

SMF Fall 2018 Portfolio Report



University of
Connecticut

SCHOOL OF BUSINESS

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University of Connecticut School of Business
Undergraduate Student Managed Fund
Team Terrion-Wilkos

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Letter to IAB

Dear Investment Board Members and Foundation,

Thank you so much for allowing us to participate in this year's Student Managed Fund. This is, without a doubt, the premier experiential learning program at the University of Connecticut. We have learned so much already and can only imagine what's in store for us next semester. This experience will prove invaluable for all of us, but especially for those pursuing careers in Portfolio Management. Additionally, it has been a wonderful opportunity to learn and work together as a team. We also would like to thank you for the time and effort you all have put into this program. All of the benefits of the Student Managed Fund would not be possible without your efforts.

The Student Managed Fund has given us the chance to put knowledge from the classroom to use in a real-world situation. While recording gains and losses provides instant gratification, the most rewarding aspect thus far has been learning the process and mechanics of managing a portfolio. Not every part is glamorous, but our disciplined approach to the process makes our final results all the more rewarding. We hope that you enjoy our report and gain a better understanding of our thought process and investment style for managing the portfolio.

Sincerely,

Team Blue (Pat Terrion & Chris Wilkos)
Matt Arons – Co-lead Manager
Austin Langer – Co-lead Manager
Alana Phillips – Portfolio Manager
Sean Homa – Digital Media Manager
Trent Nobile – Communications Manager
Zack Yellen
Samantha Martin
Harrison Newman
Sharon Liu
John Quevreaux

Philosophy

We select stocks through the lens of value investing. The main factors that we consider in evaluating a company are: free cash flow generation, return on invested capital, brand strength, competitive positioning, innovation, and strong management. These factors require both qualitative and quantitative analysis by the managers. In addition, when constructing valuations, a primary focus is the Graham-Dodd notion of "Margin of Safety". This concept is the difference between what our view is of a company's intrinsic value and its current trading value on the stock market.

While the stock market has been high flying for the last few years, we focus on companies that are both exceptional in the categories listed above and trading at a relative bargain price. This

method particularly necessitates patience in a market where many stocks are expensive or largely priced in. Additionally, to maintain the mindset of a value investment portfolio, we avoid giving undue attention to short term price fluctuations on stocks we have purchased. Instead, we look to a 5-year or longer investment horizon with confidence in the companies that we have agreed on.

Although recent market volatility has impacted our portfolio over the past few months, our value-oriented criteria mitigate unnecessary risk without engaging in top-down industry quotas or decision-making based on technical stock price noise. By selecting stocks that have long-term staying power and that are industry leaders, our confidence in the value we generate for our clients is not based on individual hunches. Instead, we make informed decisions through careful fundamental analysis and understanding of market-level trends.

Style

We invest mainly in U.S. Large Cap value stocks, taking both a quantitative and qualitative valuation approach with a ten-year long-term investment horizon. We analyze companies based on discounted cash flow models, dividend discount models, and competitive analysis. In addition, we look for strong company fundamentals which include effective business models, competitive advantages, strong established brands, experienced management, long-term growth prospects, and potential risks. We take a bottom-up approach when investing, choosing individual stocks with high future cash flow projections and strong company fundamentals. We invest across different sectors in order to diversify our risk; however, we take a calculated approach to which sectors we feel have the best potential for future growth.

In today's market it has become increasingly challenging to find undervalued stocks, as the economy is doing well, and the market has reached all-time highs. As value investors, we have had to adjust our investing style to account for a market in which many value companies are trading at intrinsic value. We have done this by investing in stocks that are undervalued due to market overreaction to company news and other factors that do not represent a change in the company's fundamentals.

Strategy

As our core strategy, we are committed to focus on the safety and prospects of the underlying securities. We are constantly reminded of our core philosophy and thus protect ourselves from speculating based on macro scenarios. We believe in collective intelligence and hence opted for a democratic voting system to make the right investment decisions. Through this approach, we conducted many hours of research and intense discussions acquainting the other SMF managers about the business models and outlook of all the securities that we have interest in.

Our key strategies could be outlined as follows:

1. Protection over Prediction

We have constantly reminded ourselves to focus more on risk instead of return. We make sure that the businesses we invest in have a good margin of safety and are able to generate considerable free cash flows even during the times of negative economic cycle.

We view risk in terms of probability of expected loss in earning power rather than the probability of expected loss in price. This strategy helps us to stay immune from the short-sighted psychological temptations over price movements.

2. Stocks as business

We view each of our investments as owning a share of the business. Our strategy is to look at each investment as business managers rather than investment managers. We make sure to understand the intricacies of every business we own and thus truly understand the business dynamics.

3. Capital allocation strategy

Our capital allocation strategy is to make sure that our capital flows to the right securities based on the best long-term opportunity cost. We think in terms of long-term yield and thus focus our investment on the securities which would give us the best risk adjusted yield. We sell our investment only if we find that there has been a fundamental change in the underlying business or if there arises a better opportunity cost after considering the capital gain tax.

4. Collective Intelligence

In order to smoothly conduct our democratic voting procedure, we have made it clear that we focus on substance rather than individual. We do not incentivize our managers based on their stock performance, but we critically judge the arguments made by each of the managers based on our core philosophy. We make sure that all the managers understand the business before voting on any investment decisions.

Procedure

Each manager specializes in at least three sectors and works with at least one other manager within that sector. These teams then research their sector to determine which companies are trading significantly less than their intrinsic value.

The fund conducts weekly investment committee meetings during which managers pitch their stocks before the team and at least one of our advisors Patrick Terrion, Chris Wilkos, and Jeffrey Anello. During these meetings, the fund discussed fundamental factors, such as the business model, growth opportunities, and risks associated with the investment. The fund then decides where or not we need more information and whether or not we are willing to invest.

In order to invest in a stock, it must get approval from at least 7 out of 10 managers. If we approve a position in the fund, the group determines how much of our portfolio to allocate based on the risks and growth potential. Each company will be allocated approximately 6% -8% of the fund.

The sectors and the corresponding analysts are listed below:

Basic Materials – Harrison Newman & Trent Nobile

Consumer Discretionary – Sean Homa, Austin Langer, Samantha Martin & Alana Phillips

Consumer Staples – Austin Langer, Samantha Martin & Harrison Newman

Energy – Matthew Arons & Zach Yellen

Financials – Matthew Arons & Alana Phillips

Healthcare – Sean Homa, Sharon Liu & Zach Yellen

Industrials – Matthew Arons, Alana Phillips & John Quevreaux

Information Technology – Sean Homa, Sharon Liu, John Quevreaux & Zach Yellen

Real Estate – Sharon Liu & Harrison Newman

Telecom – Samantha Martin, Trent Nobile & John Quevreaux

Utilities – Austin Langer & Trent Nobile

Portfolio Overview

The fund has 44.10% of the portfolio invested with 1.31% remaining in cash and 55.90% remaining in the SPDR. Looking forward, the Fund is well positioned to invest the remaining position into equities throughout the spring semester. The average position size excluding the SPDR ETF, is approximately 5.35%, with our largest position being American Express (7.39%/~100k) and Alphabet Inc. Class C (6.79%/~86k). In total, there are 7 positions.

