

# UConn

SCHOOL OF BUSINESS



## STUDENT MANAGED FUND PORTFOLIO REPORT SPRING 2016

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# Letter to the UConn Foundation

To The UConn Foundation,

On behalf of the University of Connecticut Student Managed Fund Program, we would like to thank you for the incredible opportunity to partner with you throughout the course of this academic year. We have learned so much about the activities of the UConn Foundation, while also expanding our investment knowledge by completing this program.

This experience simply would not have been possible without the guidance of the University of Connecticut faculty, the Investment Advisory Board and the Foundation. We learned about the investment process, including identifying potential investments, researching the fundamental aspects of the company, and conducting valuations. We learned about the mechanisms involved in purchasing a stock, as well as the importance of Corporate Social Responsibility in regards to a company's practices. We also had our first experience in preparing analyst reports as well as presenting our work at the end of the fall and spring semesters.

We were exposed to new research tools such as the Bloomberg Terminals in the School of Business, as well as online tools like Value Line and Morningstar. We also had the chance to meet with the Investment Advisory Board and MBA managers on a periodic basis in order to network and learn from their experiences, which is truly invaluable.

We hope that this report highlights our process, rationale, and our lessons learned from this year. The experience was invaluable, and we thank you so much for the chance to take part in the Student Managed Fund.

Sincerely,

**University of Connecticut Student Managed Fund Class of 2016**

Jacquelyn Isola  
Zack Marcoux  
Yijun Li  
Brittany Martens  
Christopher Strobel  
Brian Wilczynski  
Tom MacLean  
Michael Morabito  
Anthony Mancini

# PORTFOLIO OVERVIEW

## Investment Managers

Jacquelyn Isola

Brittany Martens

Tom MacLean

Anthony Mancini

Zack Marcoux

Christopher Strobel

Michael Morabito

Yijun Li

Brian Wilczynski

## Spring Officer Positions

**Co-Lead Managers** - Brian Wilczynski, Christopher Strobel

**Portfolio Manager** - Tom MacLean

**Treasurer/Secretary** - Michael Morabito

**Bloomberg Specialist/Web Manager** - Zack Marcoux

**Undergraduate Supervisor** - Christopher Wilkos

**Fund Director** - Professor Chinmoy Ghosh

## Investment Philosophy

The UConn Student Managed Fund uses principles of value investing in order to identify investments based on their fundamental value. We use both qualitative and quantitative research in order to research companies across the various sectors of the market. We aim to understand the company's business model, their management, the risks that they face, and their competitive advantages. We also investigate and analyze the company's financial information as well as valuation.

## Investment Strategy

Our group pays close attention to numerous measures of a company's value in order to identify potential stocks. We examine metrics such as Profitability, Leverage, Earnings/Revenue Growth, Valuation, Dividend Issuance, Stock Buybacks, as well as Management, and Competitive Advantage. Once the group feels as though we have found a potential investment, managers will conduct a pitch, which includes a comprehensive discussion of the merits of the investment, followed by a Q&A session and vote.

## Risk Management

One of the central aspects of investing that we focus on is risk management. The SMF pays close attention to the following classes of risk:

**Business Model Risk** – The risk company's business model is weak

**Balance Sheet Risk** – The risk a company has debt levels

**Management Risk** – The risk a company has incompetent management

**Aggregation Risk** – The risk the stocks in our portfolio have common risks

We feel as though our value investing philosophy aligns itself well to the risks that we face through the course of the year. We focus on quality companies with strong management, reliable business models, and strong competitive advantages. We do not time the market, nor do we buy stocks with excessive growth premiums. Rather, we utilize concepts used by value investor such as Warren Buffett to find viable companies that grow earnings over time and provide a strong return over a long time period.

In addition, our group uses stop loss orders in order to protect from downside risk. That means that in the event a stock's price declines to a predetermined level below the purchase price, there will automatically be a sell order executed to sell the stock at market price.

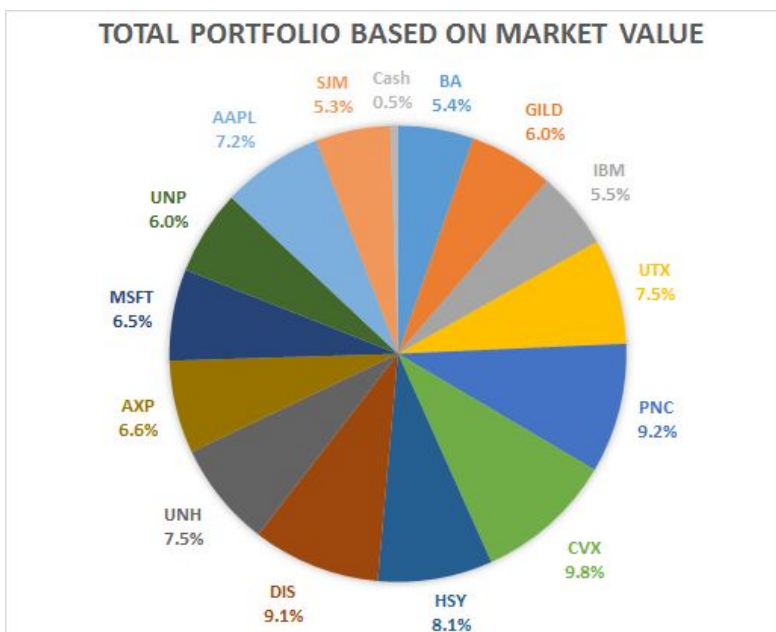
### Sector Assignments

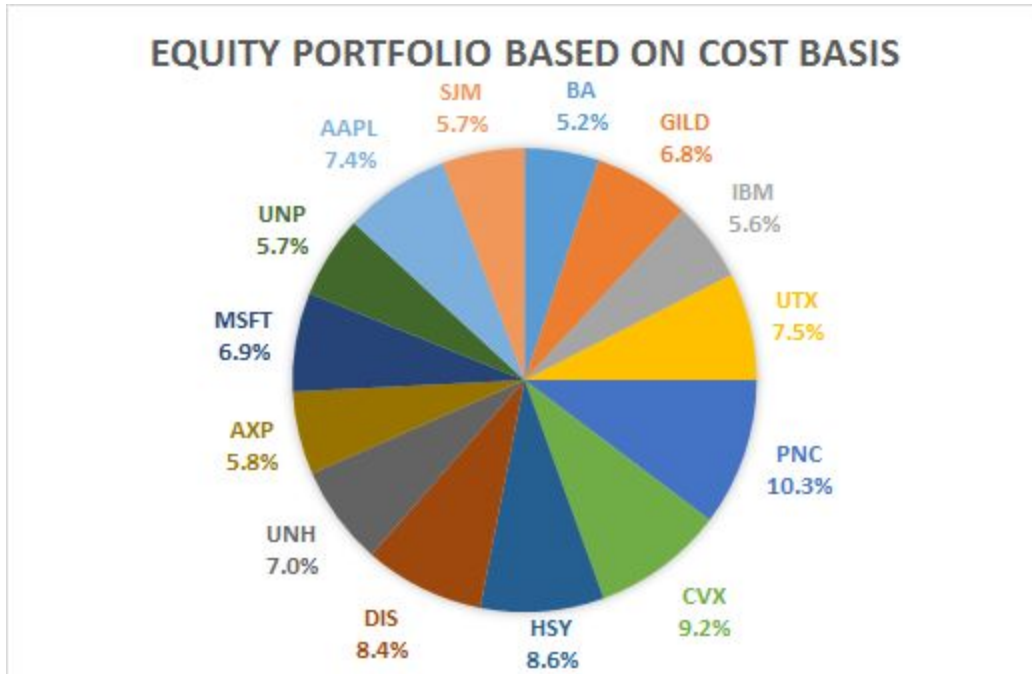
The sectors and the corresponding analysts are listed below:

- Materials** - Thomas MacLean, Christopher Strobel
- Consumer Discretionary** - Jacquelyn Isola, Brittany Martens
- Consumer Staples** - Jacquelyn Isola, Yijun Li
- Energy** - Brittany Martens, Brian Wilczynski
- Financials** - Yijun Li, Anthony Mancini, Brian Wilczynski
- Healthcare** - Zack Marcoux, Christopher Strobel
- Industrials** - Anthony Mancini, Brian Wilczynski
- Technology** - Thomas MacLean, Michael Morabito
- Telecom** - Michael Morabito

### Equity Portfolio and Allocation

The Fund has 99.5% of the portfolio invested with .5% of the portfolio remaining in cash and 0% remaining in the SPDR ETF. The average equity position size is approximately 7%, with our largest positions in Chevron (9.8%/~\$183k) and PNC Financial Services Group (9.2%/~\$172k). In total there are 14 positions.





**Performance**

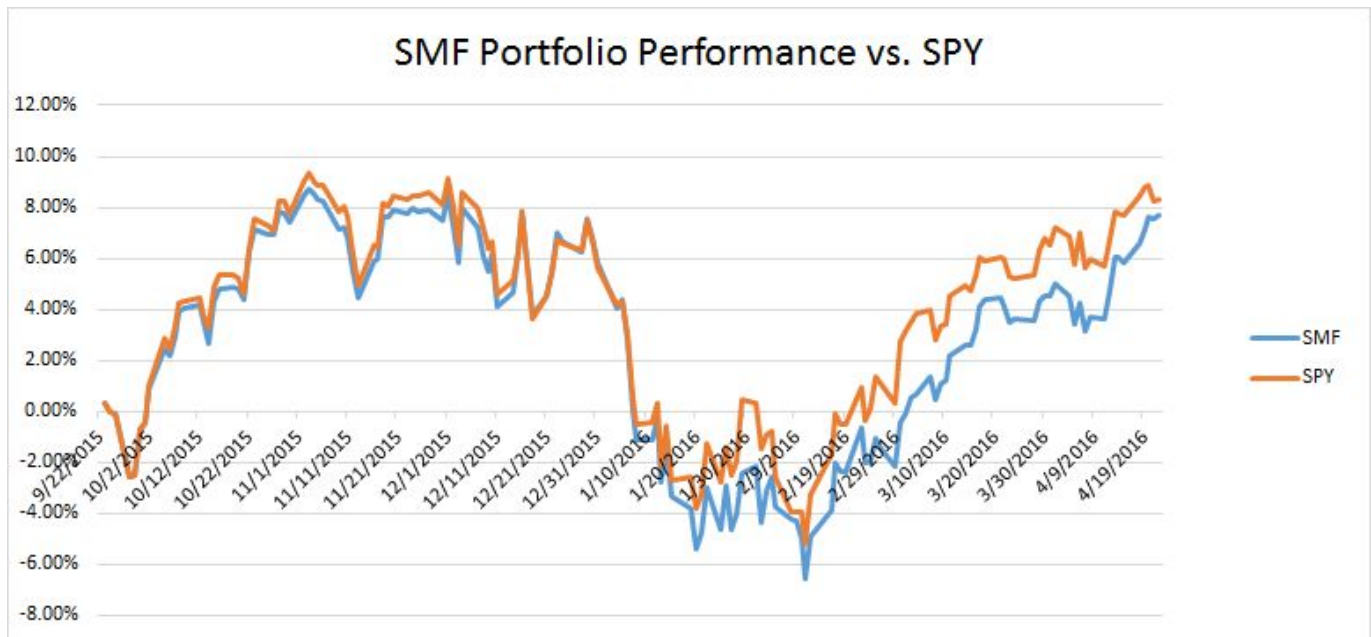
The tables and charts below depict the performance of the portfolio from September 22, 2015 to April 22, 2015.

