.74	4.43	0.31	7.5578	75.22	61.9	0.953605848	1.006330125	0.0063301247	
4.27	3.49	0.78	7.4336	90.58	61.9	0.965303176	1.012266418	0.0122664179	
3.67	2.1	1.57	7.159	97.86	61.9	0.975759229	1.010831886	0.0108318857	
3.88	1.65	2.23	6.9578	123.78	62.6	0.988453245	1.013009373	0.013009373	

1.83	0.09	1.74	6.3305	93.29	63.5	1.049553898	1.002442657	0.0024426567
1.64	0.1	1.54	6.3516	92.17	63.5	1.05164345	1.004392768	0.0043927682
1.71	0.09	1.62	6.2437	88.01	63.5	1.061057086	1.006538583	0.0065385826
1.95	0.09	1.86	6.2228	94.33	63.5	1.064701418	1.003434624	0.0034346240
1.99	0.05	1.94	6.1546	94.05	63.2	1.064323838	0.999645366	-0.003546344
2.71	0.03	2.68	6.1253	105.83	63.2	1.070317725	1.005631638	0.0056316383
2.74	0.06	2.68	6.0901	97.5	63.2	1.074096579	1.003530591	0.0035305913
2.77	0.05	2.72	6.1025	98.68	63.2	1.079654797	1.005174784	0.0051747842
2.62	0.03	2.59	6.231	103.35		1.086173016	1.006037317	0.0060373170
2.5	0.03	2.47	6.1641	97.87		1.089372507	1.002945655	0.0029456553
2.28	0.02	2.26	6.1469	73.21		1.087038239	0.997857236	-0.0021427639
1.97	0.02	1.95	6.236	48.49		1.078629065	0.992264141	-0.0077358586

V. Price, Dividend, Return Data

Date	NLS IRR	S&P500	Indust. Portfolio	BGFV Prices	BGFV Dividend Date	BGFV Dividends	DKS Prices	DKS Dividend Date	DKS Dividends	ESCA Prices	ESCA Dividends Date	ESCA Dividends
12/1/2015	-12.96%	-1.58%	1.80%	126.86	9.99	0	0.00	35.349998	12/9/2015	0.138	13.25	
11/2/2015	12.73%	0.22%	-1.68%	124.63	9.66	11/27/2015	0.10	39.029999		0	12	
10/1/2015	13.60%	8.48%	-3.87%	126.76	9.15	0	0	44.549999		0	14.83	
9/1/2015	-1.83%	-2.47%	-6.92%	131.86	10.38	0	0	49.610001	9/9/2015	0.138	15.8	9/10/2015
8/3/2015	-27.69%	-6.09%	1.26%	141.66	11.5	8/28/2015	0.1	50.130001		0	17.889999	
7/1/2015	-1.77%	2.14%	-4.65%	139.91	11.01	0	0	50.98		0	17.26	
6/1/2015	1.85%	-1.94%	-1.53%	146.72	14.21	0	0	51.77	6/10/2015	0.138	18.389999	6/10/2015
5/1/2015	25.64%	1.21%	-2.01%	149.01	14.53	5/28/2015	0.1	53.720001		0	18.280001	
4/1/2015	10.09%	1.02%	-2.73%	152.06	13.64	0	0	54.259998		0	17.99	
3/2/2015	0.07%	-1.58%	5.78%	156.33	13.27	0	0	56.990002	3/11/2015	0.138	17.379999	3/11/2015
												0.1

11/1/2006	10.69%	1.82%	0.81%	24.48	11/29/2006	0.09	53.639999			10.15		
10/2/2006	2.76%	3.33%	7.76%	24.040001		0	49.759998			10.71		
9/1/2006	11.07%	2.64%	8.43%	22.799999		0	0	45.52			10	
8/1/2006	-0.64%	2.31%	-0.67%	19.629999	8/30/2006	0.09	41.330002			10.49		
7/3/2006	-20.05%	0.69%	-5.95%	19.43		0	0	36.41			10.86	
6/1/2006	-7.04%	0.19%	-1.08%	19.5		0	0	39.599998			13	
5/1/2006	3.66%	-2.92%	-1.79%	21.16	5/30/2006	0.09	38.880001			10.9		
4/3/2006	9.70%	1.39%	2.56%	18.530001		0	0	42.150002			11.52	
3/1/2006	-9.12%	1.29%	3.32%	19.58		0	0	39.669998			11.09	3/15/2006
2/1/2006	1.22%	0.22%	4.64%	21.790001	2/27/2006	0.07	37.900002			11.34		

NLS Prices	period	NLS Dividends Date	NLS Dividends	S&P500 Price	S&P Dividends	S&P Dividends	JOUT Prices	JOUT Dividends Date	JOUT Dividends	JAH Prices	JAH Dividends Date	JAH Dividends	GAIA Prices
16.719999	60			2043.939941	31-Dec-15	43.46	21.889999			57.119999			6.24
19.209999	59			2080.409912	30-Nov-15	43.02		24		46.68			6.71
17.040001	58			2079.360107	31-Oct-15	42.64		21.43	10/13/2015	0.08	44.799999		6.81
15	57			1920.030029	30-Sep-15	42.33		21.1			48.880001		6.1!
15.28	56			1972.180054	31-Aug-15	42.01		25.07			51.34		6.1:
21.129999	55			2103.840088	31-Jul-15	41.69		21.1	7/14/2015	0.075	55		6.94
21.51	54			2063.110107	30-Jun-15	41.44		23.549999			51.75		6.54
21.120001	53			2107.389893	31-May-15	41.28		23.969999			53.060001		6.51
16.809999	52			2085.510001	30-Apr-15	41.17		31.5	4/14/2015	0.075	51.18		6.50
15.27	51			2067.889893	31-Mar-15	40.94		33.110001			52.900002		7.25

15.54	11/16/2006	0.1	1400.630005	30-Nov-06	28.95		18.5			36.979988			13.58
14.13			1377.939941	31-Oct-06	28.6		17.84			35.979996			14.51
13.75			1335.849976	30-Sep-06	28.14		17.290001			32.969994			12.91
12.38	8/16/2006	0.1	1303.819946	31-Aug-06	27.74		16.549999			29.319998			11.52
12.56			1276.660034	31-Jul-06	27.54		16.91			28.990013			13.49
15.71			1270.199951	30-Jun-06	27.37		17.299999			30.449993			14.02
16.9	5/17/2006	0.1	1270.089966	31-May-06	27.17		17.700001			30.039999			17.280001
16.4			1310.609985	30-Apr-06	27.04		17.4			33.999996			17.700001
14.95			1294.869995	31-Mar-06	27.02		17.9			32.850002			16.110001
16.450001	2/15/2006	0.1	1280.660034	28-Feb-06	26.94		17.98			29.990002			13.8
16.35			1280.079956	31-Jan-06	26.77		17.99			24.639997			14.25

BGFV IRR	GAIAM IRR	JAH IRR	JOUT IRR	ESCA IRR	DKS IRR		-0.25%	0.74%	-5.92%	0.38%	5.71%	-8.67%
3.42%	-7.56%	22.37%	-8.79%	10.42%	-9.08%		2.20%	-6.41%	2.78%	3.70%	-5.23%	7.80%
6.67%	-1.46%	4.20%	11.99%	-19.08%	-12.39%		5.44%	12.39%	9.13%	3.18%	7.10%	9.31%
-11.85%	11.38%	-8.35%	1.94%	-6.14%	-10.20%		16.15%	12.07%	12.45%	4.47%	-4.67%	10.14%
-9.74%	0.65%	-4.79%	-15.84%	-11.07%	-0.76%		1.49%	-14.60%	1.14%	-2.13%	-3.41%	13.51%
5.36%	-11.96%	-6.65%	18.82%	3.65%	-1.67%		-0.36%	-3.78%	-4.79%	-2.25%	-16.46%	-8.06%
-22.52%	6.12%	6.28%	-10.08%	-6.14%	-1.53%		-7.84%	-18.87%	1.36%	-2.26%	19.27%	1.85%
-2.20%	-0.61%	-2.47%	-1.75%	1.20%	-3.37%		14.68%	-2.37%	-11.65%	1.72%	-5.38%	-7.76%
7.26%	0.30%	3.67%	-23.90%	1.61%	-1.00%		-5.36%	9.87%	3.50%	-2.79%	3.88%	6.25%
2.79%	-10.01%	-3.25%	-4.64%	3.51%	-4.79%		-10.14%	16.74%	9.54%	-0.44%	-0.44%	4.67%
3.83%	14.08%	-0.32%	-1.28%	12.77%	5.62%		1.30%	-3.16%	21.71%	-0.06%	5.00%	3.07%