Sector	Target %	% of Total Portfolio	% of Invested Portfolio	S&P 500 Sector Weight
Basic Materials	2.00%	0.00%	0.00%	2.50%
Consumer Discretionary	15.00%	5.30%	12.38%	10.16%
Consumer Staples	7.00%	0.00%	0.00%	6.74%
Energy	7.00%	0.00%	0.00%	6.02%
Financials	12.00%	7.87%	18.39%	13.71%
Industrials	10.00%	6.32%	14.78%	9.73%
Technology	15.00%	4.26%	9.97%	20.84%
Healthcare	10.00%	0.00%	0.00%	14.90%
Real Estate	7.00%	6.12%	14.30%	2.65%
Utilities	5.00%	0.00%	0.00%	2.82%
Communication Services	10.00%	12.91%	30.18%	9.93%
Cash		1.31%		
Total	100.00%	44.10%	100.0%	100.0%

The chart below depicts the performance of the portfolio from October 1, 2018 to November 30, 2018.

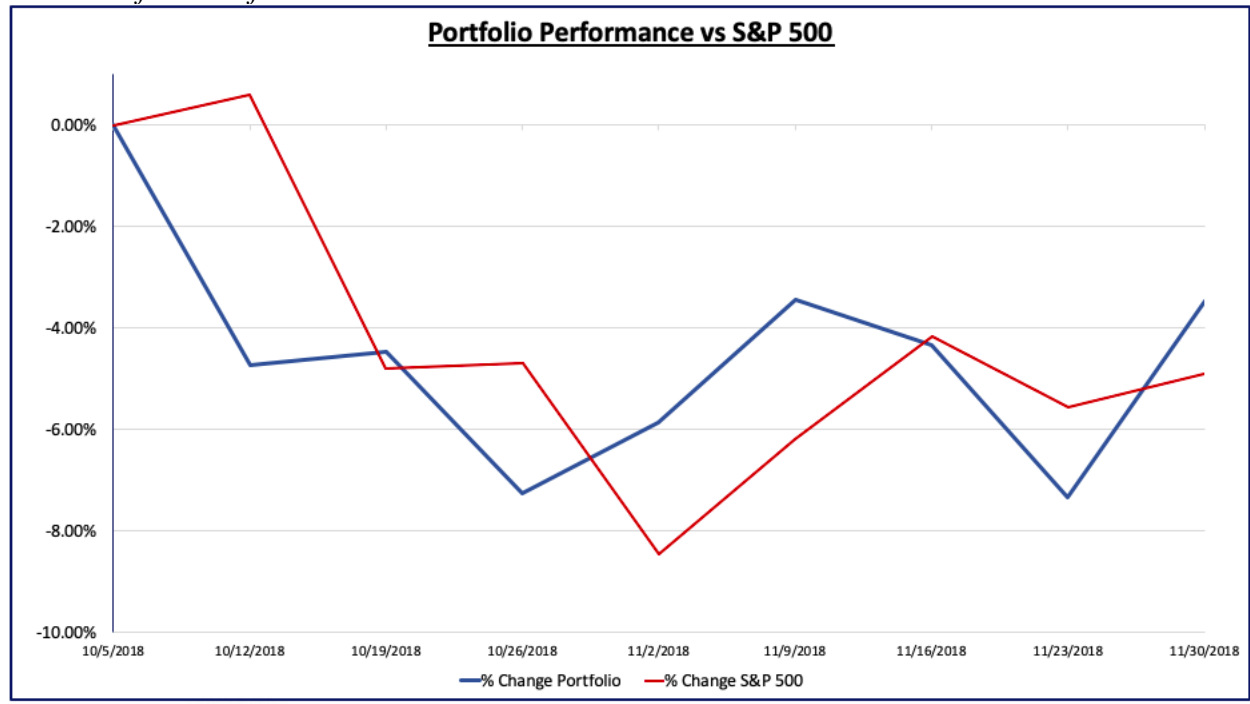
Total Portfolio Unrealized Gains

Portfolio											
Ticker	Name	Sector	Shares	Purchase Price	Price	Cost Basis	Market Value	% of Portfolio	Change	% Change	
SPY	SPDR S&P 500 ETF		2,679	\$ 289.84	\$ 275.65	\$ 776,481	\$ 738,466	55.90%	\$ (38,015)	-4.90%	
ULTA	Ulta Beauty Inc	Consumer Discretionary	235	\$ 279.77	\$ 297.79	\$ 65,746	\$ 69,981	5.30%	\$ 4,235	6.44%	
AXP	American Express	Financials	926	\$ 108.96	\$ 112.27	\$ 100,897	\$ 103,962	7.87%	\$ 3,065	3.04%	
DIS	Walt Disney Co.	Communication Services	700	\$ 117.03	\$ 115.49	\$ 81,921	\$ 80,843	6.12%	\$ (1,078)	-1.32%	
EA	Electronic Arts	Technology	670	\$ 93.99	\$ 84.07	\$ 62,973	\$ 56,327	4.26%	\$ (6,646)	-10.55%	
PLD	Prologis Inc	Real Estate	1,200	\$ 64.99	\$ 67.34	\$ 77,988	\$ 80,808	6.12%	\$ 2,820	3.62%	
LMT	Lockheed Martin Corporation	Industrials	75	\$ 309.32	\$ 300.43	\$ 23,199	\$ 22,532	1.71%	\$ (667)	-2.87%	
LMT	Lockheed Martin Corporation	Industrials	203	\$ 304.76	\$ 300.43	\$ 61,866	\$ 60,987	4.62%	\$ (879)	-1.42%	
GOOG	Alphabet Inc. Class C	Communication Services	82	\$ 1,049.96	\$ 1,094.43	\$ 86,097	\$ 89,743	6.79%	\$ 3,647	4.24%	
CASH			17,366		\$ 1.00		\$ 17,366	1.31%			
Total						\$ 1,337,169	\$ 1,321,015.27	100.00%	\$ (33,518.85)	-3.44%	

Equity Portfolio Unrealized Gains

Equity Portfolio											
Ticker	Name	Sector	Shares	Purchase Price	Price	Cost Basis	Market Value	% of Portfolio	Change	% Change	
ULTA	Ulta Beauty Inc.	Consumer Discretionary	235	\$ 279.77	\$ 297.79	\$ 65,746	\$ 69,981	12.38%	\$ 4,235	6.44%	
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GOOG	Alphabet Inc. Class C	Communication Services	82	\$ 1,049.96	\$ 1,094.43	\$ 86,097	\$ 89,743	15.88%	\$ 3,647	4.24%	
CASH			17,366		\$ 1.00		\$ 17,366	3.07%			
Total						\$ 560,687	\$ 565,183	100.00%	\$ 4,496	0.80%	

Total Portfolio Performance



Risk Management

We use 95% Value at Risk and 25% Stop loss as risk measures.

95% Value at Risk

We currently have 7 Stocks in the Portfolio. In order to quantify the diversification benefit of the portfolio we will use 95% Value at Risk. In simpler terms, this is a calculation of the largest loss that the portfolio will take under 95% confidence. If the portfolio falls below our 95% VaR level, then we will take action to reevaluate our investments. The list below gives an in-depth description of the processes used to calculate our 95% VaR.