**Total Portfolio Unrealized Gains**

Name	Symbol	Purchase Date	Last Price	Shares	Cost Basis	Mkt Value	Gain	Gain %
SPDR S&P 500 ETF Trust	SPY	Received 9/22/15	\$ 208.37	-	\$ -	\$ -	\$ -	
Boeing Co	BA	10/7/2015	\$ 131.11	762	\$ 90,922.37	\$ 99,905.82	\$ 8,983.45	9.88%
Gilead Sciences, Inc.	GILD	10/28/2015	\$ 101.46	1,099	\$ 118,456.04	\$ 111,504.54	\$ (6,951.50)	-5.87%
International Business Machines Corp.	IBM	10/28/2015	\$ 147.84	695	\$ 97,427.81	\$ 102,748.80	\$ 5,320.99	5.46%
United Technologies Corporation	UTX	11/3/2015	\$ 105.22	1,322	\$ 131,380.36	\$ 139,100.84	\$ 7,720.48	5.88%
PNC Financial Services Group Inc	PNC	11/16/2015	\$ 88.05	1,950	\$ 180,313.66	\$ 171,697.50	\$ (8,616.16)	-4.78%
Chevron Corporation	CVX	11/23/2015	\$ 101.78	1,798	\$ 160,755.58	\$ 183,000.44	\$ 22,244.86	13.84%
Hershey Co	HSY	2/1/2016	\$ 89.54	1,691	\$ 150,772.94	\$ 151,412.14	\$ 639.20	0.42%
Walt Disney Co	DIS	2/9/2016	\$ 103.72	1,629	\$ 146,870.64	\$ 168,959.88	\$ 22,089.24	15.04%
UnitedHealth Group Inc	UNH	2/17/2016	\$ 133.51	1,042	\$ 121,939.01	\$ 139,117.42	\$ 17,178.41	14.09%
American Express Company	AXP	2/19/2016	\$ 65.90	1,866	\$ 101,305.14	\$ 122,969.40	\$ 21,664.26	21.39%
Microsoft Corporation	MSFT	3/1/2016	\$ 51.72	2,339	\$ 121,012.38	\$ 120,973.08	\$ (39.30)	-0.03%
Union Pacific Corporation	UNP	3/1/2016	\$ 89.76	1,250	\$ 100,475.00	\$ 112,200.00	\$ 11,725.00	11.67%
Apple Inc.	AAPL	3/7/2016	\$ 104.86	1,275	\$ 130,159.65	\$ 133,696.50	\$ 3,536.85	2.72%
The J. M. Smucker Company	SJM	3/10/2016	\$ 125.22	787	\$ 100,413.33	\$ 98,548.14	\$ (1,865.19)	-1.86%
Cash			\$ 10,122.18			\$ 10,122.18		
Portfolio Value					\$ 1,752,203.92	\$ 1,865,956.68	\$ 103,630.58	5.91%

## Total Portfolio Performance vs. S&P 500

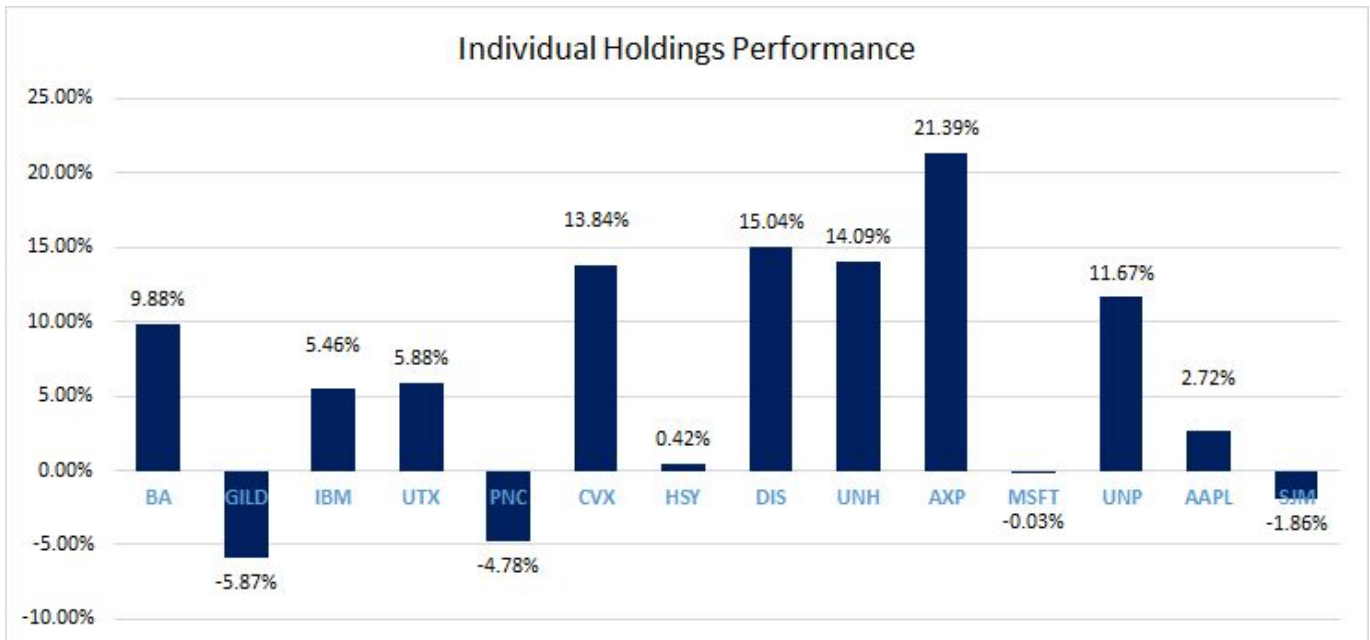
Undergraduate Portfolio		S&P 500 ETF (SPY)	
Beginning Value	\$ 1,739,173.76	Beginning Value	\$ 192.98
Current Value	\$ 1,865,956.68	Current Value	\$ 208.37
Absolute Change	\$ 126,782.92	Absolute Change	\$ 15.39
% Change	7.29%	% Change	7.97%



Fears of a global economic slowdown have had the largest adverse impact on the portfolio. In the later part of 2015, we began making our selected equity investments. Our earlier investments were in companies that depend greatly on the business cycle, such as Boeing and United Technologies of the industrials sector. As investors feared that China's economic growth was slowing which would then spread abroad, industrials was one of the hardest hit sectors. Due to our large position in industrials, the portfolio was negatively affected by these fears. Similarly, as the Federal Reserve signaled a more cautious policy in raising interest rates, the financials sector declined as companies such as PNC would face tighter margins from lower interest rates. Overall, our portfolio has suffered from the sectors we were *not* exposed to such as utilities. As investors turned to what are perceived to be safer investments, companies such as those in the utility space benefited, yet due to our lack of exposure, our portfolio did not. However, it is important to note that these are short-term economic fears and that we took a long-term perspective in making our investment decision.



## Individual Stock Performance



Over the past seven months, we have seen strong returns in our investments in Consumer Discretionary, Industrials and Energy. Our largest gain, 21.4% since purchase, comes from American Express due to making our investment after the market had severely and unfairly beaten down the company's shares after its latest earnings report. Our largest loss at the moment is Gilead due to downward political pricing pressures that sent the entire biotechnology industry downwards as we see a renewed focus on healthcare costs. Additionally, the company faces increased competition from Merck in the form of a new drug for hepatitis C. However, these are short-term price fluctuations that do not impact our assessment of Gilead as an undervalued company with a strong product pipeline and long-term growth prospects.



# ECONOMIC OUTLOOK

The first few months of the year witnessed elevated levels of volatility in global stock markets amid falling oil prices and worries about a slowdown in China's economy. S&P 500 index has moved at least 1% in either direction in 65% trading sessions in the first quarter. When considering potential investments for the Student Managed Fund, our group pays close attention to the macro-economic factors that will influence the performance of a given investment both in the short and long term. The major economic themes that we consider are:

## **The US Economy**

Our outlook of the domestic economy is mixed. year-over-year growth in real GDP has been relatively stable since the financial crisis, and appears moderate at about 2.40%, along with stable year-over-year growth in industrial production, currently at -1.03%. In addition, the unemployment rate has improved significantly and now stands at 5.00%, and weekly jobless claims have steadily declined, now standing at 265,000. From a fiscal standpoint, the government budget balance as a percentage of GDP has improved steadily as well; now standing at -2.40%. Consumer confidence, as measured by the University of Michigan Consumer Confidence Index, seems to have improved to pre-crisis levels; signaling that the american consumer is confident in the state of the overall economy.

While these numbers appear solid on the surface, given the recent and future potential interest rate hikes, these numbers likely would be better. Despite the policies implemented by the Federal Reserve, inflation has remained below the Federal Reserve's target; with the CPI ex-food and energy now at 2.30% YoY, and hourly wages have been stagnant at around 2.20% YoY compared to around 3.00% before the crisis. While the unemployment rate has improved, labor force participation remains relatively low at 62.4%; below pre-crisis levels of around 66%. This signals that workers are still reluctant to re-enter the labor force due to lack of confidence that they will be able to find work. In the housing market, we see a substantial recovery which offsets the negative stock market effect. New home sales have improved since the housing market crash, now at 501,000/year, though still drastically below pre-crash levels of around 1,000,000/year. We believe that there is still a lot of improvement to be made. Mortgage delinquencies as a percentage of total home loans come in at around 5.00% which is around pre-crisis levels; signaling that heightened lending requirements implemented after the financial crisis seem to be improving the stability of the market.

