



# Sellinger Applied Portfolio

Portfolio Review | Spring 2020



# Table of Contents

- I. Overview
- II. Sector Summaries
- III. Portfolio Strategy & Composition
  - Growth
  - Value
  - Dividend
- IV. Risk Analysis
- V. Performance Review
- VI. Student Biographies





# Spring 2020 OVERVIEW





# Sellinger Applied Portfolio Overview

## Background

The “Student-Managed Sellinger Applied Portfolio Fund,” or “SAP,” was created to provide business students with the direct means of accumulating firsthand knowledge with managing a well-diversified portfolio. Over the course of the semester, the students pitched new acquisitions, posed questions about rebalancing, and discussed market events and performance. The objective of the fund was to outperform the benchmark, S&P 500.

## Process

Prior to the Spring of 2020, the Finance Department selected a group of approximately 20 students from a pool of highly qualified applicants to manage the SAP Fund for the Spring Semester. Students were split up into five groups of four, each with a focus on specific market segments. Each week, various groups had different assignments, whether it be pitching a new acquisition, discussing current events, or researching and assessing their given market segment. As the semester proceeded, the SAP class would continuously monitor the portfolio in order to make educated and well thought investment decisions.





# Sellinger Applied Portfolio Overview

## Objective

- Select stocks that fit a value, growth, or dividend strategy with potential to beat the S&P 500 Index over the course of the investment period.

## Asset Allocation Targets

- No more than 10% invested in any one stock
- No more than 20% invested in any one sector
- No more than 25% invested in any one index
- 40% Value
- 40% Growth
- 20% Dividend
- No “sin” stocks

## Benchmark

- S&P 500 Index



Spring 2020  
**SECTOR SUMMARIES**

Overview

Sector Summaries

Portfolio Strategy  
& Composition

Risk Analysis

Performance  
Review

Student  
Biographies



# Consumer Discretionary

The Consumer Discretionary sector is a very cyclical sector, comprising two segments. The manufacturing segment of the sector includes automotive, household durable goods, textiles & apparel and leisure equipment. The services segment includes hotels, restaurants and other leisure facilities, media production and services, and consumer retailing and services. The primary appeal for investment in the consumer discretionary industry comes from surges in the economy and growth in general. Consumer spending rises as the economy grows, considering rises in wages and therefore a surplus of disposable income.

Performance (YTD):

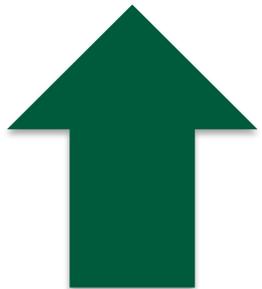
**-3.47%**

Portfolio:

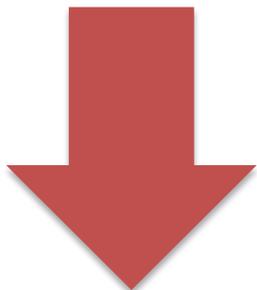
No holdings

Weighting:

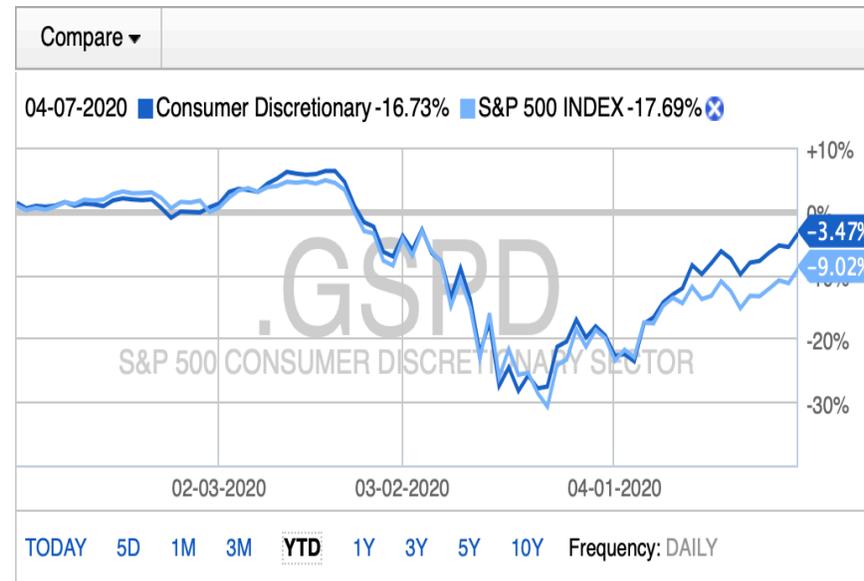
Underweight



- Increased disposable income & consumer spending
- Thriving job market and overall economy