Steps:

1. Calculate expected return and standard deviation for each security using the last 9 years of historical adjusted close prices as of November 30th

9 yr Expected Return	AXP	DIS	EA	GOOG	LMT	PLD	ULTA	SPY
2010	7.84%	17.65%	-7.72%	-4.20%	-3.84%	29.49%	112.72%	9.91%
2011	11.66%	1.07%	25.76%	8.74%	20.70%	-1.22%	99.23%	7.58%
2012	23.58%	35.00%	-29.51%	9.52%	19.52%	26.37%	45.63%	16.16%
2013	59.84%	55.80%	57.99%	58.43%	68.11%	15.13%	26.59%	30.12%
2014	3.66%	24.81%	104.97%	-5.97%	34.79%	15.12%	-0.35%	16.70%
2015	-24.21%	13.64%	46.15%	44.96%	16.18%	4.83%	32.03%	2.75%
2016	8.58%	0.54%	14.61%	1.71%	18.37%	23.46%	55.39%	7.88%
2017	36.22%	4.73%	33.39%	35.58%	31.77%	34.29%	-14.56%	22.68%
2018	14.70%	9.16%	-19.98%	4.55%	-4.02%	4.64%	34.32%	5.93%
Expected Return	15.76%	18.04%	25.07%	17.04%	22.40%	16.90%	43.44%	13.30%
Portfolio Expected Return:	16.76%							

2. Use portfolio weights from the above section and annualized expected returns from to calculate Portfolio Expected Return
3. Generate 9 yr Excess Returns by subtracting the annualized expected return from actual return for each year

9 yr Excss Return Matrix	AXP	DIS	EA	GOOG	LMT	PLD	ULTA	SPY
2010	-7.93%	-0.39%	-32.79%	-21.23%	-26.24%	12.59%	69.28%	-3.40%
2011	-4.10%	-16.98%	0.69%	-8.29%	-1.69%	-18.12%	55.79%	-5.72%
2012	7.82%	16.96%	-54.59%	-7.52%	-2.88%	9.47%	2.19%	2.86%
2013	44.07%	37.76%	32.92%	41.40%	45.71%	-1.77%	-16.86%	16.81%
2014	-12.10%	6.76%	79.90%	-23.00%	12.39%	-1.79%	-43.80%	3.40%
2015	-39.97%	-4.41%	21.08%	27.92%	-6.21%	-12.07%	-11.42%	-10.55%
2016	-7.18%	-17.50%	-10.46%	-15.33%	-4.03%	6.56%	11.95%	-5.43%
2017	20.45%	-13.32%	8.32%	18.54%	9.37%	17.39%	-58.00%	9.38%
2018	-1.07%	-8.89%	-45.05%	-12.49%	-26.42%	-12.26%	-9.13%	-7.37%

4. Multiply excess return matrix by transpose excess return matrix and divide by n-1 (8) to arrive at variance-covariance matrix
5. Use portfolio weights and variance covariance matrix to calculate portfolio variance, and portfolio Sharpe ratio
6. Calculate Value at Risk Percentage Using the equation below:

$$\text{Portfolio Expected Return} - (95\% \text{ Z-Score} \cdot \text{Portfolio Volatility})$$

Variance Covariance Matrix								
	AXP	DIS	EA	GOOG	LMT	PLD	ULTA	SPY
AXP	0.0537	0.0228	-0.0029	0.0204	0.0319	0.0100	-0.0223	0.0179
DIS	0.0228	0.0329	0.0155	0.0180	0.0251	0.0025	-0.0147	0.0111
EA	-0.0029	0.0155	0.1772	0.0261	0.0586	-0.0096	-0.0855	0.0128
GOOG	0.0204	0.0180	0.0261	0.0542	0.0324	-0.0023	-0.0388	0.0096
LMT	0.0319	0.0251	0.0586	0.0324	0.0473	0.0013	-0.0439	0.0159
PLD	0.0100	0.0025	-0.0096	-0.0023	0.0013	0.0153	-0.0086	0.0050
ULTA	-0.0223	-0.0147	-0.0855	-0.0388	-0.0439	-0.0086	0.1730	-0.0175
SPY	0.0179	0.0111	0.0128	0.0096	0.0159	0.0050	-0.0175	0.0079
Annual Portfolio Variance	0.004972							
Z-Score	1.65	----- Z-Score for one sided 95% confidence interval						
Value at Risk %	5.12%							
Value at Risk	\$ 66,707.11							
Annual Portfolio Std. Dev	0.0705							
Risk-Free rate	2.72%							
Sharpe Ratio	1.991							

Our portfolio has a Value at Risk of 5.12%. This means that we are 95% confident that the portfolio will not incur a loss greater than 5.12%, or \$66,707.11. If the portfolio was nearing this 95% Value at Risk, we would take immediate action to reevaluate the portfolio and possibly sell some positions. Additionally, our Sharpe ratio is over 50% higher than that of the S&P 500. The fact that it is almost 2 is considered a very good level.

25% Stop Loss

All of our positions are currently set at a 25% stop loss. This metric was bumped up an additional 10% from last year's 15% stop loss level. The reason that the stop loss was changed to 25% is because oftentimes, in past semesters, the groups would get pulled out of positions due to the stop loss and by the time that they reconvened and decided to buy back in, the stock was already back up 10-20%. The team members actively monitor the markets and news discussion for all of our respective companies, so we are comfortable setting the 25% level. We have discussion throughout the week about portfolio performance and notice when our positions have even dropped only 3-5%.

Economic Outlook

Upon selecting potential investment opportunities for the Undergraduate Student Managed Fund, our team analyzes the current state of the global economy by focusing on macro-economic factors that will impact our investments in both the short and long term. Some of these economic factors and trends include:

The US Economy

The U.S economy has performed strong in 2018, highlighted by real GDP growth of 4.2% in Q2 and 3.5% in Q3. Our view is that the current economy is strong but should be viewed in the scope as "late-cycle". While there are many positive signs of growth, we are still carefully monitoring key economic indicators. In Q3, growth was driven by strong consumer spending

which accelerated to a 4% increase, the best since 2014, while government spending rose by the most since 2016. The SMF Team believes that these recent trends are the product of the historic fiscal stimulus enacted in 2017 by President Donald J. Trump and do not expect for these levels of growth to continue in the long-term.

On the subject of employment, the seasonally adjusted U3 unemployment rate has dropped to 3.7%, which is down .5% from this time last year. The broader U6 measure has followed a similar trend, dropping 80 basis points over the past year to a level of 7.5%. Furthermore, it is important to recognize a disparity in the current U3 rate of 3.7% and the short-term natural rate of unemployment, which is currently estimated to be around 4.6%. The current PCE inflation rate is at the Fed's target of 2%. However, inflation has been consistently under their goal since it was announced in January 2012, despite the U3 rate being below the natural rate since March 2017.

On the topic of prices, inflation now sits comfortably at the Fed's 2% target. Our preferred inflation measure, Core PCE, stands at 2% year-over-year as of August. This is the same value as the trimmed mean PCE, which excludes sector-specific shocks. Given current trends we do not anticipate significant changes to these figures.

In conclusion, while the Undergraduate SMF team recognizes the improvements made in the U.S. economy this year, we are still cognizant of the future progress that can occur before we deem the domestic economic outlook as unconditionally strong.

Federal Reserve and International Central Bank Policies

As of November 30, 2018, the federal funds rate stood 2.25%. The FOMC has hiked rate three times in 2018 and we expect the Fed to deliver a rate hike in December followed by four hikes in 2019, about two more than priced by federal funds futures. This would bring the terminal funds rate to 3¼-3½% and mark the third straight year in which the Fed surprised markets in a hawkish direction. The next three hikes will have the Fed at their 3% estimate of the neutral rate. The neutral rate is viewed as a level that neither restricts or promotes economic growth, and historically signals to the Fed that an accommodative policy is no longer needed. However, the current rate hike path would take interest rates above neutral but recent commentary by Fed officials indicates that most think that an accommodative stance is inappropriate at a time when the economy is past their labor market target. We recognize that higher interest rates are used as a contractionary monetary policy tool to prevent the economy from experiencing high levels of inflation. Therefore, as interest rates and risk-free rates (i.e. 10-year Treasury yields) rise, the team will adjust our valuation assumptions accordingly with regards to WACC calculations and other rate-sensitive metrics.