So while the SMF sees that the U.S. economy has made improvements over recent years since the financial crisis, we recognize that there are still significant improvements to be made before the U.S. economy reaches full strength. Against this backdrop, we believe companies in healthcare, value-added technology, and consumer experiences, such as UnitedHealth Group, Apple and Disney. As financials and energy have dragged the whole index down since last year, we make sure that we are buying consumer companies at the right time with the lower price.

## **China and Eurozone Economy**

Given the fact that a lot of companies SMF have are internationally exposed to say China, Eurozone as well as emerging market. The economy of those areas is definitely considered as well when we make

investment decisions. Though the global recovery seems feeble at this time, we believe the major bear global market is unlikely.

Recent economic growth in China has slowed down led by exports and manufacturing. Exports plunged 25% in February and rebounded back at 11.5% in March. Despite the significant decline compared to global exports in 2008, China's overall market share of total global exports actually has increased to 13% in past five year. Prices (as measured by the CPI) have grown at around 1.30%, which is similar to levels seen before 2008. The real estate market shows a slight recovery this year, with Bloomberg's Real Estate Climate Index at 93.67, though still below the levels seen during the Financial Crisis and far lower than the peak of 106.0 it reached in 2010. Our main concern however, is that the country's debt has increased by 66% from 2011, leading to the current currency dilemma. Overall, China has seen a decline in real GDP growth now at 6.90%, compared to around 10% in recent years and as high as 15% below the Financial Crisis. Industrial production has decelerated drastically; now growing at 5.90% YoY compared to over 18% in 2010 as well as before 2008. For 2016, the Chinese government calls for a slower goal and focuses on quality over quantity of growth.

The economies of the Eurozone have struggled in recent months. The unemployment rate across the Euro area is currently 10.50%, ranging from 6.20% in Germany to as high as 24.43% in Greece. Youth unemployment in particular is a major issue in the region, with the unemployment rate among young adults currently standing at 19.40%. Inflation currently stands at 0.10%, which is well below the target of 2.00%. Economic growth in the region as a whole has been underwhelming; currently standing at 0.30% YoY, and Exports have declined to 42% percent of GDP across the EU. Under this fragile recovery, Europe economy has grown at a faster than expected rate. We believe that ECB's QE, the weaker Euro, and improving leading environment should help support growth.

All things considered, China and Europe are the most important economies for the Student Managed Fund when making investment decisions due to the significant exposure most of our perspective investments in the region. Current struggles are certainly a factor that we examine closely throughout the year. Especially, in those markets, customers are significant for companies we are looking at.

### **Oil and Commodities**

Over the past year, commodities markets have shown a significant decline in the prices of energy such as crude oil and precious metals such as gold, copper, and platinum. One of the most publicized and important commodities that has declined over the last year has been crude oil, with oil futures now standing at around 43.58 per barrel. This reflects significant increases in production of both OPEC and Non-OPEC countries as well as declining demand due to the economic slowdown in China. As far as our portfolio, we are looking at companies which are able to take proactive approach in this new low oil price environment. The price of oil is crucial to the SMF both directly due to our position in Chevron Corporation, and the demand-related signals that oil prices give regarding consumer demand and industrial production.

Additionally, we have seen prices of gold, copper and platinum decline drastically, perhaps due to declines in Industrial production in China and global economic slowdown, in addition to a relatively strong dollar which likely will persist following a potential Federal Reserve interest rate hike in the near future. The ripple effect of the widespread decline in oil prices will likely have repercussions on emerging markets that rely on commodity exports for growth such as Brazil, Australia, and Chile. Our group pays

very close attention to the signals given by commodities markets, both in regards to the direct impacts of prospective companies in the commodities space and the implications about global demand/growth.

### **The Federal Reserve Rate Hike**

One of the central news topics over the past months has been the potential Federal Reserve's interest rates hike. In December, Federal Reserve raised its key interest rate to a range of 0.25% to 0.5%, for the first time in almost a decade. In considering the prospects and impacts of an increase in the Federal funds rate, it is important to consider the Fed's two main policy goals: stable prices and full employment. In regards to prices, as mentioned earlier the level of inflation simply has not been able to reach the Federal Reserve's target of 2.0%. Despite nearly eight years of near-zero short-term interest rates, prices simply have not grown as quickly as the Fed would have liked. Quantitative Easing by the Federal Reserve has significantly lowered treasury rates, with the 3-month treasury rate now at .22% and the 10-Year treasury rate currently at 1.75%, compared to its 50-year average of about 6.40%. This has allowed business to borrow at very low interest rates, contributing to a significant recovery in equity markets since 2008. On the employment side, we have again seen tightening of the labor market with a declining unemployment rate and improving level of initial jobless claims. However, wage growth has been slow and the labor force participation rate has been stagnant since 2008.

All things considered, we believe it is likely that the Federal Reserve will continuously raise interest rates in the near term; likely with a gradual path of rates hikes over time. We feel as though the initial increase in rates will mean very little directly, however it will signal a renormalization of monetary policy by the Federal Reserve going forward and will have a positive effect on our holdings of financial companies.

# SECTOR ANALYSIS

## Sector Allocation

The manner in which we allocated our portfolio by sector stems from our team's investment philosophy. As previously mentioned, we based our investment decisions primarily on selecting companies that exhibited strong business models and that are trading at a discount relative to their intrinsic value. We did not limit our investment decisions by requiring a certain allocation of the portfolio into specific sectors. We believed that certain sectors (i.e. utilities) holistically contained companies that would not create as much value as other sectors, so we did not make it a requirement to allocate into that area.

While the Fund did not set any floor for sector allocation, the team is aware of sector allocation in order to minimize aggregate risk and diversify our portfolio.

The following table highlights the sector breakdown, sector performance, and S&P sector weightings of our portfolio as of April 22, 2016:

Sector	% of Total Portfolio	% of Invested Portfolio	S&P Sector Weightings	% Return
Basic Materials	0.0%	0.0%	2.8%	0.0%
Consumer Discretionary	9.1%	8.4%	12.9%	15.0%
Consumer Staples	13.4%	14.3%	10.6%	-0.5%
Energy	9.8%	9.2%	6.8%	13.8%
Financials	15.8%	16.1%	15.9%	4.6%
Healthcare	13.4%	13.7%	14.5%	4.3%
Industrials	18.8%	18.4%	10.1%	8.8%
Technology	19.2%	19.9%	20.4%	2.5%
Telecommunications	0.0%	0.0%	2.8%	0.0%
Utilities	0.0%	0.0%	3.4%	0.0%
Total	99.5%	100.0%	100.0%	

Relative to the S&P 500, our investments are not evenly spread across sectors. This is because we use a bottom-up approach when making our investment decisions rather than a top-down approach. For that reason, we invested in companies that had superior discounts to intrinsic value. We felt that there were fewer attractive valuations in the Basic Materials, Telecommunications, and Utilities sectors so we did not invest in these sectors.

## Consumer Staples

The consumer goods sector is an important sector to the market, encompassing businesses that are less sensitive to economic conditions than many of the other market sectors. The largest areas of the sector include manufacturers and distributors of food and beverages, tobacco producers, personal products, and nondurable home goods. The consumer goods sector has many large-cap companies such as Coca-Cola and Procter & Gamble.

Consumer goods are products or services that cannot be eliminated if economic outlook faces a downturn. Items such as food and beverages will still be purchased regardless of economic conditions. For this

reason, companies in this sector tend to continue to perform well during an economic downturn. When the economy slows, investors tend to flock to companies with proven and steady cash flow and financial results, such as consumer goods companies. Over the years, these companies have consistently shown growth and results. Consumer goods are valued as a long-term outlook investment strategy that will remain profitable throughout multiple business cycles.

Despite having some protection from economic downturns, consumer goods require constant innovation updating to follow consumer trends in order to remain viable amidst stiff competition. The consumer goods industry is trying to expand into emerging markets, particularly with the rise of the middle class in Asia. Companies are continuously updating products to fit with changing consumer demands. There is an increase in online shopping with the evolution of technology, so consumer goods companies need to understand how to best market their products given this change in lifestyle.

**Current Holdings:** SJM, HSY

### **Consumer Discretionary**

We have found consumer discretionary to be a difficult area to invest in. After looking into several stocks, we ruled out Home Depot, Nordstrom, and Chipotle due to fair valuations. The fund has also decided to stay away from the automotive industry, as this is unpredictable and often volatile.

The Fund has also wrestled with the idea that by definition discretionary stocks are sensitive to a downturn in the economy. However, we do believe that there is some opportunity in this sector. We were able to find an opportunity by investing in The Disney Company. Due to concerns about the global market, China specifically, Disney stock had fallen a great deal at the start of 2016. This allowed the fund to invest in the company with a comfortable margin of safety. We believe that the market is overreacting to a relatively short term slowdown in China and therefore see Disney's value increasing in the future.

**Current Holdings:** DIS

### **Energy**

Since the start of the SMF investing session, oil has been beaten down. In 2015, oil prices hovered around \$55 per barrel, a price many analysts saw as a bottom. However, prices have since moved to as high as \$65 only to fall to current \$45 per barrel. The volatility in the oil market has been caused by the intense increase of supply coming out of the United States and the determination of OPEC to maintain production. In addition, unrest across the Middle East region, the lifting of Iranian sanctions, and the economic downturn in China have also contributed to the movements in oil.

In the short term we do not expect oil prices to rise. The market is so correlated with supply and demand, that the price will not likely fall until supply also falls or demand increases. There have been some talks of OPEC decreasing production, but they have backed out of this plan several times now so this may take some time. However, the SMF does believe that an increase in oil prices will be seen in the long term.

Another opportunity for growth that we see is in natural gas. This is a cleaner and more abundant resource. In addition with the implementation of liquid natural gas, this has a great potential for growth globally.

These two views are what supported our position in Chevron, as it will greatly benefit from the growth in natural gas and an increase in oil price.

### **Current Holdings: CVX**

#### **Financials**

The Financials sector contains a vast array of financial services companies, such as commercial and investment banks (J.P. Morgan Chase), asset management firms (BlackRock), credit card companies (MasterCard), brokerage firms, stock exchanges (Intercontinental Exchange), credit rating agencies (Moody's Investor Service), insurance companies (MetLife), etc. As of 2015, the Financials sector held a 16.46% weight in the S&P 500 index, or a market capitalization of about \$6.40T trillion.