- Weak economic growth hurts discretionary stocks
- High unemployment
- Conservative spending domestically
- Susceptible to worldwide crises (COVID-19)



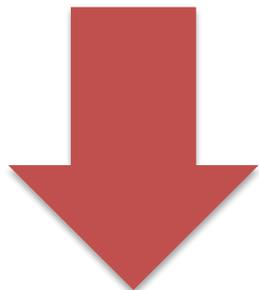


# Consumer Staples

The Consumer Staples sector comprises companies whose businesses are less sensitive to economic cycles. Any product considered a consumer staple is something that is essential or necessary for basic living. The top industry in the sector is beverages, which is then followed by cosmetics, agriculture, food, retail, household products, and sovereign.



- A safe option during periods of high market volatility or an economic downturn
- Aggressive cost cutting
- Increase in mergers and acquisitions



- Possible increase in an accommodative monetary policy
- Evolving consumer preferences
- Increased competition



Performance (YTD):

**22.82%**

Portfolio:

Consumer Staples ETF (SPDR) **+1.20%**

Coca-Cola (KO) **+0.23%**

Conagra Brands Inc (CAG) **-0.65%**

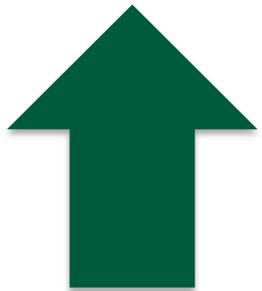
Wal-Mart Stores Inc. (WMT) **-0.79%**

Weighting:  
Overweight

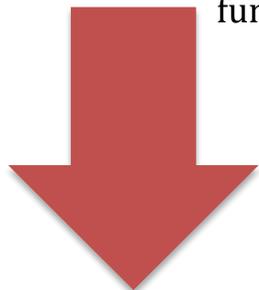


# Energy

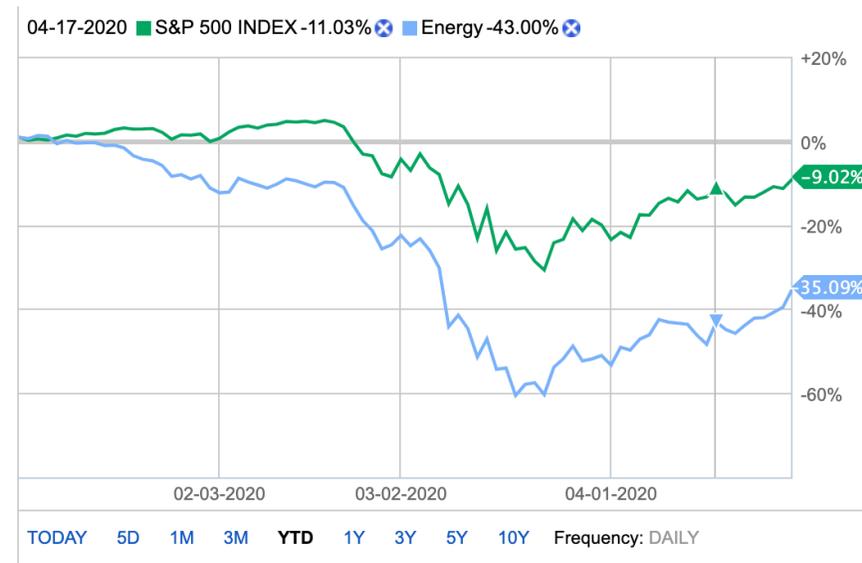
The Energy sector includes companies that explore and extract oil as well as companies that transport, refine and market oil to consumers. Supply and demand for worldwide energy drives the performance in this sector. When oil and gas prices are high, energy producers perform very well. This sector is sensitive to the political climate and news releases. The Energy sector has been volatile this year due to geopolitical tensions and disputes amongst the world's most influential leaders.