Regarding monetary policy abroad, the European Central Bank (ECB) and Bank of England (BoE) have also held central bank interest rates at historic lows (currently 0 and 75 bps, respectively) following the Financial Crisis of 2008, but are both on a normalization path. The BoE raised rates in August from 50 to 75 bps on the back of strong labor growth and credit growth). We expect the BoE to incrementally raise its main rate, and the ECB has indicated it intends to halt its purchases of securities late in 2018. Moreover, the ECB has announced that

their asset purchase program will likely end this December. Meanwhile, central banks in Japan and Sweden have enacted negative interest rates to stimulate economic activity and inflation. The SMF team has acknowledged this unconventional methodology to stimulate economic activity abroad and will continue to follow developments regarding central bank monetary policy.

Global Economy

When we consider potential investments, we often look at the firm's international exposure. We focus on three major economies, China, Japan and the Eurozone.

Growth in the eurozone is lower than in 2017, but the recovery is robust, driven mainly by strong consumption and employment growth. The recovery remains intact and solid, albeit not spectacular. Compared to last year when the eurozone grew at a record pace of 2.5 percent, this year's growth dynamics are weaker. This is mainly due to industrial production and exports. Both developed very strongly in 2017 but have been significantly weaker this year. The Eurozone economy grew 0.2% on quarter in the three months to September 2018, unrevised from a preliminary estimate and following a 0.4% expansion in the previous period. It was the weakest growth rate since the second quarter of 2014 as the German economy contracted for the first time in three-and-a-half years and Italy's GDP showed no growth. On the bright side, private consumption has been on the uptick. The current Consumer Confidence Index is also above its long-term average, and we are confident this trend will continue to drive the recovery in the Eurozone. In fact, since 2013 private consumption has grown at 8 percent. This is especially promising for our investment portfolio, with companies like Ulta, American Express, Disney, etc. benefiting from increased spending. In fact, since 2013 private consumption has grown at 8%.

Moving to China, real GDP expanded 6.5% in September 2018, down from 6.7% in the previous quarter. Both of these figures are well below the historic average of 9.2% from 1992-2018. There have been a few reasons for this slow down, on the surface a global recovery from the 2008 financial crisis is in part to blame. Chinese Government to Debt has also been increasing steadily (47.6% in 2017 up from 33.7% in 2010). More recently however, China has been on a campaign to deleverage, improve and improve credit quality. They are trying to take control of unregulated lending, all while trying to support the economy through infrastructure and fiscal spending (Belt & Road Initiative, China 2025). These plans are essential to China's long-term prospects and they will support the ongoing transformation and upgrading of China's economy, as well as the vitality and resilience of global trade and investment flows. Moreover, the tightening of credit is helping as Shadow banking assets have declined from 87% of GDP at the end of 2016 to 73% of GDP in June 2018, according to estimates by Moody's. Escalating trade restrictions are a key risk to the growth of China; however, it is the view of SMF that the market has been focused on this and has already priced it into valuations. We will continue to monitor China as the year progresses, especially when considering investments that have exposure to this market.

The Japanese economy contracted 0.3 in Q3 following a growth of 0.8 percent in Q2. A number of natural disasters weighed on personal consumption, company investment and exports. Unemployment was down to 2.3% in September, below the historical average of 2.73% from 1953 until 2018. Japan's CPI rose to 1.4% year-on-year in October 2018 from 1.2% in the

previous month, the highest rate since February. Moreover, The Bank of Japan left its key short-term interest rate unchanged at -0.1 percent at its October meeting and kept the target for the 10-year Japanese government bond yield at around zero percent, as widely expected. The central bank also revised down inflation forecasts again, saying that the momentum toward achieving the price stability target of 2 percent is not sufficiently firm despite years of massive monetary easing. Corporate profitability is improving in Japan and many companies have already announced plans to hike dividends and increase share buybacks due to improved cash flows. While the escalating trade conflict has not materially impacted Japan, the country remains vulnerable in the auto and tech industries.

It is our view, that in this late cycle the most prominent the most relevant risks facing the domestic and global economy are rising interest rates, and the rise of trade risks. The U.S is ahead on normalizing interest rates and this Fall we have already seen a market correction (10% loss on S&P 500) on the back of Federal Funds rate hikes. The ECB will be ending their asset purchasing program this December and believes they will increase interest rates above zero starting in late 2019.

Miscellaneous & Other Issues

While copious research is done before pithing a stock, there are many factors that are beyond our control that cannot be accounted for.

The first of these components is the Federal Reserve adjusting interest rates. In September of 2018, the Fed increased the interest rate to 2.25%, and in their meeting on November 8th, 2018, they agreed to keep it in the range of 2%-2.25%. This marks the highest interest rate since the great recession in 2008. While the Federal reserve has been adamant about their goal to steadily raise interest rates to slow the currently rapid economic growth, President Donald Trump has made it clear the he does not think that is the best option for the United States. It is unclear whether or not The Fed will continue with their original plan or take the President's opinion into consideration. With this, if interest rates continue to rise, it would make bonds more intriguing investments for investors because they can reduce risk while having similar returns. The challenge this poses is determine the companies that will still be able to grow despite the interest rate changes. Also, we must understand how interest rate change affect various sectors. For example, this could lower consumer discretionary spending could affect consumer discretionary and financials sectors. Also, higher interest rates tend to have a negative effect on the real estate market as well.

Another aspect beyond our control is the ongoing trade disputes between the United States and China. Both countries have implemented new tariffs on goods from the other, starting with the U.S. claiming the current trade agreements with China are unfair. This has already had a negative impact on the market, at least in the short term. This could greatly affect product driven markets, especially those that produce or sell their product in China. While this could have a negative effect in the short term, there are potential benefits to imposing tariffs in the long run. First, it could increase domestic production and revamp struggling areas in America, such as the Midwest. It would also increase the need for lower skilled labor potentially increasing the labor force participation rate. Another major factor that could affect this is the recent midterm election

in which the democrats took a majority in the House of Representatives. This could limit the additional tariffs the President can impose on China, or even possibly reduce the current ones. Overall, this could help the market bounce back more quickly and promote international trade and commerce.

Sector Analysis

Communication Services

The Telecommunications sector is renamed as Communication Service, and the change is effective on Friday, September 28, 2018. This new sector will include the existing companies from Telecommunications service (e.g., At &T, Verizon), Technology (e.g., Alphabet and Facebook), and Consumer Discretionary (e.g., Disney, Netflix, and Comcast) industry groups. The changes were due to the shrinking Telecommunication Service sector, its share of the S&P 500 Index's market value is down from around 10% in 1989 to a little over 2% in 2017 and consist of only three companies. By incorporating media companies that offer the content and information, and internet companies that facilitates communication operations with Telecommunication companies can diversify the exposure, and accurately reflect the way the world's population communicates.

After the change, the new sector will account for nearly 10% of S&P 500's market capitalization, which consists of 5.2% from Technology sector, 2.8% from Consumer Discretionary, and 1.8% from Telecommunications. The new sector will result in a more cyclical, low yielding sector, while the telecom sector is considered stable growth, and a defensive group. Other market profiles for the new sector is beta changes of 0.52 to 1.03, and the dividend yield is less than 2%.

Current Holdings: Walt Disney (NYSE: DIS), Electronic Arts (NASDAQ: EA), Alphabet (NASDAQ: GOOG)

Consumer Discretionary

The Consumer Discretionary Sector typically correlates to economic cycles, as it is tied to consumer confidence and changes in consumer income. In strong economies this sector typically outperforms the market, and in weak economies this sector typically underperforms. The sector contains two segments: manufacturing and services. The manufacturing segment includes automotive, textiles and apparel, household durable goods, and leisure equipment. The services segment includes hotels, restaurants, consumer retail/services, and media production/services.