The performance of the Financials sector has been poor this year. If an investor put a dollar in a broad basket of financial companies, this investor would have lost money, year to date. This investment would have declined from \$1 to approximately \$0.929. Comparing the Financials sector to the market as a whole, a dollar investment in the entire S&P 500 index would have declined to approximately \$0.988. Thus, the Financials sector has been underperforming the market thus far this year.

The Financials sector has endured a series of global events this year that has affected performance. Currency fluctuations (such as the devaluation of the Chinese yuan, the strengthening of the U.S. dollar versus many major currencies, and the Greek Sovereign Debt Crisis' effect on the euro) likely has had an impact on banks currency operations; Low interest rates have held down the returns on many fixed income assets held by banks, asset management firms, and insurance companies. Capital requirements have become stricter due to Basel III, reducing returns for banks; and quantitative easing programs by the European Central Bank have made European interest rates decline as well. For many financial companies, these developments were unavoidable, and thus these financial companies were forced to bear with them.

Going forward, one of the biggest developments that will affect the Financials sector is the Federal Reserve's rate hike. In December, the Federal Reserve raised its key interest rate from a range of 0% to 0.25% to a range of 0.25% to 0.5%. Recent Federal Reserve statements and general market opinion suggests "gradual" rate hikes to continue in 2016, barring no bad economic data. We believe that this will have a positive effect on our holdings of financial companies (as PNC and American Express will be able to earn a higher return on its loans).

### **Current Holdings: PNC, AXP**

#### **Healthcare**

The healthcare industry has experienced significant changes over the past year regarding increasing political tension. However, there is a tremendous amount of innovation and discovery to be seen in biotechnology and health care. Also, as emerging nations begin to develop a larger middle class, it will lead to expanding markets as well as support long term growth of these companies.

In the recent past, there has been increasing concern regarding the uncertainty of the U.S. health care reform as well as drug pricing and reimbursement pressure. Changes to the Affordable Care Act will have an impact on the long-term potential of the healthcare industry for the future. Also, as biotech firms continue to introduce highly priced medications, public scrutiny regarding their high margins will remain

prominent, especially throughout the presidential election. However, this public scrutiny does not seem to have gained any relevance but has made many headlines and caused short-term volatility in stock prices. Generic drug manufacturers have also begun to cause a threat to high margin companies by undercutting prices for similar medications.

There have also been many mergers and acquisitions in the past year that have yet to show their impact on the industry. Large health insurance companies in particular have proposed massive consolidations. However, the federal approvals of large multinational mergers have recently become a concern seeing that the proposed merger of Pfizer and Allergan was recently blocked due to potential tax evasion.

Despite uncertainty regarding the U.S. health care reform, biotech drug innovation has remained strong. Many companies have displayed promising pipelines of potential new drugs. The promising pipelines of many biotech companies should be a strong candidate for investment. As these new drugs come to the market, new consumers around the world will be gaining access to these modern medicines. The growing middle class of emerging markets will lead to an increase in market share by newly developed nations.

**Current Holdings:** GILD, UNH

### **Industrials**

The Industrials sector contains a broad spectrum of companies that produce goods or provide services to both consumers and business for mainly industrial use. The types of companies included in this sector include

- Industrial conglomerates (United Technologies Corporation, General Electric)
- Aerospace companies (Boeing)
- Heavy machinery companies (Caterpillar)
- Airlines (Southwest Airlines, American Airlines Group)
- Shipping companies (FedEx, United Parcel Service),
- Tool manufacturers (Stanley Black & Decker)
- Fire and security companies (Tyco International PLC)
- Defense companies (Lockheed Martin)

The industrials sector has been under significant downward pressure since the beginning of the year. The economic slowdown globally (in particular, China) has meant diminished demand. The relative strength of the USD has also made it very difficult for industrial companies to sell internationally.

While the slowdown in the industrial sector is concerning over the short term, and has led to some depreciation of our holdings, we are very confident in the businesses we own in this space (Boeing, United Technologies, and Union Pacific Railroad) due to their strong business models, financial track records, and management.

**Current Holdings:** UTX, BA, UNP

### **Technology**

This year the Technology sector is performing better than the other sectors. It has continued to recover following the recession in 2008. According to data provided by Finviz, the Technology sector is down 0.6% YTD, lagging behind all but the Financial and Healthcare sectors. Iron Mountain Incorporated



(IRM), Garmin Ltd. (GRMN), Nielsen Holdings plc (NLSN), and Facebook, Inc. (FB) all have generated returns above 12% this year and are the top performers in this sector.

The Technology sector is broken up into seven different industries: Communications Equipment, Electronic Equipment, Instruments & Components, Internet Software & Services, IT Services, Semiconductors & Semiconductor Equipment, Software, and Technology Hardware, Storage & Peripherals. The Technology sector has a market capitalization of \$5.65 trillion. The largest industry by market capitalization is Software (\$1.21 trillion), which is down 2.25% this year. On the other hand, the best performing industry has been Telecommunications Services, which has gained 4.19% YTD.

We view this sector as one of the most competitive sectors in the market. However, we believe some companies in the sector have developed strong competitive advantages, presenting attractive long-term investments. In the Technology sector, both growth rates and failure rates can be very high. Despite some uncertainty as to how the industry will evolve over the next ten years, we have identified companies within this sector that are positioned to capitalize on emerging trends and continue to reward shareholders in the future.

**Current Holdings:** IBM, MSFT, AAPL

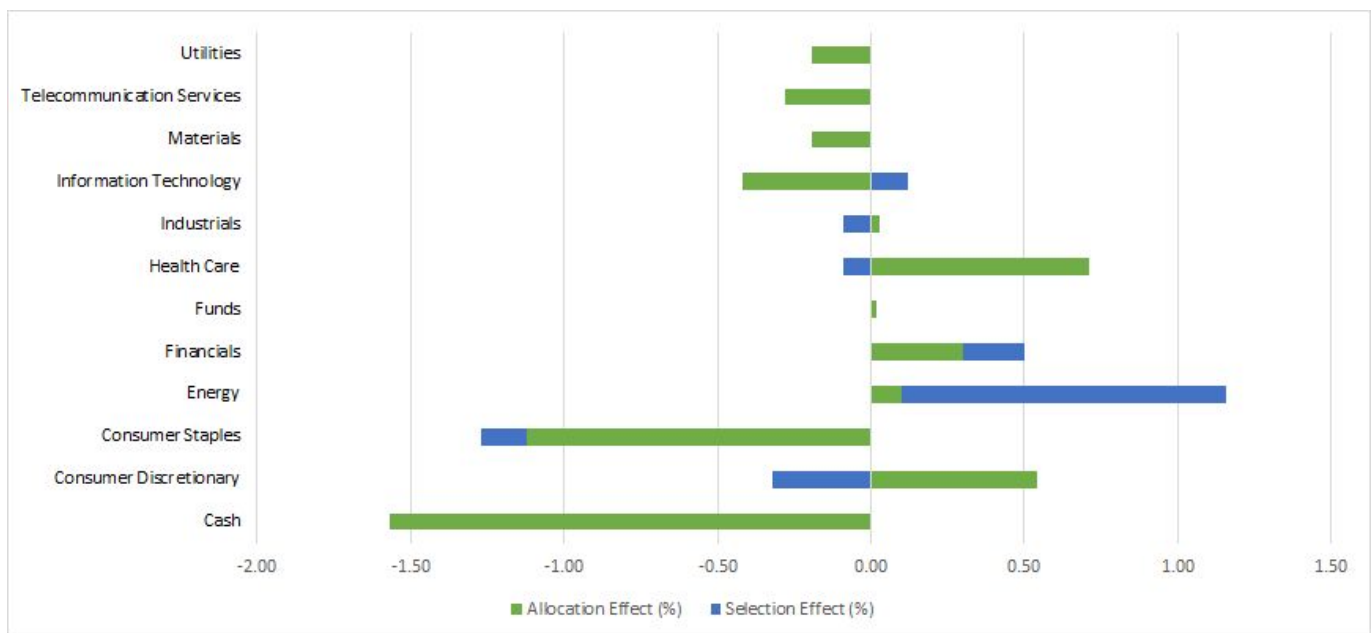
# VALUE ATTRIBUTION ANALYSIS

Attribution analysis looks to categorize the factors that contribute to the performance of a portfolio. It involves a comparison to a benchmark, and then divides excess return based on the characteristics of Allocation and Selection Effects. Our analysis of the portfolio spans the period of September 22, 2015 to April 22, 2016. Below is a summary of our portfolio per sectors, as compared to the S&P 500 ETF, including both a written and graphical representation.

	% Average Weight			Contribution to Return (%)			Total Return (%)			Total Attribution (Alpha) (%)	Allocation Effect (%)	Selection Effect (%)
	Port	Bench	+/-	Port	Bench	+/-	Port	Bench	+/-			
Total Portfolio	100.00	100.00	0.00	6.80	8.97	-2.17	6.80	8.97	-2.17	-2.17	-2.07	-0.09
Cash	3.29	0.41	2.88	0.00	0.00	0.00	0.00	0.00	0.00	-1.57	-1.57	0.00
Consumer Discretionary	3.10	12.88	-9.78	1.09	0.87	0.22	12.40	6.67	5.73	0.21	0.54	-0.32
Consumer Staples	4.51	10.13	-5.62	0.11	1.22	-1.11	1.87	11.93	-10.06	-1.27	-1.12	-0.15
Energy	6.44	6.77	-0.33	1.41	0.78	0.63	14.76	10.55	4.21	1.16	0.10	1.06
Financials	9.00	16.03	-7.03	0.71	0.80	-0.09	0.37	5.39	-5.02	0.50	0.30	0.20
Funds	44.15	0.00	44.15	2.73	0.00	2.73	4.09	0.00	4.09	0.02	0.02	0.00
Health Care	7.16	14.66	-7.50	0.62	0.58	0.04	-5.23	4.38	-9.61	0.62	0.71	-0.09
Industrials	14.50	10.06	4.44	-0.49	1.39	-1.88	6.63	14.01	-7.38	-0.88	0.03	-0.09
Information Technology	7.84	20.57	-12.73	0.63	1.87	-1.24	0.96	9.20	-8.24	-0.30	-0.42	0.12
Materials	0.00	2.81	-2.81	0.00	0.45	-0.45	0.00	16.00	-16.00	-0.19	-0.19	0.00
Telecommunication Services	0.00	2.54	-2.54	0.00	0.51	-0.51	0.00	20.74	-20.74	-0.28	-0.28	0.00
Utilities	0.00	3.14	-3.14	0.00	0.49	-0.49	0.00	15.31	-15.31	-0.19	-0.19	0.00