VI. Market Model Regression

NLS vs. Industry				
	Coefficients	Standard Error	t Stat	P-value
Intercept	0.039075952	0.019972209	1.9565163	0.055142679
	Coefficients	Standard Error	t Stat	P-value
Portfolio	1.243177066	0.353214814	0.6884679	0.493856455
Industry vs. Mkt				
revised				
	Coefficients	Standard Error	t Stat	P-value
Intercept	-0.000289685	0.006246434	1.0463761	0.299655409
S&P500	0.9613178	0.177968482	1.2173542	0.228316208
NLS vs. Mkt				
	Coefficients	Standard Error	t Stat	P-value
Intercept	-0.023740695	0.024321886	1.9761042	0.052824678
S&P500	2.561778079	0.54308468	2.8757543	0.005599684
NLS: FF3				
Monthly	Total Risk	Systematic Risk	Idio. Risk	
	0.0277117	0.76%	2.01%	
	% of TR:	0.273753321	0.726246679	
Annualized	Total Risk	Systematic Risk		Volatility
	33.25%	9.10%	24.15%	57.67%
	% of TR:	27.375332089348300%	72.624667910651700%	

VII. Depreciation Waterfall

Deprec Life:																
	Year:	1	2	3	4	5	6	7	8	9	10	11	12	13		
	1	100.0%														
	2	50.0%	50.0%													
	3	33.3%	33.3%	33.3%												
	4	25.0%	25.0%	25.0%	25.0%											
	5	20.0%	20.0%	20.0%	20.0%	20.0%										
	6	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%									
	7	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%								
	8	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%							
	9	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%						
	10	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%					
	11	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%				
	12	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%			
	13	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%			
	14	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%			
	15	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%			
	16	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%			
	17	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%			
	18	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%			
	19	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%			
	20	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%			
				0	0	0	0	0	0	0	0	0	0	0		
	PPE Gross Purchases/year (Known via 10k)			123,516.00	278,886.00	1,738,836.00	1,929,137.00	8,761,526.00	5,716,348.00	31,542,000.00	7,017,000.00	9,043,000.00	31,771,000.00	11,147,000.00		
		Sum last 20 yrs	Sum last 10 yrs													
	Estimated Net PPE:			359,513,175.32	262,628,220.80	98,438.93	307,850.55	1,664,450.08	2,936,958.05	9,395,547.11	12,279,019.10	35,624,141.18	34,578,549.51	35,091,207.63	50,227,830.84	49,972,947.53
	Actual Net PPE:			435,164,307.00	274,015,000.00	200,679.00	398,064.00	1,842,712.00	10,644,838.00	16,668,884.00	25,228,130.00	55,564,000.00	50,602,000.00	46,350,000.00	59,320,000.00	52,658,000.00
	Error:			-17%	-4%	-51%	-23%	-10%	-72%	-44%	-51%	-36%	-32%	-24%	-15%	-5%
	Gross PPE					120,629.07	399,515.07	2,138,351.07	3,934,515.39	11,736,800.79	15,684,512.49	44,517,689.97	47,704,750.59	53,442,377.54	65,184,246.10	70,384,041.50
	Acc. Deprec.					22,190.14	91,664.52	473,901.00	997,557.34	2,341,253.68	3,405,493.39	8,893,548.79	13,126,201.08	18,351,169.91	14,956,415.26	20,411,093.96
	Deprec. For year					22,190.14	69,474.38	382,236.47	584,419.75	1,460,070.16	1,897,510.69	6,002,421.53	6,295,372.94	7,023,766.28	7,911,751.81	8,646,941.52
	Year:					1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	PPE Category:	5 Years	Enter Drivers:													
			Deprec Life (yrs)			5	5	5	5	5	5	5	5	5	5	5
			Acct-Salvage Value (Proportion of new prices)			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
			Year to Hold till sold:			3	3	3	3	3	3	3	3	3	3	3
			Proportion of 5yr PPE to Total PPE:			82%	70%	80%	44%	39%	52%	59%	62%	66%	65%	67%
			PPE Gross Purchases/year (Known vis 10k)			101,272.34	193,956.38	1,388,784.96	857,276.89	3,437,967.75	2,972,186.77	18,730,937.94	4,347,473.38	5,942,447.22	20,514,573.09	7,523,366.88
			Depreciable Amt			101272.34	193956.38	1388784.96	857276.89	3437867.75	2972186.77	1873097.94	4347473.38	5942447.22	2051457.09	7523366.88

14	15	16	17	18	19	20	Check Sum Equals 1?					
7.1%							YES/OK					
6.7%	6.7%						YES/OK					
6.3%	6.3%	6.3%					YES/OK					
5.9%	5.9%	5.9%	5.9%				YES/OK					
5.6%	5.6%	5.6%	5.6%	5.6%			YES/OK					
5.3%	5.3%	5.3%	5.3%	5.3%	5.3%		YES/OK					
5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	YES/OK					
0	0	2,767,000.00	2,588,000.00	2,557,000.00	2,863,000.00	2,869,000.00	2,144,000.00					
10,689,000.00	4,515,000.00	2,767,000.00	2,588,000.00	2,557,000.00	2,863,000.00	2,869,000.00	5,325,000.00	11,159,523.29	9,838,712.18	12,807,019.85	14,924,783.48	17,145,285.97
48,824,975.13	39,241,946.67	9,133,068.05	6,497,346.06	5,724,588.19	5,555,925.51	5,170,770.23	7,187,614.95	13,136,478.00	16,501,675.00	20,163,459.00	23,200,734.00	27,355,952.00
42,291,000.00	32,883,000.00	8,042,000.00	3,795,000.00	4,405,000.00	6,138,000.00	8,499,000.00	9,634,000.00					
15%	19%	14%	71%	30%	-9%	-39%	-25%					
74,761,154.85	58,278,527.18	17,572,234.86	11,694,193.87	10,574,431.53	10,502,106.72	8,991,320.78	11,289,379.11	18,888,637.59	25,460,901.65	32,244,215.29	36,110,552.78	43,128,340.60
25,936,179.73	19,036,580.51	8,439,166.80	5,196,847.81	4,849,843.34	4,946,181.21	3,820,550.55	4,101,764.16	5,752,159.59	8,959,226.65	12,080,756.29	12,909,818.78	15,772,388.60
9,151,283.93	5,725,381.79	3,199,006.68	1,968,610.81	1,756,274.03	1,750,898.22	1,600,011.48	2,071,839.52	3,543,030.77	4,817,073.59	6,146,963.65	6,851,016.62	8,186,222.33
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
5 0%	5 0%	5 0%	5 0%	5 0%	5 0%							
3	3	3	3	3	3	3	3	3	3	3	3	3
73% 7,787,903.67	73% 3,277,629.19	89% 2,473,213.11	92% 2,393,070.86	89% 2,275,020.13	88% 2,510,991.31	84% 2,410,451.43	90% 4,775,276.52	89% 9,883,739.45	89% 8,713,926.68	89% 11,342,890.20	89% 13,218,545.94	89% 15,185,195.19
7787903.67	3277629.19	2473213.11	2393070.86	2275020.13	2510991.31	2410451.43	4775276.52	9883739.45	8713926.68	11342890.20	13218545.94	15185195.19