Year to date the Consumer Discretionary Index has a return of 6.94%, outperforming the S&P with a return of 1.29%. This sector is also significantly large, with a market cap of \$4.51 trillion and a market weighting of 9.77% (Fidelity). With U.S economic growth slowing this past year, and the Fed planning to raise interest rates, consumer income and confidence have begun to decline, slowing the growth of this sector. Based on historical trends, Fidelity shows the U.S. economy in a mid to late cycle, meaning continued strain on this sector in years to come.

In addition to the slower growth, another potential risk factor for future growth in this sector comes from changings in consumer purchasing behavior from retail to online shopping. Millennials new interest in technology and online purchasing has caused mall traffic to slightly decrease, affecting many retail companies profit margins. We do not feel that our holdings in this sector will be hurt by this trend due to their strong brand, customer loyalty, and online offerings.

Current Holdings: Ulta Beauty (NASDAQ: ULTA)

Consumer Staples

Overall, the Consumer Staples sector is viewed as companies whose business are less influenced by economic conditions than other companies. This is because this group of the S&P includes manufacturers and distributors of food, beverage, and tobacco and other household goods and products. All of these products are necessary for consumers; therefore, consumers will continue to shop them regardless of the global economic condition. Therefore, Consumer Staples as a sector will continue produce free cash flow.

Companies in the consumer staples sector will benefit from cost cutting initiatives and decreasing energy prices. M&A activity in this sector will to increase profit margins due to economics of scale which would increase gross margin. In addition to the strong consumer confidence that currently exists in our market. Consumer confidence recently reached an all-time high, as consumers see real wages rising with relatively low inflationary pressures.

Current Holdings: N/A

Energy

In the past few years, energy prices have continued to decline across the industry. Crude and natural gas prices have been driven down due to global overproduction of these energy sources. In addition to this, technological advances have made extrapolation and production in previously untapped areas possible which has increased the number of barrels produced by millions.

Price fluctuations in the energy sector have occurred due to production imbalances. Most recently, Saudi Arabia has continued to overproduce oil by millions of barrels which have seen prices fall to around \$50/barrel. If prices stay this low this could have tremendous impact on the industry because some producers cannot make a profit at these low oil prices. In addition to this, the global economy is signaling a decrease in global oil demand which has also lowered oil prices.

Current Holdings: N/A

Financials

The Financials sector contains the category of stocks that provide financial services to customers, both commercial and retail. This includes banking, mortgage finance, consumer finance, specialized finance, investment funds and insurance companies

The financial sector has been volatile over the past few months, largely reacting to changes in the yield curve. They rallied, ahead of a late-September rate hike by the Federal Reserve, only to drop afterward as inflation fears kicked in. A week later, shares were up again in response to a widening of the yield curve, the difference between rates of the 10-year and two-year Treasury notes widened for the first time in months. The Dow Jones US Financial Services ETF is at approximately 124 as of November 30th, down from around 130 in January.

Fed rate hikes have boosted interest income as higher rates across the curve should mean financial companies can earn more on the cash they hold and the loans they make. Balance sheets are stronger with the capital requirements that came out of the 2008 Financial Crisis. The continued tightening of labor markets in the United States and more recently in the European Union, should fuel income gains and credit expansion for retail banks in the near term. While loan growth is slowing it's still rising in the low-single digits.

Earnings at large banks are expected to rise about 40% this year. With income rising and stock prices generally lower, bank valuations have contracted. Financial stocks trade at an average price-earnings ratio of 12, based on earnings estimates for the coming 12 months. That's one of the lowest P/Es of the 11 sectors in the S&P 500, which trades at a P/E roughly of 16.

The uncertainty over Brexit negotiations between the United Kingdom and the European Union is forcing banks to prepare maximum change contingencies that have the potential to be operationally disruptive, legally challenging, and financially demanding. Institutions are taking on the tough task of setting up new operational entities in Europe following the potential loss of "passporting" arrangements for UK-regulated entities.

Current Holdings: American Express (NYSE: AXP)

Healthcare

For this analysis, healthcare will be broken down between companies that provide healthcare services or healthcare equipment, and companies that are involved in biotechnology and pharmaceuticals.

In general, health care companies' balance sheets are solid, their stocks have offered attractive dividend yields and the sector's overall cost structure appears to have improved. Demand appears to be on the rise for health care products and services. On the other hand, political rhetoric around the Affordable Care Act can be expected to fuel continued volatility.

The health care sector has outperformed over the past few months as investor concerns over the political situation appear to have eased, allowing them to focus on the attractive characteristics of

the sector. Investors should always be prepared for volatility, given the influence the political arena can have on the health care world. However, we continue to believe the health care sector will benefit from good growth characteristics combined with the traditionally defensive nature of the sector.

In our view, the health care sector has a lot of positives going for it and has had decent performance over the past year and we think there's likely improving performance to come. Valuations appear fair to slightly below average based on historical levels, and balance sheets are solid with good dividend yields. Also, demand appears to be on the rise for health care products and services, partly as a result of an aging population.

Government actions and potential actions continue to be potential sources of volatility for the sector. While large-scale changes to the existing system seem highly unlikely in the near term given the environment in Washington and the split Congress that resulted from the midterm elections. This is a story that will continue to develop as we get past the elections, with health care continuing to be at the center of many political debates and the mix in Washington changing but remaining divided.

Positive factors for the health care sector include an increased need for services and strong financials. An aging population requires more extensive drug treatments and medical care. Balance sheets in the health care sector remain flush with cash, increasing the possibility of higher dividend payments, share-enhancing stock buybacks, and merger and acquisitions.

Negative factors for the health care sector include regulatory uncertainty and fiscal policy concerns. Following an election where health care was a center of many political campaigns, it seems likely that new proposals regarding the health care sector will be made, but with a split Washington, getting much done seems unlikely to us at this point. The current fiscal situation in Washington creates uncertainty regarding the health care sector. Certain funding mechanisms could be changed as Congress deals with growing deficits.

Current Holdings: NA

Industrials

The Industrials Sector includes companies whose businesses are dominated by one of the following activities: The manufacture and distribution of capital goods, including aerospace & defense, construction, engineering & building products, electrical equipment and industrial machinery, the provision of commercial services and supplies, including printing, employment, environmental and office services, and the provision of transportation services, including airlines, couriers, marine, road & rail and transportation infrastructure.

As of June 2018, the Industrials Sector makes up 10% of the S&P 500, with 69 companies. The median market cap of industrial companies in the S&P was \$19.7 M, and they have provided a return of -4.7% YTD. The total market cap of the entire sector is \$3.84 trillion and has returned -2.09% YTD.

Moving forward, North American industrials are poised to enter 2019 on a steady beat after a robust 2018, supported by a broad-based rebound in global end-markets including energy, construction, mining and health care. Aerospace continues to grow, led by commercial, with business jets growth resuming. Currency will be a tailwind and additional M&A activity is likely with the tax overhaul providing additional flexibility for capital allocation. Improved pricing power should help offset rising costs.

There are several positive factors for the industrials sector. First, there is potential for productivity gains as corporate balance sheets remain relatively cash-rich, which should help push management teams to invest in new, more-efficient equipment to help offset weaker productivity. Also, relatively low manufacturing inventories signal the possibility of a demand-inspired rebuilding phase. Lastly, excluding the Federal Reserve, central banks throughout much of the developed world are maintaining accommodative policies aimed at stimulating economic activity.