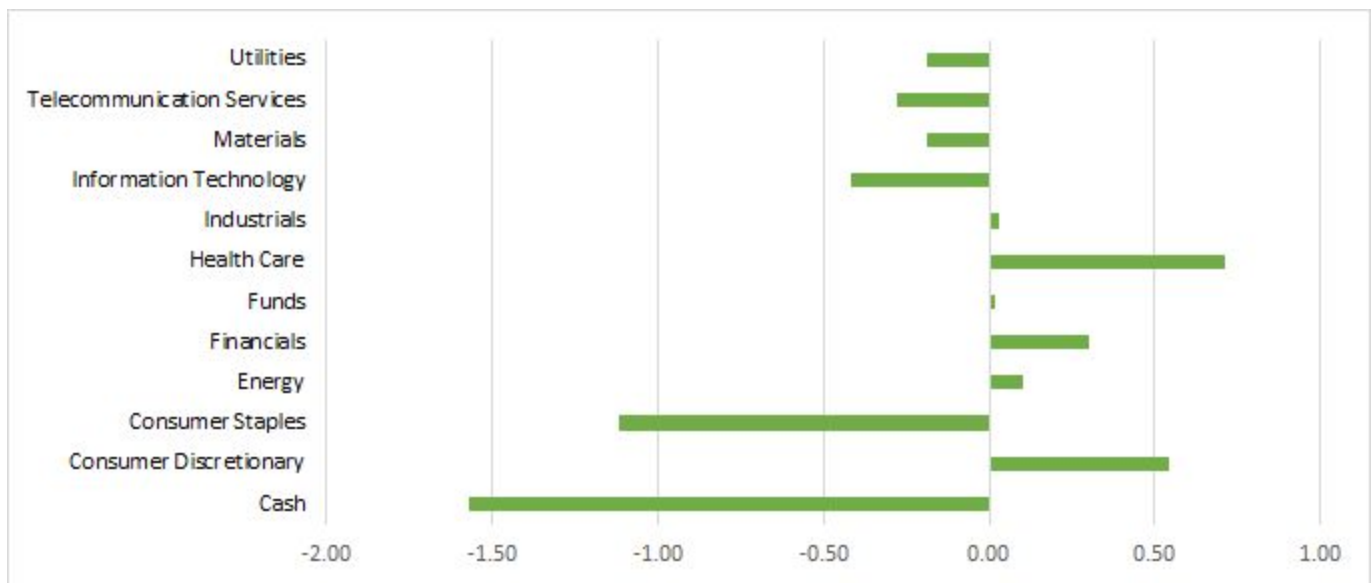
\*The return figures of the value attribution analysis differ from the total return figures earlier as the value attribution analysis does not take into account the intraday price movements of the portfolio and the SPY ETF on the date of purchase in September.

## Total Attribution by Sector



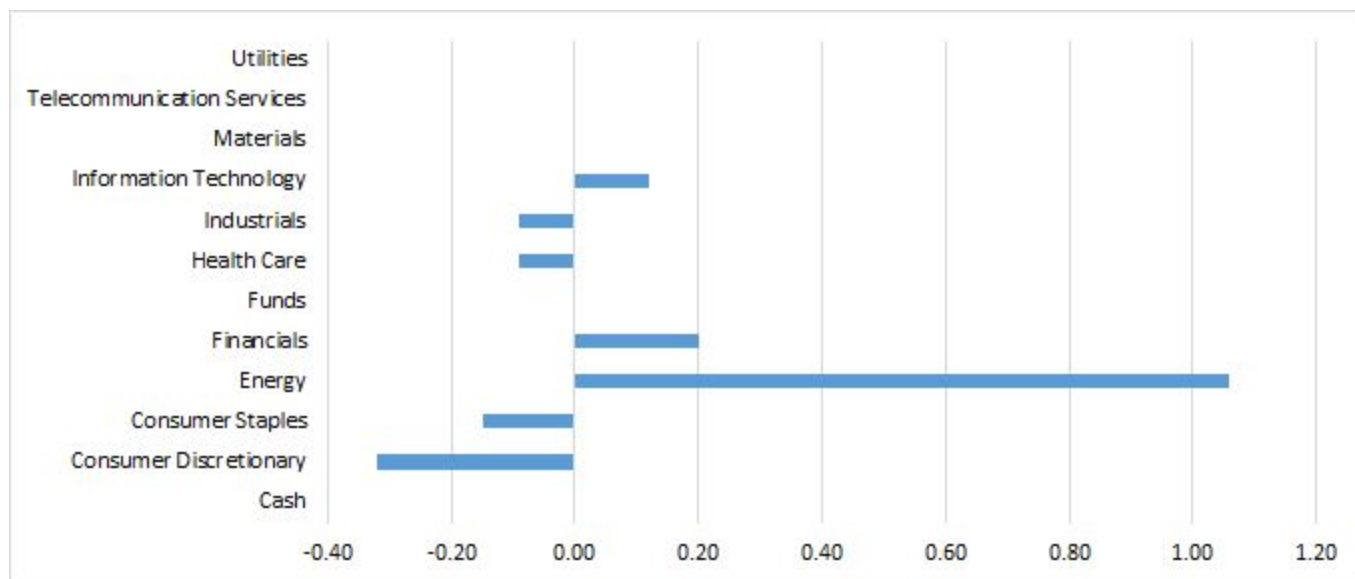
In several cases, it appears that we have invested in the correct industries but did not select the best individual equities within that sector and vice versa. For instance, it appears that our investment allocations in the Consumer Discretionary and Health Care sectors were wise decisions, however our individual holdings within those sectors did not generate significant alpha. Conversely, while the Information Technology did not perform as well as some of the other sectors, the selection effect illustrates that we made intelligent individual investments within that sector. Overall, we did particularly well in the Financials and Energy sectors, with both sectors having a positive allocation effect as well as significant selection effects based on our specific holdings in those sectors. More specifically, this is due to our strong returns generated from American Express and Chevron.

**Allocation Effect**



The Allocation Effect is a measure of a manager’s decision to over or underweight a sector. This weight difference is compared to that sector’s performance within the benchmark over a given period. Our total Allocation Effect was -2.07%. One of the leading causes for this was the Consumer Staples sector. We were underweight in this sector by an average of 562 basis points yet this sector performed particularly well as compared to the other sectors. Consequently, our Allocation Effect results were adversely impacted by this. On the other hand, we benefitted from being underweight in the Consumer Discretionary and Health Care sectors as these sectors have not performed as well as some of the other sectors. Once again, because we utilize a bottom-up approach rather than a top-down approach, we did not base our decisions on the weights of a specific sector.

## Selection Effect



Selection Effect measures a manager's ability to choose individual securities within a sector. It is a comparison of a security's return relative to the return of its sector; a positive measure demonstrates that a manager has correctly identified a security that will outperform its sector. Our overall Selection Effect was -0.09%. Our largest positive Selection Effect was generated from the Energy sector. Our investment in Chevron proved to be key as it significantly outperformed its peers. We saw Chevron as an attractive investment as it is vertically integrated and would thus weather any short-term volatility in the oil market better than its peers. Additionally, the decline in oil prices had caused the market to significantly undervalue the company, presenting an attractive entry point.

The most significant adverse affect on our portfolio has resulted from the Consumer Discretionary sector, where we invested in the Walt Disney Company. Disney has underperformed relative to the Consumer Discretionary sector as investors continue to fear the company's reliance on revenues and profits from ESPN. However, Disney is well positioned for long-term growth and should outperform its peers in the coming years.

# INDIVIDUAL POSITIONS

## The Boeing Company (NYSE: BA)

On October 7 2015, we purchased 1343 shares of The Boeing Company at \$136.734/share

The Boeing Company sells commercial aircraft as well as information, space, and defense systems. Management is CEO Dennis A Muilenburg and CFO Greg Smith, both of whom have been at the company for over 20 years. Boeing makes money by selling commercial jetliners to customers such as Southwest Airlines, American Airlines, Delta Airlines, etc. They also manufacture defense systems, satellites and information systems to sell to the US Military. Finally, they provide financing/leasing for clients in the airline industry through Boeing Capital Corporation. Boeings major competitors are Airbus, Lockheed Martin, General Dynamics, and GE.

We feel as though Boeing has a number of competitive advantages that all contribute to it being a viable investment over a long term time horizon. First, they have very strong relationships with their suppliers and competitors. For example, they have partnered with Lockheed Martin in the United Space Alliance and with Northrop Grumman in various joint missile programs. Also, they work closely with international suppliers such as Kawasaki and Mitsubishi to help them gain exposure to foreign markets.

From a product specification standpoint, we compared one of its major intercontinental Jumbo Jets to a comparable jet made by Boeing's primary competitor; Airbus. We found that although Airbus' "Airbus A380" had a higher capacity in terms of seats/plane, Boeing 747-81, the 747-81 had better thrust/weight, range, total cost and fuel efficiency. These kind of fundamental advantages highlight why Boeing has achieved and maintained such as strong market share; it consistently produces high quality products for its customers. Boeing is also a primary supplier to the US Military and Air Force, benefiting from sustained military spending by the US government.

Company Financials obtained from Bloomberg show that over the past 4-5 years, Boeing has shown strong growth in returns, stable margins over time, very strong Free Cash Flow Growth, solid liquidity, stable growth in Net Income and EPS, as well as very strong growth in their dividend per share. On June 30 of the year, the company announced that they will be purchasing \$7.5 Billion of common stock. When compared to its industry competitors, Boeing has above average sales growth and the best Cash from Operations over the past 12 Months, and a superior Free Cash Flow Yield among its industry.

Finally, a risk that Boeing faces is any kind of cyclicalality in the airline industry. As we mention in our economic outlook, the US economy appears to be solid, but not particularly strong. Any kind of weakening or downturn in the US Economy could have a negative impact on the domestic airline industry, which is where Boeing focuses most of its business.

On February 11 2016, Boeing fell below its stop loss level of \$108.75, executing a sale at market price. This followed a weak Q4 Earnings report which noted flat Earnings from Operations YoY, decreased Operating Margins, and a note from the company describing a slow recovery in the air cargo market. On Feb 11, news surfaced about an SEC probe regarding Boeing's accounting practices in recording expected

yearly sales for its 787 Dreamliner and 747 Jumbo Aircraft. As a result, the price fell to \$103.69. We bought back on March 1 2016 at \$119.32/share.