Gross PPE of assets still owned												
1996 Purchased Equip.		101272.34	101272.34	101272.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997 Purchased Equip.		193956.38	193956.38	193956.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998 Purchased Equip.			1388784.96	1388784.96	1388784.96	0.00	0.00	0.00	0.00	0.00	0.00	
1999 Purchased Equip.				857276.89	857276.89	857276.89	0.00	0.00	0.00	0.00	0.00	
2000 Purchased Equip.					3437867.75	3437867.75	3437867.75	0.00	0.00	0.00	0.00	
2001 Purchased Equip.						2972186.77	2972186.77	2972186.77	0.00	0.00	0.00	
2002 Purchased Equip.							18730937.94	18730937.94	18730937.94	0.00	0.00	
2003 Purchased Equip.								4347473.38	4347473.38	4347473.38	4347473.38	
2004 Purchased Equip.									5942447.22	5942447.22	5942447.22	
2005 Purchased Equip.										20514573.09		
2006 Purchased Equip.												
2007 Purchased Equip.												
2008 Purchased Equip.												
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2014 Purchased Equip.												
2015 Purchased Equip.												
2016 Purchased Equip.												
2017 Purchased Equip.												
2018 Purchased Equip.												
2019 Purchased Equip.												
Accum Gross PPE:												
Deprec	Year	1	20254.47	38791.28	277756.99	171455.38	687573.55	594437.35	3746187.59	869494.68	1188489.44	4102914.62
	Year	2		20254.47	38791.28	277756.99	171455.38	687573.55	594437.35	3746187.59	869494.68	1188489.44
	Year	3			20254.47	38791.28	277756.99	171455.38	687573.55	594437.35	3746187.59	869494.68
	Year	4				0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Year	5					0.00	0.00	0.00	0.00	0.00	0.00
	Year	6										
	Year	7										
	Year	8										
	Year	9										
	Year	10										
Total Deprec this Year:			20254.47	59045.74	336802.73	488003.65	1136785.92	1453466.28	5028198.49	5210119.62	5804171.71	6160898.74
Accum Deprec Calculations:												
1996 Purchased Equip.		20254.47	40508.94	60763.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997 Purchased Equip.		38791.28	77582.55	116373.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998 Purchased Equip.			277756.99	555513.98	833270.97	0.00	0.00	0.00	0.00	0.00	0.00	
1999 Purchased Equip.				171455.38	342910.76	514366.14	0.00	0.00	0.00	0.00	0.00	
2000 Purchased Equip.					687573.55	1375147.10	2062720.65	0.00	0.00	0.00	0.00	
2001 Purchased Equip.						594437.35	1188874.71	1783312.06	0.00	0.00	0.00	
2002 Purchased Equip.							3746187.59	7492375.17	11238562.76	0.00	0.00	
2003 Purchased Equip.								869494.68	1738989.35	2608484.03		
2004 Purchased Equip.									1188489.44	2376978.85		
2005 Purchased Equip.										4102914.62		
2006 Purchased Equip.												
2007 Purchased Equip.												
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2016 Purchased Equip.												
2017 Purchased Equip.												
2018 Purchased Equip.												
2019 Purchased Equip.												
Accum Deprec:		20254.47	79300.21	416102.95	843343.19	1863755.28	2483950.59	6997782.95	10145181.91	14166041.56	9088377.53	
Net PPE:												
Book Values:		81017.87	215928.51	1267910.73	1596675.04	3820174.32	4783380.83	18143209.51	15905416.17	14854816.98	21716116.16	
1996 Purchased Equip.		81017.87	60763.40	40508.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1997 Purchased Equip.		155165.10	116373.83	77582.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1998 Purchased Equip.			1111027.96	833270.97	555513.98	0.00	0.00	0.00	0.00	0.00	0.00	
1999 Purchased Equip.				685821.51	514366.14	342910.76	0.00	0.00	0.00	0.00	0.00	
2000 Purchased Equip.					2750294.20	2062720.65	1375147.10	0.00	0.00	0.00	0.00	
2001 Purchased Equip.						2377749.42	1783312.06	1188874.71	0.00	0.00	0.00	
2002 Purchased Equip.							14984750.35	11238562.76	7492375.17	0.00	0.00	
2003 Purchased Equip.								3477978.70	2608484.03	1738989.35		
2004 Purchased Equip.									4753957.78	3565468.33		
2005 Purchased Equip.										16411658.47		
2006 Purchased Equip.												
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2018 Purchased Equip.												
2019 Purchased Equip.												

	2019 Purchased Equip.										
Accum Deprec:	0.00	0.00	0.00	43391.14	274120.76	599490.16	1387764.74	2271533.59	3271807.76	4652180	
Net PPE:	0.00	0.00	0.00	920856.34	4853204.29	6630940.81	16129448.16	17367774.23	18956507.21	26022768	
Book Values:											
1996 Purchased Equip.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
1997 Purchased Equip.		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
1998 Purchased Equip.			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
1999 Purchased Equip.				920856.34	877465.20	834074.06	790682.93	747291.79	703900.65	660509	
2000 Purchased Equip.					3975739.09	3788400.60	3601062.11	3413723.62	3226385.12	3039046	
2001 Purchased Equip.						2008466.15	1913826.38	1819186.62	1724546.85	1629907	
2002 Purchased Equip.							9823876.74	9360971.55	8898066.37	8435161	
2003 Purchased Equip.								2026600.65	1931106.38	1835612	
2004 Purchased Equip.									2472501.84	2355996	
2005 Purchased Equip.										8066534	
2006 Purchased Equip.											
2007 Purchased Equip.											
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2016 Purchased Equip.											
2017 Purchased Equip.											
2018 Purchased Equip.											
2019 Purchased Equip.											
Check: Does sum(Book Values) = Net PPE?				YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	
										YES/OK	

											44299.24
5812579.96	7373192.98	8977942.81	6206.46	18642.74	18747.62	20377.63	23156.38	29456.05	57533.34	83087.82	83931.89
26723808.28	27307096.43	26683164.49	131714.87	257718.94	259425.78	292725.60	318059.67	457277.02	902098.11	1122563.89	1216313.81
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2851708.14	2664369.65	2477031.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1535267.32	1440627.55	1345987.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
797255.99	7509350.81	7046445.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1740117.84	1644623.57	1549129.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2239491.19	2122985.87	2006480.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7686436.45	7306337.95	6926239.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2698531.34	2571375.41	2444219.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047425.62	1950950.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
936681.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131714.87	125508.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	132210.53	125980.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		133445.06	127157.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			165568.53	157766.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				160292.80	152739.73	0.00	0.00	0.00	0.00	0.00	0.00
					304537.29	290187.36	0.00	0.00	0.00	0.00	0.00
						611910.74	583077.25	0.00	0.00	0.00	0.00
							539486.64	514065.80	0.00	0.00	0.00
								702248.01	669157.79	0.00	0.00
									818371.46	779809.45	940128.39
YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK	YES/OK

Proforma Statements

Ratios: NLS		Historical									
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Liquidity Focus:											
Current (EOY values)		1.774	1.702	1.543	1.447	1.375	1.422	1.503	1.571	1.953	2.39
Quick (EOY Values)		1.079	1.187	1.214	0.947	1.141	1.137	1.203	1.149	1.623	1.97
Activity (Utilization) Focus:											
(using ave B/S values unless indicated otherwise)											
A/R Turnover (assume 100% Credit sales)		4.864	5.893	6.942	10.082	7.843	7.560	7.853	8.220	8.481	4.68
Average Collection Period (AKA Days Sales Outstanding)		75.039	61.935	52.575	36.204	46.540	48.279	46.478	44.405	43.035	77.87
Inventory Turnover (using end of Yr Inv.)		6.570	8.971	8.512	9.387	14.426	16.280	15.551	10.322	13.827	11.02
Days Inventory		55.552	40.686	42.878	38.883	25.301	22.420	23.471	35.360	26.397	33.11
Inventory Turnover (using average Inv.)		6.570	8.971	8.512	9.387	14.426	16.280	15.551	10.322	13.827	11.02
Days Inventory		55.552	40.686	42.878	38.883	25.301	22.420	23.471	35.360	26.397	33.11
Fixed Asset Turnover		10.642	12.151	10.563	10.939	9.249	28.462	44.003	36.788	29.897	30.27
Total Asset Turnover		1.506	1.668	1.705	2.630	1.956	2.090	2.037	1.630	1.371	1.33
A/P to Assets:		0.148	0.144	0.113	0.193	0.322	0.313	0.345	0.347	0.259	0.27
Cash to Sales (using average Cash)		0.013	0.009	0.012	0.016	0.034	0.064	0.088	0.105	0.147	0.15
A/P Turnover (using ave A/P relative to COGS)		5.766	6.231	6.114	6.340	2.463	2.975	3.840	3.356	3.212	3.15
Days A/P		62.433	57.772	58.882	56.783	146.152	120.993	93.746	107.270	112.085	113.97
Other curr. Assets/Sales		0.013	0.034	0.027	0.028	0.027	0.034	0.025	0.030	0.032	0.02
Intang											
Intangible Assets/Sales		0.176	0.168	0.141	0.090	0.125	0.129	0.109	0.091	0.070	0.04
Accrued Expenses & Other / COGS		0.103	0.100	0.126	0.120	0.129	0.128	0.099	0.114	0.096	0.09
Deferred LT & Other Liab./COGS		0.064	0.044	0.047	0.024	0.070	0.067	0.065	0.063	0.036	0.03
Financial Leverage Focus:											
Debt / Assets (EOY values)		0.389	0.396	0.497	0.475	0.544	0.607	0.614	0.541	0.362	0.36
Debt / BV Equity (EOY Values)		0.637	0.656	0.989	0.905	1.194	1.544	1.592	1.177	0.568	0.58
Times Interest Earned	#DIV/0!	14.429	-13.684	-47.599	-173.839	-68.350	7.723	-189.071	436.778	1206.160	
Profitability Focus:											
(using average B/S values):											
Gross Profit Margin		44.16%	43.89%	35.77%	36.64%	51.00%	45.56%	43.49%	46.94%	48.66%	51.22%
Operating Margin		5.35%	6.04%	-13.68%	-20.29%	-15.43%	-5.68%	1.99%	5.46%	7.19%	10.99%
Net Profit Margin		3.64%	4.28%	-11.09%	-22.03%	-28.16%	-13.56%	0.79%	8.71%	21.92%	6.85%
ROA		5.49%	7.13%	-18.90%	-57.94%	-55.08%	-28.34%	1.60%	14.19%	30.04%	9.15%
ROE (Book Value of Equity)		9.04%	12.85%	-37.06%	-116.01%	-127.99%	-72.80%	3.77%	25.03%	47.33%	15.14%
ROE (Mkt Value of Equity)		4.71%	9.80%	-50.40%	-139.29%	-91.00%	-42.09%	1.75%	9.10%	12.99%	3.95%
Market Focus:											
Price to Earnings (P/E)		24.044	15.556	-2.756	-0.759	-1.167	-2.405	35.000	6.382	5.546	25.72
Earnings Yield		0.042	0.064	-0.363	-1.317	-0.857	-0.416	0.029	0.157	0.180	0.03
P/E of S&P 500 (end of year)											
Relative P/E											
Market to Book (EOY)		2.123	1.717	0.779	0.653	1.189	1.777	1.684	2.505	2.869	4.28
Dividend Yield											
Capital Gain on Stock	N/A	0.168	1.887	1.195	0.089	0.140	0.017	-0.501	-0.584	-0.44	
ROE Decomposition (DuPont Analysis)											
(using average B/S values):											
PAT / PBT		0.652	0.716	0.772	1.021	1.807	2.475	0.446	1.621	2.990	0.62
PBT / EBIT		1.044	0.990	1.050	1.063	1.010	0.965	0.886	0.984	1.020	1.00
EBIT / Sales		0.054	0.060	-0.137	-0.203	-0.154	-0.057	0.020	0.055	0.072	0.11
Sales / Total Assets		1.506	1.668	1.705	2.630	1.956	2.090	2.037	1.630	1.371	1.33
Total Assets / BV of Equity		1.646	1.800	1.960	2.002	2.324	2.569	2.353	1.763	1.575	1.65
Total Assets / Mkt Value of Equity		0.782	0.925	1.922	2.311	1.551	1.473	1.646	1.096	0.608	0.43
Potential for Bankruptcy Indication:											
Altman's Z Score Inputs:											
(using average B/S values):											
EBIT / Total Assets		0.081	0.101	-0.233	-0.534	-0.302	-0.119	0.041	0.089	0.099	0.14
Sales / Total Assets		1.506	1.668	1.705	2.630	1.956	2.090	2.037	1.630	1.371	1.33
Mkt Value of Equity / Book Value of Debt.		3.257	2.430	1.062	0.864	1.132	1.112	1.057	2.108	4.507	5.85
Ret Earns / Total Assets		0.592	0.616	0.629	0.604	0.425	0.227	0.223	0.308	0.530	0.50
Working Cap / Total Assets		0.202	0.194	0.147	0.120	0.081	0.072	0.158	0.321	0.417	0.51
Z Score: (Z < .75 => trouble ahead)		4.798	4.554	2.630	2.377	2.331	2.770	3.306	4.005	5.642	6.65