On the other hand, a negative factor for industrials is fiscal austerity measures around the world, which could dampen growth in the industrials sector. For now, countries seem to be moving to scale them back. Plus, as trade dispute rhetoric ramps up, concerns are growing that a damaging trade dispute could ensue and affect the sector.

Current Holdings: Lockheed Martin (NYSE: LMT)

Information Technology

The GICS Information Technology sector includes software, IT services, communications equipment, hardware, electronic equipment, and semiconductor companies. Major companies in the index include: Apple Inc., Microsoft Corp., Visa Inc., Intel Corp., and Cisco Systems, Inc. The index has a one-year performance of +.39%, making it the third highest performing sector over the year. However, over the past three months, the sector has a loss of 12.70%. This is the second weakest three-month performance.

Major sources of growth in this industry are cloud computing and cognitive computing. The Internet of Things has facilitated connectivity and made cloud software more flexible, convenient, and affordable to customers. The “software as a service” paradigm that goes hand-in-hand with cloud computing has particularly reduced variable costs and improved flexibility. Cognitive computing is the use of machine learning to evaluate data sets and draw conclusions. As this area becomes more advanced, operational and product enhancements will accelerate as the potential of big data is tapped into with more depth.

Potential headwinds facing this sector are: cybersecurity issues, regulation, and industry disruption. Information technology companies often work with large sets of data that is collected from customers. If this information is not properly handled or if cyber criminals develop more sophisticated hacking methods, customer privacy is at risk. Privacy is a major source of regulatory scrutiny for technology companies as a result. Lastly, since technology is a particularly dynamic field, identifying industry disruptors and reacting accordingly is a crucial area in maintaining competitive position.

The recent losses in this sector have been driven by a selloff of technology stocks, many of which had seen spectacular gains over the past few years. The high amount of liquidity in market as a result of quantitative has facilitated meteoric growth in the post-crisis era. However, as the Fed continues to raise interest rates, a higher cost of capital will hamper investment. As such, exacerbated by the past few years' gains, the market is likely to be more sensitive to evidence of growth slowdown in Information Technology companies.

Current Holdings: NA

Materials

The materials sector makes up about 2.6% of the S&P 500 with 24 constituents and has seen a -7.7% return for the last 12 months. The materials sector is quite sensitive to changes in the business cycle and is quite dependent on a strong economy. Supply and demand fluctuations (impacting the prices of raw materials) strongly affects the performance of the sector. The materials sector is made up of five major industries: Paper and forest products, chemicals, construction materials, containers and packaging and metals and mining. Paper and forest products operate in a market where transportation and electricity tend to be the biggest expenses. They are mainly concentrated in lumber and building supply, paper, and timberland markets. Chemicals is broken down to include agricultural, basic and diversified, and specialty sections, all of which are used for manufacturing processes. The construction materials branch tends to be highly cyclical and fragmented with certain companies dominating certain niche markets. Containers and packaging are broken down to include food and beverage, household products, and pharmaceuticals- including dispensing and protection of products. Metals and mining companies excel at supplying commodities used in many of the other sectors.

Specialty chemicals (0.1% return), along with specifically fertilizers and agricultural chemicals (16.1% return) has led the sector in a somewhat disappointing year. Diversified chemicals (-18.8% return), construction materials (-17.6% return) and copper (-40.7% return) have been the poorest performers, creating an overall drag on the sector. The concerns about global growth outlook have combined with trade war worries to drag down the sector. It is also showing signs of being at or near the end of the current growth cycle. However, a combination of increased raw material demand and potential reduction of austerity programs could lead to better than expected returns from the materials market. Despite this, problems with inventories and demand in China along with increased labor costs could prove to drag the sector down even further.

Current Holdings: NA

Real Estate

As of June 30th, 2018, real estate makes up 2.85% of the S&P 500. The main sectors of the real estate sector are residential, commercial, and industrial. Residential consists of buildings such and individual houses and apartment buildings. Commercial real estate includes office buildings and shopping centers. The industrial section is made up of distribution centers and warehouses.

The real estate market has been steadily growing since its crash in 2008. Overall, it has been a relatively safe sector, but with this, does not provide many major growth opportunities. The real estate market is heavily correlated with interest rates, and subsequently is affected by recent interest rate hikes. Valuing real estate is very similar to a bond. With this, if interest rates rise, the value of bond decline. For our strategy, we needed to look to real estate that differs from this norm for more strategic investments. The other major way to value real estate is to calculate net asset value by dividing the net operating income by the capitalization rate (cap rate). If this value is higher than what the real estate is selling for, then it is undervalued.

With this, the most strategic area of the real estate sector to invest in is industrial. This sector of the real estate market generally has lower cap rate than other sections such as commercial. Also, a stronger indicator of the industrial real estate market is consumer spending, rather than interest rates. Consumer spending has increased in recent years, and we anticipate this trend to continue. This means that investment in industrial real estate is safer at a time when interest rates are uncertain. Also, this means that the value of real estate in the industrial sector does not come from just factors such as property location and size, but also what service the building can provide. For example, the rent of a commercial building with similar criteria is higher in New York City than Hartford. This is because there is a greater demand for property in New York. However, while there is still regional value in industrial properties, there is a much greater widespread need for them in rural areas compared to commercial real estate.

Current Holdings: Prologis (NYSE: PLD)

Utilities

The Utility sector is currently producing steady gains over the last 3-month period as investors become sheepish in light of rumors about the next big market crash. The compounded annual growth rate of the dividends on utility stocks has been growing quickly as of recent years. However, while the steady returns of dividend paying utilities looks nice right now, in the rising interest rate environment they could begin to look less and less attractive. A high interest rate environment would cause fixed income assets to be of increased value compared to these dividend paying stocks.

On another note, If the housing market were to improve, there will be more of a demand for Electricity/Electric Utilities which would benefit this market. One of the most popular ways to generate electricity right now is natural gas consumption which is up over 20% YTD. We are yet to establish a position in the Utilities Sector. We had discussed buying NextEra Energy, Inc (NEE) earlier in the semester, however their FCF was heavily dependent on the Tax Credits received from investment and production of renewable energy. We will be looking into remodeling an investment in NextEra Energy or an alternative investment in few of the other natural gas producing utilities in the Southern Company, and Duke Energy.

Current Holdings: NA

Portfolio Positions

Ulta Beauty (NASDAQ: ULTA)

On October 3rd, 2018 we bought 235 shares of ULTA stock at a price of \$279.77 for a total of \$65,745.95.

Ulta Beauty Inc. is a strong investment because of its' store growth opportunities, unmatched product breadth, and loyalty program. First, we believe that based on Ulta's stores/population, it still has the ability to open over 2,000 more stores in the U.S. Next, Ulta has a mix of low- and high- end brands for cosmetics, hair and skin care. Currently 6% of sales are from exclusive products. Amazon and Walmart do not currently sell Ulta's top 25 best-selling product. Lastly, Ulta has had great success with their loyalty program. Their target demographic is women from ages 16-25. About 57% of beauty shoppers are considered "beauty enthusiasts", CEO estimates that Ulta has most of this market share. Ulta's reward members count grew 17% in Q1 to Q2 of 2018. ULTA can continue to drive high double-digit growth.