We decided to buy Boeing back because our investment thesis was still intact. The company has a very strong market share in a growing industry. They have strong product specifications and financials. The company has still shown strong growth in Free Cash Flow, they have stable growth in Earnings and EPS, and have been increasing their dividend steadily over time. They have a strong balance sheet and the company's Board of Directors has approved significant stock repurchases, as noted above. Our group is confident in the future prospects of the company and we are very comfortable having reentered the position.

To date, we have a realized loss of 21.43 % and an unrealized gain of 9.88% on Boeing.

### **American Express Company (NYSE: AXP)**

On February 2<sup>nd</sup> (02/19/2016), we purchased 1866 shares of American Express. The size of the investment was \$101,305.14, for a share price of \$54.29

American Express is a global financial services company, focusing on U.S. and international card services, global commercial services, global network and merchant services, and corporate services. Of these different business areas, American Express is most heavily focused on its card business, which comprises a majority of its revenue.

One of the major issues that American Express has been facing in recent years has been the low interest rate environment. Low interest rates are particularly an issue for companies such as American Express, which derives a majority of its revenue off of interest rates spreads. Recently, major countries around the world have been experiencing historically low interest rates due to large scale monetary policy efforts by these countries. Furthermore, within the past year, major central banks (such as the European Central Bank, and the Bank of Japan) have cut interest rates. In some cases, the rate cuts have been so substantial as to force rates into negative territory. Given the recent rate cuts and our long-term outlook on the global economy, it is likely that American Express will have to bear with the low interest rate environment for the foreseeable future.

Some of American Express's major competitors are Discover Financial Services, MasterCard Inc., Synchrony Financial, and Visa Inc. Of these companies, Discover Financial Services, MasterCard Inc., and Visa Inc., focus mainly the technological aspects of credit cards and processing payments, and can be viewed more as technology companies than financial services company. Similarly, Synchrony Financial focuses more on technology, and does not have its own cards like Discover, Visa, and MasterCard. Thus, American Express holds a competitive advantage over these other card and payment processing companies by also offering a plethora of financial services to card holders. Furthermore, American Express also derives a large portion of its revenue from other services outside of credit cards, and also offers financial services to corporations as well. Thus, American Express is more diversified than these other companies, both in terms of financial services and in terms of customer base (consumer and corporate).

As of the March 6<sup>th</sup> (03/06/2016), we have made an unrealized gain on AXP of 21.39%

### **International Business Machines Corp. (NYSE: IBM)**

On October 21, 2015, we purchased 695 shares of International Business Machines Corp. (IBM) at a price of \$140.18/share. The size of the initial investment was \$97,427.81.

IBM is a diversified technology company focused on providing enterprises with individualized information technology solutions. It has four operating segments: Global Services, Software, Systems & Technology, and Global Financing. In the past three years, IBM has significantly divested its hardware capabilities and heavily invested in services and software. In 2015, it is primarily a services and software company; those two capabilities account for nearly 85% of revenue. Moving forward, management is focused on growing four “strategic imperatives”: cloud computing, cognitive computing, enterprise mobile solutions, and digital security.

Until now, IBM has been negatively affected by the cloud-computing trend due to its focus on traditional hardware solutions. However, it is at the end of its transition out of traditional hardware and into higher margin software and services businesses, and it is set to grow revenue and free cash flow over the next 10 years. Despite current struggles, IBM is the market leader in the IT Services industry with an 8% market share – the industry is projected to grow to \$450B by 2021. With its strategic imperatives growing at nearly 30% per year, it is positioned to gain a large portion of industry growth moving forward. From a valuation perspective, at a price of \$141.66, IBM has a fantastic 9.9% free cash flow yield and 3.7% dividend yield. With our growth projections for the next 10 years, IBM is an outstanding investment opportunity at this price.

IBM’s major competitors are Microsoft, Oracle, Amazon, HP, Cisco, and Accenture. The company has several competitive advantages that will drive long-term revenue growth. One of its main competitive advantages its ability to scale hybrid cloud offerings using IT expertise and infrastructure capabilities. Second, IBM has advanced data analytics capabilities using the first commercially viable artificial intelligence engine: Watson. In addition, data security is an issue of analytics, allowing IBM to use its expertise to capitalize on the growth of this industry. IBM has a strong diversity of complementary offerings making it a compelling option over competitors for companies looking for a single package to augment and improve IT infrastructure and capabilities. As a result, we believe that IBM is currently one of the best investments in the technology sector.

As of April 22, 2016, we have an unrealized gain of 5.55% on IBM.

### **Gilead Sciences, Inc. (NYSE: GILD)**

On October 28, 2015, we purchased 1,099 shares of Gilead Sciences at a price of \$107.23 per share.

Gilead is a leading biotechnology company that develops and produces pharmaceuticals for a variety of unmet medical afflictions. Gilead’s main business focuses on the treatment and cure of Hepatitis C and the treatment of HIV/AIDS. In addition to HIV and HCV, they have recently been expanding oncology, inflammation, and cardiovascular segments.

Gilead is the global leader in Hepatitis C treatment with its drugs Sovaldi and Harvoni. Sovaldi, a combined-treatment regimen, was the first ever cure for Hepatitis C. Gilead later developed its successor,



Harvoni, a single treatment cure for Hepatitis C. Both drugs have been proven to be over 96% effective, with minimal side effects. While Gilead was first to cure Hepatitis C, AbbVie's Viekira Pak and Merck's recently approved Zepatier have entered the HCV space. However, Viekira Pak requires multiple pills and has triggered FDA warnings for risk of serious liver injury. As competition strengthens, Gilead continues to develop new drugs for additional unmet diseases while also seeking expansion of current products to foreign markets.

Outside of Hepatitis C, Gilead has a favorable pipeline of 11 drugs currently in Phase 3, with its single-tablet HIV treatment Genvoya recently receiving FDA approval. Other drugs in the pipeline consist of new treatments for HIV, Hepatitis C, Hepatitis B, pancreatic and gastric cancer, and inflammation and cardiovascular disease. Gilead also recently acquired EpiTherapeutics in May, 2015 for \$65 million. This acquisition has improved its drug pipeline with preclinical small molecule inhibitors of enzymes involved in regulating gene transcription in cancer.

The healthcare industry has experienced significant changes over the past year regarding increasing political tension. However, there is a tremendous amount of innovation and discovery to be seen in biotechnology and health care. Also, as emerging nations begin to develop a larger middle class, it will lead to expanding markets as well as support long term growth of these companies.

In the recent past, there has been increasing concern regarding the uncertainty of the U.S. health care reform as well as drug pricing and reimbursement pressure. Changes to the Affordable Care Act will have an impact on the long-term potential of the healthcare industry for the future. Also, as biotech firms continue to introduce highly priced medications, public scrutiny regarding their high margins will remain prominent. However, this public scrutiny does not seem to have gained any relevance but has made many headlines and caused short-term volatility in stock prices. There have also been many mergers and acquisitions in the past year that have yet to show their impact on the industry. Generic drug manufacturers have also begun to cause a threat to high margin companies by undercutting prices for similar medications.

Despite uncertainty regarding the U.S. health care reform, biotech drug innovation has remained strong. Looking at Gilead's position for the next couple years, we feel that competitive pressures in the HCV space will continue to take away from Gilead's revenue from Sovaldi and Harvoni. Since both HCV drugs represent a large portion of overall sales, it will result in a total decline in 2016 revenues. In the next couple years, HIV sales will also begin to decline due to impending patent expiration. However, despite these short-term challenges, we are confident that Gilead will be able generate growth in the long-term. Gilead will continue to have high demand in the Hepatitis C space given millions of people have been diagnosed and are currently left untreated. Gilead is a financially sound company with a balance sheet that gives them the flexibility to make key partnerships and acquisitions going forward. Gilead continues to create breakthrough therapies for unmet medical needs with cure rates of up to 99%. It's growing product pipeline with additional HIV, oncology, inflammation, and cardiovascular treatments will continue to generate increasing revenue well into the future. As seen in our Discounted Cash Flow Model in appendix A, we value Gilead at a target price of \$122.02 as we believe it is currently undervalued by the market at this time.

As of April 25, 2016, we have an unrealized loss of 5.43%.

### **UnitedHealth Group (NYSE: UNH)**

On February 17, 2016 we purchased 1,042 Shares of UnitedHealth Group at a price of \$117.02/share. The total size of the initial investment was \$121,939.01.

UnitedHealth Group is a diversified healthcare company operating mostly out of the United States. The company was started in 1977, dealing primarily in health insurance. Now the company offers a wide variety of health insurance products under its United Healthcare segment in addition to health data and software consulting services offered by the newly formed Optum segment. UnitedHealth Group is the largest American health insurer in terms of revenue and the third largest pharmacy benefits manager under OptumRx. Overall the company is a fortune 14 company with a market cap over \$106 Billion and a workforce over 182,000.

One of the most discussed risks in this industry would be the costs associated with the Affordable Care Act (ACA). Health Insurers industry-wide are having a difficult time remaining profitable in individual exchanges due to the ACA and UnitedHealth Group has announced that they may exit these exchanges due to significant losses. Other risks include risks from competition (particularly Aetna and Anthem), and business mix risk from being overly concentrated in employer and individual insurance enrollment. However, We feel as though UnitedHealth Group is strongly positioned as the industry leader and we are confident in their future growth prospects.

While their core healthcare business is growing at steady rates, Optum is undergoing a rapid expansion and we expect Optum revenues to outpace health insurance revenues by 2022. Another major benefit to UnitedHealth Group is their ability to offer a full spectrum of products and services along the healthcare supply chain. By providing both health insurance and pharmacy benefits management for example, they open themselves up to operational synergies as well as convenience for their customers. While issues associated with healthcare reform may cut into UnitedHealthcare's revenues in the short term, we understand that these effects are felt industry wide. Overall we see UnitedHealth Group's market influence, diversification, and pioneering innovation as methods for them to create value well into the future.

As of April 22<sup>nd</sup>, we have an unrealized gain of 14.62% on UNH.

### **United Technologies (NYSE: UTX)**

On November 3 2015, we purchased 1322 shares of United Technologies at \$99.38/share.

United Technologies makes plane engines, elevators, escalators, HVAC equipment, and fire/safety equipment. Management is headed by CEO Gregory J Hayes and Akhil Johri. United Technologies has several lines of business including Otis, Carrier, UTC Fire and Safety, Pratt and Whitney, and Hamilton Sundstrand.