Proforma					Industry (2004)	Industry (2005)	Industry (2006)	Industry (2007)	Industry (2008)	Industry (2009)	Industry (2010)	Industry (2011)	Industry (2012)	Industry (2013)	Industry (2014)
2015	2016	2017	2018	2019											
2.274	2.283	2.082	2.410	2.482	1.7	1.7	1.3	1.5	1.3	1.5	1.6	1.6	1.4	1.7	1.
2.244	1.991	2.026	2.189	2.412	0.2	0.3	.2	0.2	0.2	0.2	.2	.3	.2	0.2	0.
4.834	5.086	5.320	5.396	4.988	4.2	3.5	5.5	3.6	5.5	4.3	4.7	5.2	8.2	3.2	4.
75.512	71.769	68.614	67.637	73.175	86.905	104.286	66.364	101.389	66.364	84.884	77.660	70.192	44.512	114.063	89.02
137.018	14.995	63.258	18.598	54.243											
2.664	24.341	5.770	19.626	6.729											
137.018	14.995	63.258	18.598	54.243	7.693	10.051	12.249	10.181	8.772	11.610	11.887	8.175	7.602	10.503	10.06
2.664	24.341	5.770	19.626	6.729	47.448	36.315	29.799	35.850	41.608	31.438	30.705	44.650	48.015	34.751	36.25
32.358	32.358	32.358	32.358	32.358	27.3	26.2	29.0	35.7	42.1	59.0	37.1	48.0	52.7	53.5	100.
1.393	1.374	1.351	1.302	1.354	2.9	2.8	2.6	3.0	3.0	3.3	2.6	3.0	3.2	2.7	3.
0.261	0.257	0.217	0.207	0.182	0.176	0.215	0.261	0.217	0.193	0.168	0.141	0.143	0.212	0.172	0.10
0.174	0.216	0.251	0.288	0.322	0.121	0.102	0.095	0.111	0.137	0.122	0.108	0.131	0.142	0.144	0.18
3.240	3.240	3.240	3.240	3.240	9.7	10.1	6.9	7.9	7.7	10.5	8	9.8	9.8	9.5	1
111.110	111.110	111.110	111.110	111.110	37.629	36.139	52.899	46.203	47.403	34.762	45.625	37.245	37.245	38.421	26.07
0.027	0.027	0.027	0.027	0.027	0.032	0.041	0.039	0.047	0.058	0.043	0.041	0.056	0.026	0.022	0.02
0.029	0.029	0.029	0.029	0.029	0.034	0.018	0.02	0.014	0.018	0.013	0.035	0.041	0.037	0.037	0.01
0.105	0.105	0.105	0.105	0.105											
0.054	0.054	0.054	0.054	0.054											
0.417	0.414	0.452	0.394	0.384	0.205	0.257	0.177	0.209	0.151	0.23	0.16	0.189	0.193	0.186	0.12
0.714	0.705	0.824	0.650	0.623	0.58	0.913333333	0.646666667	0.89	0.866666667	0.643333333	0.72	0.676666667	0.86	0.703333333	0.726666666
269.587	179.709	76.612	68.706	76.025											
52.12%	53.77%	55.42%	57.07%	58.72%	38.10%	38.90%	39.20%	40.00%	41.60%	38.70%	40.90%	37.70%	38.30%	39.30%	38.10%
11.06%	12.71%	14.36%	16.01%	17.66%	37.40%	36.30%	40.30%	38.60%	39.70%	37.30%	39.90%	35.10%	35.60%	36.10%	34.90%
6.21%	7.31%	8.32%	9.35%	10.39%	0.70%	2.50%	-1.20%	1.40%	1.90%	1.50%	1.10%	2.50%	2.70%	3.20%	3.20%
8.65%	10.05%	11.24%	12.16%	14.07%	8.61%	5.85%	5.14%	1.24%	2.98%	1.73%	3.82%	2.19%	6.70%	6.93%	7.42%
14.78%	17.80%	19.40%	19.89%	22.83%	19.46%	14.85%	13.31%	4.86%	6.21%	3.80%	8.22%	6.67%	14.20%	13.52%	14.18%
0.562	0.577	0.586	0.592	0.596											
0.999	0.996	0.988	0.986	0.988											
0.111	0.127	0.144	0.160	0.177											
1.393	1.374	1.351	1.302	1.354	2.9"	2.8"	2.6"	3.0"	3.0"	3.3"	2.6"	3.0"	3.2"	2.7"	3.
1.709	1.772	1.726	1.635	1.623											
0.154	0.175	0.194	0.208	0.239	0.028	0.02	0	0.013	0.047	0.025	0.001	0.04	0.034	0.055	0.
1.393	1.374	1.351	1.302	1.354	2.9"	2.8"	2.6"	3.0"	3.0"	3.3"	2.6"	3.0"	3.2"	2.7"	3.
0.000	0.000	0.000	0.000	0.000											
0.477	0.462	0.480	0.512	0.598											
0.493	0.505	0.485	0.552	0.494	0.290	0.295	0.141	0.213	0.161	0.264	0.206	0.283	0.187	0.241	0.37