Ulta Beauty Inc. is the largest beauty retailer in the United States and the premier beauty destination for cosmetics, fragrance, skin care products, hair care products, and salon services. They provide unmatched product breadth, value and convenience in a distinctive specialty retail environment. Their stores are located in convenient, high traffic locations such as power centers. Ulta Beauty has developed a unique specialty retail concept that offers "All Things Beauty. All in One Place", a compelling value proposition, and a convenient and welcoming shipping environment. Ulta Beauty serves customers throughout the United States but continue to look for expansion. The current trends for the cosmetics industry outlook over the next five years, revenue is anticipated to grow an annualized 1.2% to 23.7 billion. Also, the demand for naturally derived products will spur growth in the market. The beauty, cosmetics, and fragrance stores industry has had an increase in purchases from beauty retailers from consumers due to expertise and loyalty programs. Ulta is one of the leading beauty retailers in the industry with leading market share. Also, Ulta has consistently increased its number of stores and sales per store each quarter, while maintaining a constant inventory per store.

In addition to store expansion, they expect to significantly grow their e-commerce sales to double market share. Ulta's omni-channel guests are extremely valuable because they spend nearly three times as much as retail only guests. E-commerce sales represented 9.7% of total net sales in the fiscal year ended February 2, 2018 and has increased since quarter to quarter.

American Express (NYSE: AXP)

On October 3rd, 2018 we bought 926 shares of AXP stock at a price of \$108.96 for a total of \$100,896.96.

American Express can deliver consistent value from their position in the expanding payments industry, their industry leading innovation and reputation as a premium brand. The expanding payments industry is led by the generally positive outlook for the economy and an increase in global card use. Amex's industry leading innovation is characterized by their top-notch rewards

program, expansion into the digital payments space and successful capture of high-quality millennial customers. Their premium brand has never been in question, boasting the industry's best credit quality backed by their closed loop business model.

American Express is a global payment and travel company. They offer charge and credit payment products and travel related services for consumers and businesses around the world. Their business can be broken down into US Consumer Services, Global Commercial Services, International Services and Global Merchant services. They are a truly global company, operating in more than 40 countries worldwide. The vast majority of their revenues come from their spend-centric business model. American Express's main competitors include card issuers like Visa and MasterCard along with bank issuers like JP Morgan Chase, Citigroup, Bank of America, Synchrony Financial and Discover. While they compete in both industries, their closed loop business model sets them apart from their competition. The only business with a similar system is Discover, and they are not nearly as global as American Express. Additionally, Amex boasts the lowest charge off rates and the best credit in the industry due to the premium nature of their customers. On top of that, American Express customers spend 5x as much per account compared to the industry account average. Since they have premium customers, they are also able to give larger lines of credit with more certainty, resulting in extremely high revenues. AXP's spend-centric model allows them to make back a percentage of every purchase facilitated by their card. Their extremely high spending customers (paired with their great credit) bolster this advantage. Additionally, their closed loop system gives them numerous fee-based and data-based advantages unmatched by any other company. Their digital presence has increased with industry leading digital integration and capture of millennial customers. Thirdly, their premium brand is a competitive advantage in itself. No competitors can compete with their rewards program or market share of corporate spending, which essentially forces merchants all around the world to accept Amex.

Losing a branded card relationship like Costco could be catastrophic for the AXP stock price and the business in general. Additionally, Amex's premium brand is key to many of their competitive advantages and tarnishing that brand would severely hurt their business model. A third risk is increasing price competitiveness as rewards and merchant discount rates increase around the world. Credit risk is an inherent problem for companies like Amex, but their low charge off rate somewhat hedges this problem. However, an unexpected increase in their loan loss provision would substantially impact their ability to make money. A final risk facing American Express is technology risk, as their expansion into digital mediums increases threats of fraud and hackers.

Walt Disney (NYSE: DIS)

On October 9th, 2018 we bought 700 shares of DIS stock at a price of \$117.03 for a total of \$81,921.

The Walt Disney Company is a diversified worldwide entertainment and mass media company founded in 1923. The business operates in four business segments: Media Networks, Parks and Resorts, Studio Entertainment, and Consumer Products & Interactive Media.

Media Network is the largest segment, which includes cable and broadcast television networks, television production and distribution operations, domestic television stations and radio networks and station. Parks and Resorts is second largest segment, which include domestic and international theme parks and resorts (The Walt Disney World Resort in Florida; The Disneyland Resort in California; and Disneyland Paris). Following is the Studio Entertainment, which distributes films under Walt Disney Pictures, Pixar, Marvel, Lucasfilm, and Touchstone banners. Lastly, Consumer Products & Interactive Media is the smallest segment, which sells merchandise, games, books, and advertising in online video content.

Disney's unique business model will contribute to the company's ability for long-term sustainable growth. The main competitive advantage Disney's business model provides is its ability to connect its branded entertainment across all four business segments, utilizing its successful characters and storylines in the studio entertainment segment throughout its theme parks and consumer products.

Disney also has strong brand loyalty with low consumer sensitivity to price changes and a valued rewards program. Disney's ability to create an unparalleled customer experience in its theme parks contributes to strong brand loyalty that drives sustainable profits through all four business segments.

With the Media Networks segment composing the largest amount of the company's revenues, Disney's plan to launch a direct-to-consumer streaming service in early 2019 will be important in helping them remain relevant in the industry. With the acquisition of Fox, Disney will have a large content base for its direct-to-consumer streaming services and a higher market share, giving it a competitive advantage against other direct-to-consumer models. This acquisition will allow Disney to grow internationally as well, with over 350 new channels reaching 170 countries.

Disney faces competition across all business segments. For Media Network and Studio Entertainment, the main competitors are Twenty First Century Fox (Acquired), CBS, Viacom, and Netflix. For Parks and Resorts, the competitors are Universal Studios and Comcast, Cedar Fair, Six Flags and Entertainment etc. For Studio Entertainment, the competitors are Comcast, and Sony Corp. etc. For Consumer Products and Interactive Media, the competitors are Mattel, Hasbro, and DC Comics. Again, Disney's acquisition of Fox and the planned launch of its direct-to-consumer platform will help compete among strong competitors such as Netflix and Amazon.

Some of Disney's risks include the changes in the U.S. economy affecting consumer spending, the success of their direct-to-consumer platform dependent on consumer tastes and preferences, and the decline in cable TV popularity among younger generations. Disney is mitigating these risks by transforming part of their Media Networks segment to include digital streaming services and acquiring Fox in order to provide a larger content base to reach a variety of consumer profiles.

Electronic Arts (NASDAQ: EA)

On October 29th, 2018, we purchased 670 shares of EA stock at a price of \$93.99 for a total of \$62,973.30.

Electronic Arts is a videogame developer and publisher founded in 1982. The business is a leader within the interactive entertainment industry, owning critically acclaimed and commercial hits such as: EA SPORTS™ FIFA, Battlefield™, Madden NFL, Dragon Age™, and Mass Effect™. EA develops, markets, and delivers these games through its own retail software and third-party retailers like GameStop. The company has three strategic pillars: Players First, Commitment to Digital, and One EA. Players First is an emphasis on building and maintaining relationships with players by providing and maintaining high quality, engaging titles. Commitment to Digital involves the expansion of live services provided to customers. Lastly, One EA is the use of EA's scale to improve its player network and make the development process as efficient as possible.

The company has experienced a sharp drop in price over the past few months due to a delay in the release of Battlefield V, a key franchise product. While some investors have raised concern in the company's execution ability, these fears are not fundamentally reflected in the company. EA's strong digital revenue growth potential, platform development strategy, and widening margins all indicate operational success. In addition, the company has a \$2.4 billion-dollar share repurchase plan that has recently been instituted, indicating internal confidence. Lastly, EA has a return on invested capital (ROIC) of 19.7%, roughly twice that of Activision Blizzard, its nearest competitor. This company's long-term strength, coupled with recent underpricing, made it an attractive investment.