United Technologies operated through five main business lines: Otis ( which makes elevator and escalators). Carrier (which makes heating, ventilating and air conditioner systems) UTC Fire and Safety (which makes fire detection systems and electronic security systems), Pratt and Whitney (which makes plane engines) and, Hamilton Sundstrand (which makes aerospace products).

One of UTC's major competitive advantages is the quality of their products. They are releasing a new "Geared Turbofan Engine", which is said to be 10-15% more fuel-efficient and 50% quieter than any single aisle aircraft that is currently on the market. This engine is going to be used by airliners such as Airbus, Mitsubishi, Embraer, and Bombardier.

United Technologies also has a strong market share in the elevator market. Otis has maintained a very strong market share and brand in its space due to its high quality and strong brand. As the economies in emerging markets recover in the future, Otis will be able to capture significant market share in those countries as well.

Further, given that UTC has such a diverse product line, it is able to take advantage of cross-selling opportunities that exist among Otis and UTC Fire and Safety. For example, if a builder is hoping to install elevators in a new office building, UTC can offer to produce/ service the elevator through Otis and also install the building's security and fire detection systems.

United Technologies also stands to benefit from an expanding airline market. Airline traffic is expected to grow by about 5% per year over the course of the next 20 years the global economy expands, according to forecasts by Boeing. This increase in traffic will help airline companies make higher profits and invest in new airlines/airplane engines. In addition, UTC says that they expect there to be about 35,000 commercial airplane orders over the next 20 years, which would be an increase from the 19,000 order over the past 20 years. This rapid growth in the airline market will benefit Pratt and Whitney significantly over time.

In regards to UTC's financial information, over the past 4 years, United Technologies has shown solid growth in revenue, operating income, EPS, Cash from Operations, and Free Cash Flow Growth. In addition, they have shown improving margins and a growing dividend, and they recently announced that they will be conducting \$10 Billion worth of stock buybacks by the end of the year. This buyback will be funded primarily by the sale of Sikorsky, which was sold to Lockheed Martin for \$9 Billion cash.

Finally, the major risk that UTC faces going forward is the Chinese economy. A major part of UTC's value proposition going forward is expansion into the Chinese market, especially for Otis. The economic slowdown in China provides uncertainty in that regard. Further, the devaluation of the Yuan versus the US dollar makes it harder for UTC to sell products to China. Generally speaking, the strengthening of the USD will hurt UTC's ability to expand in emerging markets in the short term.

To date we have an unrealized gain of 5.88% on United Technologies.

### **Union Pacific Railroad (NYSE: UNP)**

On March 1 2016, we purchased 1250 shares of Union Pacific Corp at \$80.38/share.

Union Pacific Corporation is a railroad company that transports agricultural, industrial, automotive, and chemical products. Their major segments include: Agricultural Products, Automotive, Chemicals, Coal, Industrial Products, and Intermodal.

Union Pacific competes with other railways such as BNSF and CSX, as well as motor carriers, ship operators, and energy pipelines. As of 2014, the company has a 22% market share, which is second to BNSF who was 26%.

Some of the major risks that UNP faces are Fuel/Commodity Price volatility, pricing power of suppliers, the inherent hazardous nature of the materials it transports, and general economic conditions in the US, Mexico and Canada that would affect demand for products they deliver.

One of the major factors that led to our buy recommendation for Union Pacific was its strong financials. Since 2009, the company has shown strong growth in Operating/Profit Margins, Revenues, income, Free Cash Flow as well as Dividend/Share. In addition, as of Jan 2014, the company's Board of Directors approved a \$120M stock buyback to be completed by Dec 31 2017.

The major factor that sets Union Pacific apart from its competition are its large infrastructure and capacity in the United States: the company has about 32,000 route miles which is as much as any company in the industry. They also have exclusive access to all of the major gateways to Mexico that serve the two biggest Mexican Railroads. Union Pacific also has a much more diverse product portfolio compared to competitors like BNSF who focus primarily on consumer products and coal. The company has improved its operational efficiency; with a decline in its operating ratio from 87.5% in 2004 to 63.5% in 2014. In regards to advantage over trucking, railways such as UNP are far more fuel efficient with much lower accident rates than trucks.

In regards to financials in the industry, Union Pacific has above average Operating Margins, Return on Equity, Return on Assets, Dividend Yield, Free Cash Flow Yield, and capacity in addition to having a below average P/E ratio.

To date, we have an unrealized gain of 11.67% on Union Pacific.

### **Apple, Inc. (NYSE: AAPL)**

On March, 7, 2016, we purchased 1,275 shares of Apple, Inc. at a price of \$102.09/share. The size of the initial investment was \$130,164.75.

Apple is a technology company that designs, develops, and sells consumer electronics, software, and online services. The company's products include Mac computers, iPhone, iPad, Apple Watch, and Apple TV. Its services include a variety of professional software applications, the iOS and OS X operating systems, Apple Pay, and iCloud. Lastly, the company sells digital content through the iTunes Store, App Store, iBooks Store, and Mac App Store. Recently, Apple has introduced a music streaming service called Apple Music. Its competitors include a variety of different smartphone, personal computer, tablet, and software companies, including Samsung, LG, Lenovo, Huawei, Microsoft, Google, and Xiaomi.

Apple has several competitive advantages that will drive the company's long-term growth and profitability. One of its biggest competitive advantages is its ability to continually innovate and create the best products on the market, which has created a loyal customer base. As a result, the company can introduce new products to immediate success. Second, Apple has a strong cash position, which will allow the company to invest heavily even in recessions. Lastly, it has a large installed base, as shown by its

recent announcement that it reached 1 billion active devices. Its installed base will drive growth in services such as Apple Pay, Apple Music, and the App Store, which are becoming a significant portion of overall revenue. An existing installed base also contributes to integration between devices, which consumers value highly when considering new purchases.

In addition to its competitive advantages, Apple's stock is undervalued. The company has a 13% free cash flow yield, and we found its intrinsic value to be \$134.65, a 35% margin of safety over the purchase price. As of April 22, 2016, we have an unrealized gain of 2.86% on Apple.

### **The Hershey Co. (NYSE: HSY)**

On February 1 2016, we purchased 1691 shares of The Hershey Company at \$89.16/share. The Hershey company manufactures and sells chocolate and sugar products. Their main include are chocolate, gum, mints, food toppings, and drinks. The company's CEO is John P Billbrey, and around 80% of voting rights are owned by the Milton Hershey School Trust.

They compete with major players in the confectionary industry such as Mars, Mondelez, Nestle, as well as private label brands. Hershey has the largest market share in the US Confectionary Market, the US Chocolate Market, and the US Breath Mint Market. In addition, they have the second largest market share in the US Non-Chocolate Market, and the third largest share in the US Gum Market. This strong market share is a function of Hershey's strong brand, high quality, and product development over time.

In regards to financials, Hershey has shown strong growth in Revenue, Operating Income, Diluted EPS, and Dividend/Share. They are one of the only companies in the S&P 500 to maintain positive revenue growth during the Financial Crisis, contributing to the notion that the confectionary industry is relatively recession-proof. Amongst its industry, Hershey above average margins, return on Invested Capital, Return on Equity, Return on Assets, and a below average P/E Ratio. Its total return to shareholders has been superior to both its industry and the broader market since 2009.

Our group feels as though Hershey faces major risks both in the short and longer term. In 2014, the company purchased Shanghai Golden Monkey, which has since performed far below expectations. There is also strong global competition in the industry, and companies face shipping challenges during warmer seasons and in warm climates. In addition, the industry faces volatile inputs prices such as those for sugar and cocoa, which would impact margins in the future.

Our group feels that there are many major factors that set Hershey apart. They have made significant improvements in the supply chain efficiency by reducing production lines, outsourcing, and building plants overseas. This is expected to result in Gross Margin increases of 135-145 bp over the next year. They are also introducing new products to supplement their existing portfolio such as "Kit Kat White Minis" and new Reese's Spreads. These additions should benefit from Hershey's brand and distribution system.

To date, we have an unrealized gain of .42% on Hershey.

### **JM Smucker Co. (NYSE: SJM)**

On March 15 2016, we purchased 787 shares of JM Smucker Co. at \$127.59/share.

The JM Smucker Company sells products like coffee, peanut butter, fruit spreads, pet food,snacks, etc. Some of their major products are: Jif Peanut Butter, Fruit Spreads, Folgers Coffee, and Meow Mix Pet Food. The company's major business segments are: US Retail Coffee, US Retailer Consumer Goods, International Foodservice and Natural Foods, and US Retail Pet Foods.

Over the past 5 years, the company has shown substantial growth in Operating Income, Revenue, Net Income, Free Cash Flow, and Dividend/Share. They are the leading seller in their main segments: coffee, peanut butter, and spreads with 26%, 46% and 44% market share respectively. They have also shown significant growth in their "Snacks to Go" segment for 13 consecutive quarters.

There is very strong competition in the food packaging space. Smucker's competes with a lot of major players in the food/retail space such as Conagra, Kraft, General Mills, Unilever, and various Private Label producers. The risks that they face in both the short and long term are raw material input prices such as those of coffee, peanuts, oils, wheat, etc.

They also have a very high percentage of sales in their main segments which are coffee and peanut butter, so a decline in market share in those areas could mean significant earnings declines for Smuckers. Finally, they have made a number of acquisitions in recent years such as Big Heart. There is major execution risk involved in integrating these acquisitions into the company's business model.

One of the major factors that set JM Smucker apart from its competition is its strong brand with staple products. They carry the biggest product names in each of its business areas and has maintained positive Revenue and EPS Growth during the Financial Crisis. Amongst its industry, Smuckers has superior sales growth over the last 12 months, and above average operating margins, dividend yield, and FCF yield.

A majority of SJ M's sales are in North America, so the company's earnings do not face much headwind from currencies and weak economies in China, Japan, and the EU. Finally, Smuckers has a very strong distribution system to deliver its new and existing products, with around 28% of its sales in 2015 coming from Wal Mart which is one of the largest retailers in the world.

To date, we have an unrealized loss of 1.86% on Smuckers.

### **PNC Financial Services (NYSE: PNC)**

On November 16<sup>th</sup>, 2015 we purchased 1,950 shares of PNC for \$92.30/share with a 25% stop loss order.

PNC Financial Services Group, Inc. is a diversified financial services company. It is the 6<sup>th</sup> largest U.S. bank by total assets. The Company provides regional banking, corporate & institutional banking, residential mortgage banking and asset management services nationally and in the Company's primary regional markets. Its 20% ownership stake in BlackRock, the world's largest publicly traded asset management firm, provides diversification to PNC's portfolio of services and makes it unique from its competitors.