Nautilus Inc (NYS: NLS)																
													Sporting Goods SIC: 5941			
													"Industry Norms and Key Business Ratios"			
Exchange rate used is that of the Year End reported date													- Dunn & Bradstreet, 2014 Ratios are in Median Values			
Common Size Annual Consolidated Balance Sheet	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Report Date	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	
Assets:																
Cash & Equivalents	1.9%	1.0%	2.0%	2.8%	6.3%	18.2%	21.0%	24.6%	28.5%	41.1%	35.2%	42.3%	43.1%	48.5%	49.0%	
Receivables (ST)	28.9%	33.0%	23.2%	27.2%	24.1%	26.1%	29.1%	23.2%	17.6%	14.9%	38.6%	21.0%	31.4%	20.3%	27.1%	
Inventories	23.2%	17.8%	15.1%	22.2%	11.4%	13.2%	14.0%	19.9%	11.0%	14.2%	1.1%	10.9%	2.3%	8.0%	2.5%	
Current Tax Assets	1.8%	1.3%	7.7%	6.2%	11.5%	0.7%	0.6%	0.3%	3.1%	7.1%	6.3%	6.6%	5.9%	6.0%	5.5%	
Assets Held for Sale (ST)	1.5%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Discontinued Ops (ST Asset)	0.0%	0.0%	18.9%	0.0%	9.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Other Current Assets	2.0%	5.4%	3.5%	5.8%	4.4%	7.3%	5.4%	6.1%	4.8%	4.0%	4.3%	4.5%	4.0%	4.1%	3.7%	
Total Current Assets	59.3%	59.0%	70.8%	64.1%	67.1%	65.8%	70.1%	74.1%	65.2%	81.3%	85.6%	85.2%	86.7%	86.8%	87.8%	
Gross Property Plant & Equip	25.0%	24.5%	26.1%	48.3%	48.2%	61.7%	56.5%	50.1%	34.2%	20.4%	8.0%	8.7%	8.0%	7.6%	7.1%	
Accumulated Depreciation	10.6%	12.1%	15.3%	31.6%	41.2%	56.9%	51.2%	43.6%	28.2%	14.9%	2.4%	3.0%	3.0%	2.7%	2.6%	
Net Property Plant & Equip	14.4%	12.4%	10.8%	16.6%	7.0%	4.8%	5.3%	6.5%	5.9%	5.5%	5.6%	5.6%	5.0%	4.9%	4.5%	
Intangible Assets	26.8%	27.0%	18.1%	18.6%	20.5%	27.7%	23.7%	18.7%	10.7%	7.5%	4.5%	4.7%	4.3%	4.3%	3.9%	
Deferred LT Assets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.9%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Other Assets	-0.5%	1.6%	0.3%	0.6%	5.4%	1.6%	0.9%	0.7%	0.3%	0.4%	4.3%	4.5%	4.0%	4.1%	3.7%	
Total Assets	100.0%	100.0%	100.0%													
Liabilities:																
Accounts Payable	14.8%	14.4%	11.3%	19.3%	32.2%	31.3%	34.5%	34.7%	25.9%	27.1%	26.1%	25.7%	21.7%	20.7%	18.2%	
Accrued Expenses	7.0%	7.4%	9.5%	15.4%	9.3%	9.0%	8.7%	8.7%	6.4%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
Current Debt	9.9%	11.2%	20.2%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	3.7%	13.1%	8.6%	11.3%	
Discontinued Ops (ST Liab)	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Other Current Liabilities	1.7%	1.6%	0.8%	0.5%	1.1%	6.0%	3.5%	3.8%	1.1%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total Current Liabilities	33.4%	34.7%	45.9%	44.3%	48.8%	46.3%	46.7%	47.2%	33.4%	34.0%	37.6%	37.3%	41.7%	36.0%	35.4%	
LT Debt & Leases	0.0%	1.0%	0.0%	0.0%	0.0%	6.6%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Deferred LT Liabilities	4.1%	4.0%	1.3%	0.5%	0.7%	1.3%	1.7%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Other Liabilities	1.4%	0.0%	2.5%	2.7%	5.0%	6.6%	6.3%	5.3%	2.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total Liabilities	38.9%	39.6%	49.7%	47.5%	54.4%	60.7%	61.4%	54.1%	36.2%	36.8%	41.7%	41.4%	45.2%	39.4%	38.4%	
Equity:																
Common Share Capital	0.9%	0.2%	1.1%	1.6%	3.8%	6.4%	6.5%	6.5%	4.7%	4.6%	3.4%	2.7%	2.0%	1.7%	1.3%	
Retained Earnings	60.0%	59.2%	47.3%	47.8%	35.7%	23.3%	23.8%	38.8%	58.9%	58.8%	53.7%	54.9%	52.1%	58.3%	59.8%	
Accum Other Comprehensive Income	0.7%	1.0%	1.8%	3.1%	6.0%	9.5%	8.3%	0.7%	0.2%	-0.2%	1.3%	1.0%	0.7%	0.6%	0.5%	
Other Equity	-0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total Equity	61.1%	60.4%	50.3%	52.5%	45.6%	39.3%	38.6%	45.9%	63.8%	63.2%	58.3%	58.6%	54.8%	60.6%	61.6%	
Total Liabilities & Equity	100.0%	100.0%	100.0%													
Common Size Annual Consolidated Income Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Report Date	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Direct Costs	55.8%	56.1%	64.2%	63.4%	49.0%	54.4%	56.5%	53.1%	51.3%	48.8%	47.9%	46.2%	44.6%	42.9%	41.3%	
Gross Profit	44.2%	43.9%	35.8%	36.6%	51.0%	45.6%	43.5%	46.9%	48.7%	51.2%	52.1%	53.8%	55.4%	57.1%	58.7%	
Operating Income	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Research & Development	36.2%	35.4%	51.0%	44.2%	53.1%	49.5%	39.7%	39.3%	38.9%	37.6%	38.9%	38.9%	38.9%	38.9%	38.9%	
Restruct Remediation & Impair	1.8%	1.6%	2.1%	2.1%	2.8%	1.7%	1.8%	2.1%	2.5%	2.6%	2.2%	2.2%	2.2%	2.2%	2.2%	
Other Operating Expense	0.9%	0.8%	-3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total Indirect Operating Costs	38.8%	37.9%	49.4%	56.9%	66.4%	51.2%	41.5%	41.5%	41.5%	40.2%	41.1%	41.1%	41.1%	41.1%	41.1%	
Interest Income	5.4%	6.0%	-13.7%	-20.3%	-15.4%	-5.7%	2.0%	5.5%	7.2%	11.0%	11.1%	12.7%	14.4%	16.0%	17.7%	
+ Depreciation, Amort.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
EBITDA	5.4%	6.0%	-13.7%	-20.3%	-15.4%	-5.7%	2.0%	5.5%	7.2%	11.0%	12.0%	13.7%	15.4%	17.0%	18.7%	
-Depreciation, Amort.	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%									
EBIT	5.4%	6.0%	-13.7%	-20.3%	-15.4%	-5.7%	2.0%	5.5%	7.2%	11.0%	11.1%	12.7%	14.4%	16.0%	17.7%	
Interest income	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
-Interest expense	0.0%	0.4%	1.0%	0.4%	0.1%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.2%	
Interest Income (Int. income - int. exp.)	0.2%	-0.3%	-0.9%	-0.4%	0.0%	-0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.2%	
Other Non-Operating Income	0.0%	0.3%	0.2%	-0.9%	-0.1%	0.3%	0.0%	-0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total Non-Operating Income	0.2%	-0.1%	-0.7%	-1.3%	-0.2%	0.2%	-0.2%	-0.1%	0.1%	0.0%	0.0%	0.0%	-0.2%	-0.2%	-0.2%	
Earnings Before Tax (PBT)	5.6%	6.0%	-14.4%	-21.6%	-15.6%	-5.5%	1.8%	5.4%	7.3%	11.0%	11.1%	12.7%	14.2%	15.8%	17.4%	
Taxation	1.9%	1.7%	-5.2%	1.0%	-5.7%	0.3%	0.4%	-0.1%	-14.7%	3.6%	4.3%	5.0%	5.5%	6.2%	6.8%	
Discontinued Operations	0.0%	0.0%	-2.0%	0.6%	-18.3%	-7.7%	-0.6%	3.2%	-0.1%	-0.6%	-0.5%	-0.4%	-0.3%	-0.3%	-0.2%	
Extraordinary Items	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Accounting Changes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Net Income (PAT)	3.6%	4.3%	-11.1%	-22.0%	-28.2%	-13.6%	0.8%	8.7%	21.9%	6.8%	6.2%	7.3%	8.3%	9.3%	10.4%	

Nus Inc (NYS: NLS)