The video game industry is growing and expected to maintain course. The monthly subscription model for individual titles, such as included in Blizzard Entertainment's World of Warcraft, are decreasing in popularity as revenue from in-game downloadable content (DLC) has greatly increased. The average age of video game players is also increasing as those who started playing as children continue into adulthood. This demographic shift is a key source of growth in the market.

Competitively, EA's nearest peers are Activision Blizzard, Take-Two Interactive, and Zynga, Inc. EA's stronger ROIC, coupled with products that are more franchise-oriented and that use licenses from established brands, highlights its long-term prospects. Since EA can develop games using household names like the NFL, FIFA, or Star Wars, it relies less on the spontaneous development of new intellectual property hits. In addition, the "One EA" strategy allows for all of its major projects to be developed using the same engine. As a result, it is easier to share talent between products due to the uniform technical skills required.

While EA's price has suffered with other technology companies and partially due to Activision Blizzard's recent selloffs, we remain confident in our initial investment thesis. While the "hit" based nature of the video game is highly competitive and hard to predict, EA offers a more reliable path towards its intrinsic value as the industry matures.

Prologis (NYSE: PLD)

On November 6th, 2018, we purchased 1200 shares of PLD stock at a price of \$64.99 for a total of \$77,988.

Prologis Inc. (PLD) is a real estate investment trust (REIT) that specializes in distribution in the United States and a total of 19 other countries in the form of property ownership or joint ventures. Their largest client is Amazon. A REIT must have at least 75% of its assets in real estate and derive 75% of their gross income from rent. Also, they must pay out at least 90% of their income as dividends.

We believe that PLD is a strong investment for three major reasons. First, they offer a “Built-to-Suit” model for their distribution centers. This means that they build customized distribution centers for their clients. They take control of the entire process from choosing the location to working with the client to meet their exact distribution needs. This gives them an advantage compared to their competitors because they can offer a superior product and develop closer connections with their clients. Second, they are the only major industrial REIT expanding internationally. Currently, 15.9% of their revenue (\$416 million) comes from foreign holdings. They are partnering with some of the largest companies in these countries such as BMW in Germany. This helps diversify the REIT’s portfolio and protect against possible trade disputes. Finally, they recently acquired one of their largest competitors, DCT Industrial. This added 71 million square feet, and 75 million more in development. Also, there is 305 acres of land in pre-development and 131 acres under contract. The acquisition had a total cost of \$8.5 Billion.

There are some risks involved with our investment in PLD. First, there is the risk of trade agreements with foreign countries. Currently, President Donald Trump is attempting to put higher tariffs on Chinese imports. In response the Chinese government is doing the same in products made in the United States. If this continues, it could lower the need for distribution. However, the democrats taking control of the House of Representatives during the 2018 midterm elections should help reduce the prevalence of tariffs. Another risk is cultural and operation differences in foreign countries. Fluctuation in currency prices could negatively affect PLD, and differences in cultural norms must be understood before conducting business in foreign countries.

Lockheed Martin (NYSE: LMT)

On November 8th, 2018 and November 13th, 2018, we purchased 75 and 203 shares of LMT stock at a price of \$309.32 and \$304.76 respectively for a total of \$85,065.28.

Lockheed Martin can provide long-term sustainable growth through its already profitable business model, significant growth opportunities, strong relationship with the U.S. government, and game changing innovation that has led to the creation of some of the most high-tech products in the industry. Lockheed has consistently performed highly and beaten expectations and won many contracts with governments throughout the world. This company-wide and industry-wide growth makes Lockheed a strong stock pick with a high chance for growth and low risk.

Lockheed Martin Corp. engages in the research, design, development, manufacturing, and sustainment of technology systems, products, and services. It operates through four business segments: Aeronautics, Missiles and Fire Control, Rotary and Mission Systems, and Space. Lockheed Martin's main competitors include aerospace companies like GE, Boeing and United Technologies along with defense companies like Raytheon and Aerojet. While they compete in both industries, their unmatched relationship with the U.S. Government (especially the DoD) sets them apart from the competition. LMT is the top government contractor by more than double the contracts as the next closest competitor (Boeing). Additionally, Lockheed's innovative company culture has led to incredible inventions, like the F-35, which are unmatched in today's marketplace. On top of that, government spending is increasing rapidly and is expected to continue to rise under the Trump administration. LMT's unmatched relationship with the government sets them apart when bidding for new and lucrative contracts. Additionally, their innovative company mindset has led to game-changing innovation like underwater mine locators, augmented reality combat training software, autonomous war vehicles, and of course, the F-35. Their strong position in contracts around the world makes them the servicer of choice to many countries' jet fleets and leads to large recurring revenue streams. Additionally, their expertise in space exploration and communications systems positions them well to help conquer the next frontier.

One of the biggest risks for Lockheed Martin is their large concentration of contracts with the U.S. government. Nearly 70% of their revenue is related to the defense budget, so if that was slashed, we would expect a large impact on the business. Additionally, losing out on contracts is a large risk, as a win and a loss means a difference in billions of dollars of revenue. As competition increases and bid protests happen, this could pose a threat to the company's expected growth. However, their strong relationship with the US government serves as strong mitigation. Finally, as they handle extremely classified data, any hacks or breaches could result in serious sanctions and potential problems in their strong relationship with the governments they serve. Luckily enough, they are at the cutting edge of cybersecurity, even providing protective services to the US government itself.

Alphabet (NASDAQ: GOOG)

On November 15th, 2018, we purchased 82 shares of GOOG stock at a price of \$1,049.96 for a total of \$86,096.72.

Alphabet is an industry leading technology company, which is predominately known for its' search engine Google. Alphabet was created in 2015 as a holding company which is split into two main parts: Google, and other bets. The Google segment accounts for the majority of Alphabet's total revenue and is made up of ads, cloud, g-suite, maps, YouTube, android, and other hardware such as Google Home and the Chromecast. The other part of Alphabet's business model is referred to as other bets. These are quirky projects and initiative's that many never make money to break even, but if they do, they have the opportunity to disrupt different industries. Alphabet's most notable other bet is Waymo, a self-driving car company that is currently making strides to bring autonomous self-driving cars to all consumers.

Alphabet operates in many different industries; however, it generates the majority of its revenue from advertising it sells on its own website and third-party websites. Alphabet currently has a dominate market share in digital media advertising which is around 44%. Global digital media advertising is expected to grow at a compounded annual growth rate of 5% over the next 5 years bringing the projected total advertising spending to over \$720 billion. Additionally, the fastest growing subsection of this industry is mobile ads. Alphabet's mobile platform, Android, captures approximately 84% of the market share of smartphones. Mobile ad revenues are expected to double in the next 2 years to \$250 billion.

Alphabet has a very strong business model that will continue to attract more business as it expands into untapped markets, such as Asia and India. Additionally, Alphabet is extremely future focused as it continues to invest heavily into new innovations, such as Google cloud and their AI platform. Alphabet has a unique goal of wanting to make data accessibly to everyone over the world. Also, Alphabet's other bets category is looking to use technology to disrupt industries, and recently Alphabet has been slowly able to monetize these innovations one by one. The market has fundamentally undervalued their ability to turn these moonshots ideas into profitable cash flow generating business segments.

Alphabet is a very unique situation. Yes, it has competitors in each of their business sections, but there are very few companies that are able to compete with Alphabet in the full set of products and services that it offers consumers. However, Alphabet's closest competitors are Netflix, Facebook, Amazon, Microsoft, and Yahoo.

Alphabet's competitive advantage is its dominant market share. Google is predominately used as the premier search engine, and Gmail has over 1.5 monthly users. As the internet grows, Alphabet is positioned to grow with it. Lastly, Alphabet has over \$100 billion in cash, which it can use to invest in R&D to keep its competitive advantage.