We feel as though PNC is a viable long-term investment due to its consistent operating history in its five segments and growing long-term projects, including acquisitions of National City and RBC Bank (USA), expansion in southeast, and its environmentally friendly business practices. As the Fed is close to raising interest rates, we expect a greater increase in PNC's profitability and we have several reasons. First, increases in the federal funds rate will increase the yield on cash holdings of PNC and directly contribute to earnings. Second, along with an increase in interest rate and a strong economic growth, consumer and business demands for loans spike, which also augments earnings. Third, because of the greater spread federal funds rate and the rate the bank charges its customers, PNC is likely to start offering higher returns on safe investments.

We feel as though PNC's main competitive advantage is that it survived and thrived, and fared better than other banks during the mortgage crisis. It was able to acquire companies that fed its expansion. Compared to money center banks, such as Wells Fargo & Company, JPMorgan Chase & Co. and Bank of America Corporation, PNC has low exposure to high yield market and derivative. Also, when new Monetary policy actions and statements of the Federal Reserve is announced, it be able to pick it up and coordinate its portfolio quicker due to its simplicity of business model. When it is compared to other regional banks, in US Bancorp, BB&T Corp and SunTrust Banks Inc. PNC is well diversified due to its investments in BlackRock and Visa and has a relatively low P/B ratio of 1.13 and Debt ratio. In addition, its mortgage-banking model is differentiated in that it's focused exclusively on higher-margin retail originations, not third-party production channels. This enables its above-average margins per mortgage sold, or gain-on-sale margin.

As of April 27<sup>th</sup>, 2016, we have an unrealized loss of 4.29% on PNC.

### **Chevron Corporation (NYSE: CVX)**

On November 23, 2015, we purchased 1,798 shares of Chevron Corporation at a price of \$89.41/share. The total size of the initial investment was \$160,755.58.

Chevron Corporation is a vertically integrated energy company. The company is heavily involved in each part of the oil and natural gas industry, including exploration and production, transportation, and refining. It is separated into three segments: Upstream, Downstream, and Alternative Energy. Chevron's Upstream segment builds and operates oil and natural gas production facilities worldwide. Its Downstream segment takes the raw materials and refines it into usable energy, chemicals, and products for commercial use. Finally, the Alternative Energy segment is focused on developing and building renewable energy assets.

Chevron is positioned to maintain profitability and free cash flow at any oil price due to its vertically integrated business model and valuable asset base. The company's upstream segment is highly sensitive to oil prices, but its downstream operations serve as a natural hedge to oil price declines due to higher margins. In addition, Chevron has the ability shift to higher value by selling less valuable assets and strategically investing in more valuable assets. It is also becoming more cost efficient and lowering capital expenditures to adjust to the price of oil. Management has continually stressed that maintaining and growing its dividend is its top priority regardless of oil prices. That being said, due to bankruptcy of smaller oil companies and decreasing capital expenditures of larger companies, it is unlikely for oil to stay at \$40/barrel for long. If oil prices rise in the near future, Chevron's profitability (and stock price) will



thrive.

Chevron's major competitors include ExxonMobil, British Petroleum, Royal Dutch Shell, and a variety of smaller, independent energy companies. During oil crashes, integrated oil companies are much better positioned for success. ExxonMobil and Chevron are the only large, integrated domestic oil companies. In comparison to ExxonMobil, Chevron is set to grow faster with a rebound in the price of energy due to its development of its Wheatstone and Gorgon natural gas facilities. In addition, Chevron is more focused on returning value to shareholders with a dividend yield of 4.75% vs. 3.64% for ExxonMobil.

Risks to Chevron's profitability include a further decrease in oil prices, energy regulation, failure to adapt to alternative energy sources, and unexpected delays to new projects.

As of April 25th 2016, CVX is trading at \$102.83. We have an unrealized gain of 14.12% on our CVX position.

### **Walt Disney Company (NYSE: DIS)**

On February 9th, 2016 we purchased 1,629 shares of DIS for \$90.16/share. The size of the initial investment was \$146,870.64.

According to the 10k distributed by The Walt Disney Company, the company, together with its subsidiaries, is a diversified worldwide entertainment company with operations in five business segments: Media Networks, Parks and Resorts, Studio Entertainment, Consumer Products and Interactive. The Walt Disney Company is unlike any other in the industry. With their integrated business structure, ability cross sell products, and tendency to recycle creative material for each generation, Disney has been able to build a mass media conglomerate that dwarfs its closest rivals. Generally Disney has competitors in each business segment, but few can recreate the integrated business structure that Disney has mastered. Disney's market cap of \$168.55 billion is the largest when compared to its closest competitors and more than twice the entertainment industry average.

We believe Disney's greatest opportunities reside in their collection of branded franchises, allowing them to continue with their record-breaking performance, particularly within the Studio Entertainment segment. The Company has a myriad of motion pictures in the pipeline, including films from their increasingly popular Marvel and Star Wars franchises. As these franchise extensions continue to grow in popularity, Disney can further integrate them into their media ecosystem, particularly their Consumer Products and Interactive segments.

In addition, Disney has significant opportunity within their Parks and Resorts segment. In mid-June of this year, Disney will have its grand opening of Shanghai Disneyland. China is a great opportunity for Disney, as it is largely an untapped market. The opening of Shanghai Disneyland signifies Disney's expansion into less westernized markets, an effort they are committed to pursuing.

Disney's largest challenges are within their Media Networks segment. One of Disney's most well known franchises is its cable network ESPN. As online advancements in media streaming and downloading continue to change the landscape of media consumption, a trend known as cord-cutting is gaining popularity. Cord-cutting is when cable and satellite customers replace their TV service providers with

alternative sources of TV programming. This is a risk for The Company as ESPN is one of the main cable networks included on those traditional TV service plans.

To combat this, Disney is teaming up with TV service providers to have ESPN be included in lighter cable packages that cost less than traditional subscriptions. In addition to this, Disney is always analyzing new ways to convey their Media Networks content. Due to Disney's history of repeatedly overcoming competition, we are confident in the company's ability to manage this challenge.

As of April 25th, 2016, we have an unrealized gain of 15.13% on DIS.

### **Microsoft Corporation (NASDAQ:MSFT)**

On March 1, 2016, we purchased 2,339 shares of Microsoft Corporation (MSFT) at a price of \$51.74/share. The size of the initial investment was \$121,012.38.

Microsoft Corporation is a worldwide leader in the development, licensing, marketing, and support of software, services, and devices. The company operates in three business segments: Productivity and Business Processes, Intelligent Cloud, and More Personal Computing. The Productivity and Business Processes segment includes results from Office and Office 365 for commercial and consumer customers, as well as Dynamics and Dynamics CRM Online. The Intelligent Cloud segment includes results from public, private and hybrid server products and services such as Windows Server, SQL Server, System Center, Azure, and Enterprise Services. The More Personal Computing segment includes results from licensing of the Windows operating system, devices such as Surface and phones, gaming including Xbox consoles, and search.

Our investment in Microsoft was due to its competitive advantage and market share in the industries in which it operates. Currently, Microsoft is the market leader with a 20.8% market share in the software industry. The company should benefit from the tremendous growth in cloud computing with its Azure platform as the platform-as-a-service (PaaS) market, a sub segment of cloud computing, is expected to grow to \$68.3 billion by 2026 from just \$1.7 billion in 2014, representing a CAGR of 36%. Through strong enterprise relationships, Microsoft maintains a significant competitive advantage. Furthermore, Microsoft is the first company to operate a public cloud in China, providing a first mover advantage over major competitors such as Amazon and Salesforce. Additionally, Microsoft has seen strong growth in the video game market with its Xbox platform. This should continue into the future as the video game market is expected to grow by 7.9% annually through 2018 to \$113.3 billion. Furthermore, with the introduction of Windows 10 and the shift to a subscription model for Microsoft Office, Microsoft's core businesses should continue to stand as lucrative businesses. As almost 10% of the market continues to use the now 15 year old Windows XP operating system, Microsoft has stopped supporting this product which will force these customers to eventually upgrade their operating systems, likely to the newest offering of Microsoft due to high switching costs. Lastly, Microsoft's latest Surface products should allow the company to capitalize on the trend towards mobile computing.

Overall, the largest risk to Microsoft is that of competition. In a dynamic industry characterized by technological innovation, companies must continually develop new products that are attractive to consumers in order to succeed. Microsoft faces many strong competitors such as Oracle, IBM, Google,

Apple, and Amazon that continue to invest in new technologies. In order to remain a market leader, Microsoft must continue to demonstrate value to its customers in order to stay relevant.

As Microsoft continues to invest in growth, the company may be unable to capitalize on its new technologies such as the HoloLens, an augmented reality device. While it may seem as though demand for these products will be high, there is no guarantee that investments in new technologies will provide future growth. Further, increased competition may force Microsoft to reduce the price of these new technologies, which may decrease profitability.

Based on a \$67.34 price target, Microsoft should provide investors with substantial returns as the company is well positioned for long-term growth due to its various competitive advantages in its operating segments.

As of April 22, 2016, we have an unrealized loss of -0.03%.

# LESSONS LEARNED

## Lessons Learned

The Student Managed Fund Program was truly an unbelievable experience. We learned a great deal about managing investments, but also we have developed skills that will help us succeed in our careers.

One of the most important things that we learned was how to identify quality investments. That means looking for companies with strong business models, quality management, good competitive advantages, strong financial track records, and an attractive valuation. Although finding value sounds easy, it is a difficult and time-consuming task, and requires depth of analysis far beyond what the average investor uses.

At the beginning of the year, we had some difficulty negotiating between trying to outperform the market in the short term, and focus on finding quality investments over the long term. We had to remind ourselves that although our positions are being liquidated in May, the SMF program is about the process. Investing with a 10-year time horizon requires patience and discipline -- Investing is as much a game of emotion as it is intelligence.

Finally, we acquired skills that will help us succeed in the real world. We have learned that preparation is crucial for any presentation, and being asked tough questions are inevitable. The only way to be able to answer tough questions is to know nearly everything about the topic you are presenting on.

Our group is truly amazed at the growth we have experienced over the course of the year, thanks to this amazing opportunity. It simply could not have been done with help from the UConn Foundation, Investment Advisory Board, and University of Connecticut faculty. We are very thankful for the opportunity to take part in the SMF this year.