Drivers:												
	2012	2013	2014	2015	2016	2017	2018	Estimated	Estimated	Estimated	Estimated	Estimated
Capacity Utilization	74.60%	76.00%	76.80%	75.80%	75.80%	75.80%	75.80%	75.80%	75.80%	75.80%	75.80%	75.80%
Sales Growth (Expected)												
COGS / Sales								47.88%	46.23%	44.58%	42.93%	41.28%
SG&A / Sales								38.89%	38.89%	38.89%	38.89%	38.89%
Other Op.Exps / Sales								2.17%	2.17%	2.17%	2.17%	2.17%
Short Term Interest Rate								3.50%	3.50%	3.50%	3.50%	3.50%
Long Term Interest Rate								7.00%	7.00%	7.00%	7.00%	7.00%
Tax Rate								39.10%	39.10%	39.10%	39.10%	39.10%
Days A/R (using average A/R)								57.22	57.22	57.22	57.22	57.22
Days Inventory (using average inventory)								28.15	28.15	28.15	28.15	28.15
Days A/P (using average A/P , relative to COGS - not sales!)								111.11	111.11	111.11	111.11	111.11
Cash to Sales Ratio (using average cash)								0.2248	0.2591	0.2934	0.3277	0.3620
Current Tax Assets/Sales								0.0403	0.0403	0.0403	0.0403	0.0403
Other Current Assets/Sales								0.0274	0.0274	0.0274	0.0274	0.0274
Intangible Assets/Sales								0.0290	0.0290	0.0290	0.0290	0.0290
Accrued Exps. & Other / COGS								0.1054	0.1054	0.1054	0.1054	0.1054
Deferred LT & Other Liab./COGS								0.0536	0.0536	0.0536	0.0536	0.0536
P/E Ratio assumed (based on same year's EPS, i.e. TTM):												
	2012	2013	2014	2015	2016	2017	2018	2019				
Some Interim Calculations												
Max Sales Possible at Full production Capacity:												
Expected Revenue:												
Fixed Asset Turnover Ratio (using average Net PPE)												
Fixed Asset Turnover at MAX Sales Capacity												
Average Net PPE needed at max Sales Level:												
Net PPE required at EOY for Max Sales Level												
1	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016
2												
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Detailed Annual Balance Sheet

Date	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019

ivents & ST Investments	7,984,000	4,262,000	7,911,000	5,547,000	7,289,000	14,296,000	17,427,000	23,207,000	40,979,000	45,206,000	82,821,966	124,247,473	174,050,877	229,914,128	236,101,875
Sale Securities										26,384,000					
\$ (ST)	119,404,000	140,175,000	90,665,000	53,770,000	27,793,000	20,465,000	24,697,000	21,849,000	25,336,000	26,260,000	90,851,211	61,581,249	126,981,787	96,055,288	163,983,613
Assets	96,084,000	75,832,000	58,910,000	43,802,000	13,119,000	10,347,000	11,601,000	18,787,000	15,824,000	24,886,000	2,688,734	31,978,92	9,377,59	37,724,477	15,079,636
for Sale (ST)	7,235,000	5,722,000	29,987,000	12,220,000	13,232,000	513,000	529,000	294,000	4,521,000	12,418,000	14,886,228	19,310,899	23,888,366	28,254,175	32,940,482
1) Ops (ST Asset)	-	-	73,771,000	-	10,781,000	292,000	-	-	-	-	-	-	-	-	
1) Assets	8,369,000	23,093,000	13,759,000	11,362,000	5,043,000	5,682,000	4,433,000	5,750,000	6,927,000	6,987,000	10,083,853	13,138,203	16,253,170	19,222,775	22,411,112
1) Net Assets	245,191,000	250,761,000	276,720,000	126,701,000	77,263,000	51,595,000	56,087,000	69,887,000	93,587,000	142,751,000	201,291,992	250,256,315	350,562,761	411,150,843	530,516,719
Property Plant & Equip	103,122,000	103,920,000	101,964,000	95,385,000	55,512,000	48,380,000	46,791,000	47,279,000	49,040,000	35,802,000	18,888,638	25,460,902	32,244,215	36,110,553	43,128,341
Depreciation	43,802,000	51,262,000	59,673,000	62,502,000	47,470,000	44,585,000	42,386,000	41,141,000	40,541,000	26,168,000	5,752,160	8,959,227	12,080,756	12,909,819	15,772,389
Plant & Equip	59,320,000	52,658,000	42,221,000	32,883,000	8,042,000	3,795,000	4,405,000	6,138,000	8,449,000	9,654,000	13,136,478	16,501,675	20,163,459	23,200,734	27,355,952
Assets	110,813,000	114,600,000	70,660,000	36,801,000	23,632,000	21,705,000	19,589,000	17,606,000	15,355,000	13,055,000	10,680,712	13,915,077	17,244,236	20,359,436	23,736,302
Assets	-	-	-	-	-	-	-	-	-	9,546,000	25,725,000	-	-	-	
\$	-2,138,000	6,923,000	1,169,000	1,134,000	6,235,000	1,272,000	732,000	680,000	401,000	628,000	10,083,853	13,138,203	16,253,170	19,222,775	22,411,112
Net Assets	168,895,000	174,181,000	114,120,000	70,818,000	37,909,000	26,772,000	24,726,000	24,424,000	49,390,000	32,903,000	33,921,043	43,554,954	53,630,865	62,732,945	73,503,367
\$	413,286,000	424,942,000	390,840,000	197,519,000	115,172,000	78,367,000	82,813,000	94,311,000	143,587,000	175,654,000	235,213,035	293,811,270	404,193,626	473,933,788	604,020,085
Available	61,132,000	61,375,000	43,993,000	38,198,000	37,107,000	24,535,000	28,563,000	32,753,000	37,192,000	47,574,000	61,238,138	75,527,362	87,697,767	98,205,765	110,202,871
Denses	29,097,000	31,444,000	37,318,000	30,472,000	10,744,000	7,046,000	7,218,000	8,171,000	9,123,000	9,851,000	-	-	-	-	-
! Notes Payable(ST)	40,554,000	47,759,000	79,000,000	17,944,000	0	0	0	0	0	0	0	0	0	0	67,954,077
! Ops (ST Lit)	-	-	15,867,000	-	-	-	-	-	-	-	-	-	-	-	-
! Liabilities	7,137,000	6,780,000	3,208,000	919,000	1,220,000	4,699,000	2,867,000	3,553,000	1,610,000	2,246,000	-	-	-	-	-
Expenses & Other	36,234,000	38,224,000	40,526,000	31,391,000	11,964,000	11,744,000	10,085,000	11,724,000	10,733,000	12,097,000	18,584,488	23,356,130	27,882,550	31,733,756	35,575,380
Int Liabilities	138,220,000	147,356,000	179,386,000	87,533,000	56,200,000	36,279,000	38,646,000	44,477,000	47,925,000	59,671,000	88,521,446	109,627,888	168,392,688	170,568,634	213,732,328
Reses	0	4,158,000	0	0	0	5,141,000	5,598,000	0	0	0	0	0	0	0	0
Liabilities	16,990,000	16,792,000	5,123,000	1,037,000	754,000	1,008,000	1,434,000	1,484,000	-						
! Liabilities	5,610,000	0	9,877,000	5,264,000	5,735,000	5,140,000	5,180,000	5,024,000	4,077,000	4,911,000	-	-	-	-	-
LT & Other Liab.	22,600,000	16,792,000	15,000,000	6,301,000	6,489,000	6,148,000	6,614,000	6,508,000	4,077,000	4,911,000	9,458,931	11,887,550	14,181,179	16,151,503	18,106,772
! Liabilities	22,600,000	20,950,000	15,000,000	6,301,000	6,489,000	11,289,000	12,212,000	6,508,000	4,077,000	4,911,000	0	0	0	0	0
ties	160,820,000	168,308,000	194,386,000	93,834,000	62,689,000	47,568,000	50,860,000	50,985,000	52,002,000	64,582,000	97,980,377	121,515,448	182,543,876	186,720,138	231,839,100
are Capital	3,549,000	1,026,000	4,346,000	3,207,000	4,414,000	5,051,000	5,360,000	6,103,000	6,769,000	8,033,000	8,033,000	8,033,000	8,033,000	8,033,000	8,033,000
arnings	248,123,000	251,418,000	185,021,000	94,433,000	41,136,000	18,295,000	19,715,000	36,598,000	84,552,000	103,347,000	126,221,258	161,284,422	210,688,330	276,202,250	361,169,506
Comprehensive Income	2,741,000	4,190,000	7,037,000	6,045,000	6,933,000	7,453,000	6,878,000	625,000	244,000	-308,000	2,978,400	2,978,400	2,978,400	2,978,400	2,978,400
-1,947,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	252,466,000	256,634,000	196,454,000	103,685,000	52,489,000	30,799,000	31,563,000	43,326,000	91,565,000	111,072,000	137,232,558	172,255,822	221,649,750	287,213,650	312,181,966

es & Equity	413,286,000	424,942,000	390,840,000	197,519,000	115,172,000	78,367,000	82,813,000	94,311,000	143,567,000	175,654,000	235,713,035	293,811,270	404,193,226	473,933,788	604,020,085
ance:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual Income															
	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019
g	631,310,000	680,295,000	501,471,000	411,178,000	189,260,000	168,450,000	180,412,000	183,926,000	218,803,000	274,447,000	368,404,555	479,56,965	593,206,787	701,591,157	817,956,810
ne	352,496,000	381,693,000	322,108,000	260,541,000	92,745,000	91,704,000	101,983,000	102,889,000	112,326,000	133,872,000	176,375,271	221,860,337	264,428,320	301,167,333	337,626,601
278,814,000	298,602,000	179,363,000	150,637,000	96,515,000	76,746,000	78,459,000	91,037,000	106,477,000	140,575,000	192,229,284	257,86,628	328,778,468	400,423,324	480,332,210	
I & Admin	228,482,000	240,737,000	255,850,000	181,868,000	100,443,000	83,410,000	71,637,000	76,286,000	85,191,000	103,190,000	143,290,401	186,507,406	230,726,893	272,882,831	318,143,886
Development	11,160,000	11,179,000	10,425,000	8,469,000	5,222,000	2,905,000	3,223,000	4,163,000	5,562,000	7,231,000	7,982,939	10,390,629	12,854,168	15,202,743	17,724,308
iation & Impair	-	-	-	43,741,000	20,055,000	-	-	-	-	-	-	-	-	-	-
g Expense	5,388,000	5,607,000	-18,300,000	0	0	0	0	0	0	0	0	0	0	0	0
Operating Costs	245,010,000	257,523,000	247,975,000	234,078,000	125,720,000	86,315,000	74,860,000	80,449,000	90,753,000	110,421,000	151,275,340	196,888,035	243,581,360	288,085,574	335,868,163
ne	33,804,000	41,079,000	-68,612,000	-83,441,000	-29,205,000	-9,559,000	3,599,000	10,588,000	15,724,000	30,154,000	40,755,943	60,988,593	85,197,407	112,337,750	144,464,046
n, Amort.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amort.	33,804,000	41,079,000	-68,612,000	-83,441,000	-29,205,000	-9,559,000	3,599,000	10,588,000	15,724,000	30,154,000	44,298,974	65,775,667	91,344,371	119,188,766	152,650,269
;	1,179,000	732,000	364,000	229,000	77,000	15,000	65,000	18,000	14,000	63,000	151,179	339,206	1,112,069	1,635,051	1,900,206
ne	0	2,847,000	5,014,000	1,753,000	168,000	140,000	466,000	56,000	36,000	25,000	151,179	339,206	1,112,069	1,635,051	1,900,206
ome (Int. income - int. exp)	1,179,000	2,115,000	4,650,000	-1,524,000	-91,000	-125,000	-401,000	74,000	-22,000	38,000	-151,179	-339,206	-1,112,069	-1,635,051	-1,900,206
rating Income	310,000	1,705,000	1,234,000	3,744,000	-194,000	464,000	-11,000	-246,000	337,000	32,000	115,200	115,200	115,200	115,200	115,200
operating Income	1,488,000	4,101,000	3,416,000	-5,268,000	-285,000	339,000	-412,000	-172,000	315,000	70,000	-35,979	-224,006	-986,869	-1,519,851	-1,785,006
re Tax (PBT)	35,293,000	40,669,000	-72,028,000	-88,709,000	-29,490,000	-9,230,000	3,187,000	10,416,000	16,039,000	30,224,000	40,719,984	60,734,587	84,210,538	110,817,399	142,679,040
operations	12,293,000	11,569,000	-26,216,000	4,290,000	-10,880,000	588,000	686,000	-266,000	32,085,000	9,841,000	15,921,506	23,747,223	32,922,411	43,329,798	55,787,505
tems	0	0	0	0	0	0	0	0	0	0	0	0	-1,924,200	-1,924,200	-1,924,200
anges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	23,000,000	29,100,000	-55,613,000	-90,588,000	-53,297,000	-22,841,000	1,420,000	16,883,000	47,954,000	18,735,000	22,874,258	35,063,163	49,353,928	65,563,900	84,967,336
dividends & Similar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common	23,000,000	29,100,000	-55,613,000	-90,588,000	-53,297,000	-22,841,000	1,420,000	16,883,000	47,954,000	18,735,000	22,874,258	35,063,163	49,353,928	65,563,900	84,967,336
Basic	33,303,383	32,300,000	31,538,000	31,117,000	30,664,000	30,744,000	30,746,000	30,851,000	31,072,000	31,253,000	31,457,000	31,688,000	31,688,000	31,688,000	31,688,000
g Basic	1	1	2	-3	-2	-1	0	1	2	1	2	1	2	1	2
Diluted	33,886,886	32,457,000	31,538,000	31,117,000	30,664,000	30,744,000	30,776,000	30,974,000	31,457,000	31,688,000	31,688,000	31,688,000	31,688,000	31,688,000	31,688,000
g Diluted	1	1	-1	-3	-1	0	0	0	0	0	0	0	0	0	0
ding	32,779,611	31,482,000	31,557,000	30,614,000	30,744,000	30,747,000	30,924,000	31,162,000	31,333,000	31,333,000	31,333,000	31,333,000	31,333,000	31,333,000	31,333,000
Share	16	14	5	2	2	2	2	2	2	2	2	2	2	2	2

ized Annual Cash Flows															
ite	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019
o	23,000,000	29,100,000	-55,613,000	-91,588,000	-18,610,000	-9,818,000	2,501,000	10,642,000	48,124,000	20,383,000	22,874,258	35,063,163	49,353,928	65,563,900	84,967,336
from Inc to Cash	18,885,000	18,670,000	18,157,000	65,970,000	10,410,000	-8,333,000	2,968,000	4,474,000	-27,894,000	12,365,000	3,543,031	4,817,04	6,146,964	6,851,017	8,186,222
Working Capital	-50,731,000	-13,964,000	38,636,000	33,226,000	24,010,000	-4,880,000	-871,000	-2,767,000	856,000	1,594,000	28,659,868	14,209,429	-30,639,202	13,117,580	-33,316,377
ating Cash Flows	-	-	6,724,000	-3,088,000	-1,018,000	12,372,000	-	464,000	-	-	-	-	-	-	-
from Operations	9,646,000	33,866,000	8,504,000	5,570,000	14,782,000	-10,659,000	4,588,000	12,813,000	21,066,000	34,372,000	2,242,519	54,089,066	24,861,880	85,532,497	59,847,181
of Pby Plant & Equip	-31,771,000	-11,147,000	-10,689,000	4,515,000	-2,000,000	.222,000	-2,506,000	-2,442,000	3,590,000	-3,181,000	-11,159,533	-9,838,712	-12,807,020	-14,927,783	-17,145,286
of Investments	49,352,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
from Pby Plant & Equip	2,972,000	7,143,000	6,125,000	-	-	-	-	-	-	-	-	-	-	-	-
Investments	134,671,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Activities	-73,689,000	-	-21,879,000	-	7,397,000	7,266,000	1,303,000	410,000	116,000	-	-	-	-	-	-10,450,000
ting Cash Flows	441,000	-11,123,000	-350,000	66,889,000	-688,000	4,588,000	351,000	6,000	5,000	0	-	-	-	-	-
from Investing	-17,610,000	-15,127,000	-27,393,000	62,354,000	4,699,000	11,642,000	-852,000	-2,026,000	-3,469,000	-30,165,000	-11,159,533	-9,838,712	-12,807,020	-14,924,783	-17,145,286
ST Debt	40,147,000	7,353,000	31,500,000	-61,056,000	-17,944,000	-	-	-	-	-	-	-	-	-	-
LT Debt	-301,000	-1,900,000	-	-	-	5,000,000	-	-5,000,000	-	-	-	-	-	-	-
Equity	-10,021,000	-16,002,000	867,000	-4,757,000	-	-	3,000	113,000	357,000	378,000	-	-	-	-	-
Dividends	-13,351,000	-12,913,000	-9,465,000	-	-	-	-	-	-	-	-	-	-	-	-
ing Cash Flows	0	0	-178,000	-3,302,000	-75,000	-324,000	-35,000	0	-145,000	-180,000	-	-	-	-	-
from Financing	16,468,000	-23,462,000	22,724,000	-69,115,000	-18,019,000	4,676,000	-32,000	-4,887,000	212,000	198,000	8,668,821	2,105,585	42,057,975	-12,173,267	27,324,863
xchange Rate	-495,000	1,061,000	-186,000	-1,173,000	280,000	1,348,000	-583,000	-120,000	-57,000	-178,000	-	-	-	-	-
Cash	-11,282,000	-3,722,000	3,649,000	-2,304,000	1,742,000	7,007,000	3,131,000	5,780,000	17,772,000	4,227,000	4,763,221	46,356,539	54,112,845	58,434,446	70,026,658
ash	19,266,000	7,984,000	4,262,000	7,911,000	5,547,000	7,289,000	14,286,000	17,427,000	23,207,000	40,979,000	45,206,000	40,442,779	86,798,318	140,911,963	199,346,409
ash	7,981,000	4,262,000	7,911,000	5,547,000	7,289,000	14,286,000	17,427,000	23,207,000	40,979,000	45,206,000	40,442,779	86,798,318	140,911,963	199,346,409	269,373,267
ing Cash = Cash on BIS?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26,728,608

7
ing Cash = Cash on BIS?

Comparable Analysis

Ticker	P/E	PEG	P/S	PSG	P/B		
GAIA	-9.89393994	-0.952245799	0.916628574	0.062348854	1.612202492		
ESCA	17.64634146	0.743974479	1.261296237	0.153073388	2.032219113		
NLS	17.82142857	1.550063461	1.384933025	0.057975526	3.387083707		
BGFV	15.03174603	1.084932284	0.21344446	0.10521594	1.070330865		
DKS	14.31788079	1.103115202	0.724134687	0.089739362	2.841642484		
LULU	30.33695652	2.117894561	4.312342722	0.296761941	6.688760316		
Average Excluding NLS		Corrected:					
FAIR Price NLS	\$11.33	\$16.24	\$12.19	\$12.19	\$12.59		
Actual Price NLS	14.97	14.97	14.97	14.97	14.97		
% Difference	-24.32%	8.48%	-47.12%	-18.55%	-7.27%		
Under/Over Valued	Overvalued	Overvalued	Overvalued	Undervalued	Undervalued		
	GAIA	ESCA	NLS	BGFV	DKS	LULU	Average Excluding NLS
P/E	-9.8939	17.6463	17.8214	15.0317	14.3179	30.3370	13.4878
PEG	-0.9512	0.7440	1.5501	1.0849	1.1031	2.1179	0.8197
P/S	0.9166	1.2613	1.3848	0.2134	0.7241	4.3123	1.4886
PSG	0.0623	0.1551	0.0580	0.1051	0.0897	0.2968	0.1414
P/B	1.6120	2.0322	3.3871	1.0703	2.8416	6.6888	2.8490
Weight							
FAIR Price	0.257142857	0.385714286	0.064285714	0.192857143	0.1	1	
	\$11.33	\$16.24	\$16.06	18.25684079	\$12.59		
FAIR Price							
Under or Over Valued?							

Comparable Company Analysis:

Company Name:	Ticker:	Shares:	Sales:	B/E of Equity:	Price / Share:	Earnings per Share:	Earnings Ratio:	(P)	(E)	(P/E)	(E)	(PEG)	(S)	(P/S)	(G)	(PSG)	(B)	(P/B)
							of Earnings (%):				Growth Rate							
Gaiam Inc.	GAI	23400000	\$166,700,000.00	\$94,780,000.00	\$6.53	\$0.66	-9.8833023594	10.40%	-0.55245799	14.70%	0.062348854	\$4.05	1.62225					
Escalade Inc.	ESCA	13550000	\$155,450,000.00	\$56,480,000.00	\$14.47	\$0.82	17.64334146	23.72%	0.743914479	\$11.47	1.262262	8.24%	0.153073288	\$7.12	2.032191			
Nautlius Inc.	NLS	31050000	\$335,550,000.00	\$137,232,558.00	\$14.97	\$0.84	17.3214857	11.50%	1.550033461	\$10.81	1.3848309	23.83%	0.057975326	\$4.42	3.387837			
Big Five Sporting Goods	BGFV	22040000	\$97,860,000.00	\$195,004,000.00	\$9.47	\$0.63	15.03174683	13.66%	1.08992284	\$44.37	0.2134445	2.03%	0.10521504	\$8.35	1.070309			
Dick's Sporting Goods	DKS	120410000	\$7,291,000,000.00	\$1,832,225,000.00	\$3.24	\$3.02	14.31788079	12.98%	1.103115202	\$99.71	0.7241347	8.07%	0.089739362	\$15.22	2.841625			
Woollemon Inc.	WWU	130560000	\$1,690,000,000.00	\$1,089,558,000.00	\$55.82	\$1.84	30.3369562	14.32%	21.1784561	\$12.94	4.3123427	14.53%	0.295761941	\$8.35	6.6887603			

Revenue:	2015	2014	2013	1 yr Sales Growth	2 yr Sales Growth	Average of 1 & 2 yr. growth
Gaiam Inc.	\$166,694,000.00	\$155,463,000.00	\$127,242,000.00	7.22%	22.18%	14.70%
Escalade Inc.	\$155,542,000.00	\$137,975,000.00	\$132,991,000.00	12.73%	3.75%	8.24%
Nautlius	\$335,764,000.00	\$274,447,000.00	\$218,803,000.00	22.34%	25.43%	23.83%
Big Five Sporting Goods	\$977,860,000.00	\$933,323,000.00	\$940,490,000.00	-1.56%	5.62%	2.03%
Dick's Sporting Goods	\$6,814,479,000.00	\$6,213,173,000.00	\$5,936,119,000.00	9.68%	6.45%	8.07%
Woollemon Inc.	\$1,797,213,000.00	\$1,591,188,000.00	\$1,370,359,000.00	12.55%	16.11%	14.53%

Earnings Per Share:	2015	2014	2013	2012	2011	1 yr EPS Growth
Gaiam Inc.	N/A	\$0.41	\$0.89	\$0.57	\$1.08	10.40%
Escalade Inc.	0.82	\$0.85	\$1.73	\$0.37	\$0.35	23.72%
Nautlius	0.85	\$0.60	\$1.54	0.55	0.05	11.50%
Big Five Sporting Goods	N/A	\$0.68	\$1.28	0.7	0.54	13.86%
Dick's Sporting Goods	2.89	\$2.75	\$2.39	2.19	1.57	12.98%
Woollemon Inc.	1.66	1.93	1.88	1.29	0.85	14.32%

Dividend Discount Model

Dividend Discount Model FF3 Nautilus																																									
			Projected																																						
			Historical			2014			2015			2016			2017			2018			2019			2020			2021			2022			2023			2024			2025		
FF3 Industry:	Value:	9.27%				0	1	2	3	4	5	6	7	8	9	10	11	12																							
CAPM Industry:	Value:																																								
CAPM Industry:	Value:	Cost of Equity	6.75%																																						
Return on Equity(ROE)		15.4%	15.70%	16.83%	16.81%	17.37%	17.93%	18.46%	19.05%	19.63%	20.68%	20.73%	21.28%	21.28%																											
Plowback Ratio(p/b)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1									
Payout Ratio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
Growth(ROE x p/b)	15.4%	15.70%	16.83%	16.81%	17.37%	17.93%	18.46%	19.05%	19.63%	20.68%	20.73%	21.28%	21.28%	21.28%																											
Profit After Tax(PAT)	\$18,75,00,000	\$22,874,283.14	\$35,063,163.45	\$49,353,203.08	\$65,563,930.29	\$84,957,335.56	\$114,708,612.28	\$124,449,906.99	\$134,191,927.71	\$143,932,478.42	\$153,673,764.14	\$163,415,049.85	\$173,156,335.56																												
Common Equity Value	\$11,072,000,000	\$126,991,000,000	\$193,865,000,000	\$155,381,419.38	\$165,076,529.07	\$177,771,338.76	\$191,467,084.45	\$203,161,258.14	\$215,557,457.83	\$228,552,677.52	\$241,247,887.21	\$253,945,095.90	\$266,633,165.59																												
Shares Outstanding	31,25,300	31,28,000	31,32,000	31,45,600	31,60,000	31,74,000	31,89,000	31,91,000	31,99,000	32,06,000	32,13,000	32,20,000	32,26,000																												
Book Value of Equity per Share	\$3.55	\$4.06	\$4.45	\$4.84	\$5.22	\$5.61	\$5.99	\$6.37	\$6.74	\$7.12	\$7.49	\$7.86	\$8.22																												
Nautilus Specific:																																									
Current Dividend	\$0.00																																								
Current Stock Price [2014]	\$55.25																																								
Current Earnings per Share	\$0.59																																								
Nautilus Dividend History:																																									
16-Aug-07	0.010 Dividend																																								
16-May-07	0.010 Dividend																																								
15-Feb-07	0.010 Dividend																																								
16-Nov-06	0.010 Dividend																																								
16-Aug-06	0.010 Dividend																																								
17-May-06	0.010 Dividend																																								
15-Feb-06	0.010 Dividend																																								
16-Nov-05	0.010 Dividend																																								
17-Aug-05	0.010 Dividend																																								
18-Mar-05	0.010 Dividend																																								
16-Feb-05	0.010 Dividend																																								
17-Nov-04	0.010 Dividend																																								
18-Aug-04	0.010 Dividend																																								
18-May-04	0.010 Dividend																																								
17-Feb-04	0.010 Dividend																																								
18-Nov-03	0.010 Dividend																																								
18-Aug-03	0.010 Dividend																																								
16-May-03	0.010 Dividend																																								
Dividends	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00												
Dividends per Share	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00											
Present Dividend	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00											
Sum of Present [2014] Fair Price per Share:	\$16.81																																								

Works Cited

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