- Sector is heavily reliant on global economic conditions and relations with foreign countries and companies
- Growing environmental concerns could point to growth in ESG style funds



- Oil trade war/surplus has crippled oil prices
- Political uncertainty
- Process to obtain and refine oil has a negative environmental impact



Performance (YTD):

**-43.00%**

Portfolio:

Vanguard Energy ETF (VDE) **-45.07%**

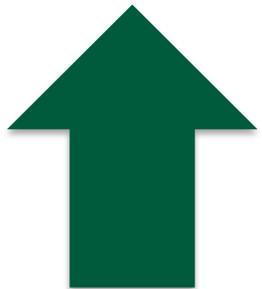
Weighting:

Underweight

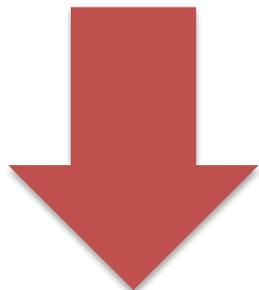


# Financials

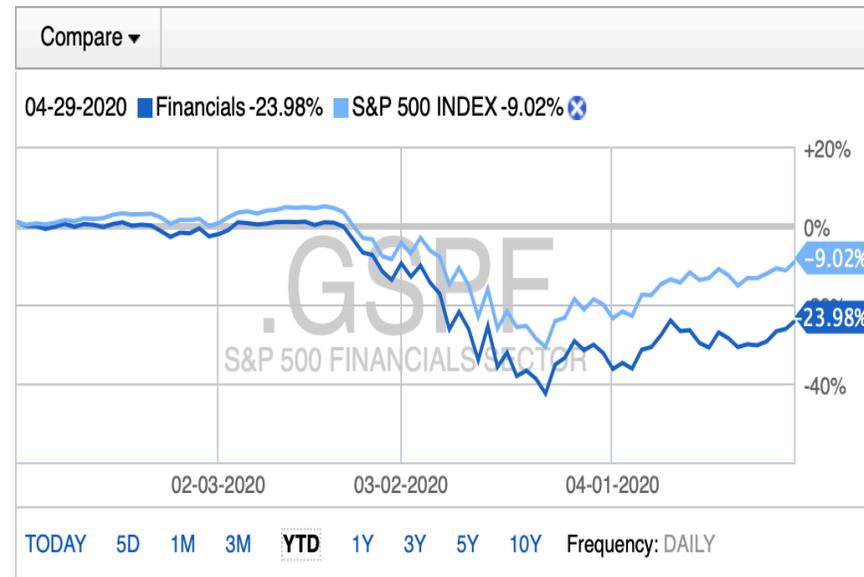
The Financial Services sector is a vital part of the world's economy as it includes thousands of depository institutions, investment products, insurance companies, other credit and financing organizations. These institutions provide financial services to both commercial and retail customers. Financial institutions can vary in size and presence, ranging from large global companies with large market capitalizations to small community banks and credit unions. Economists often measure the health of the economy in conjunction with the Financial sector. This sector generates a high portion of revenue through loans and mortgages. Low interest rates benefit the financial services sector since there are more opportunities for investment and capital available to spur economic growth. Some factors that influence the industry are change in interest rates, regulatory climate, and personal finances.



- Prosperity fueled in large part by government spending, support from the Federal Reserve, stock buybacks, and dramatic rebound in corporate earnings



- COVID-19 has put pressure on the banking system  
- Bearish markets affect market appetite and business / consumer spending  
- Subject to economic cycles



## Performance (YTD):

**-23.98%**

### Portfolio:

Financial Sector ETF (XLF) **+2.95%**

Schwab U.S. Dividend Equity ETF **+9.83%**

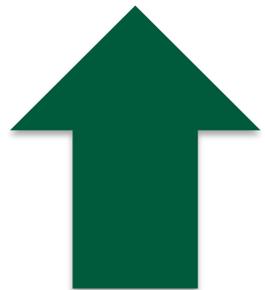
### Weighting:

Underweight

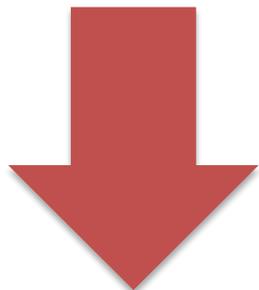


# Healthcare

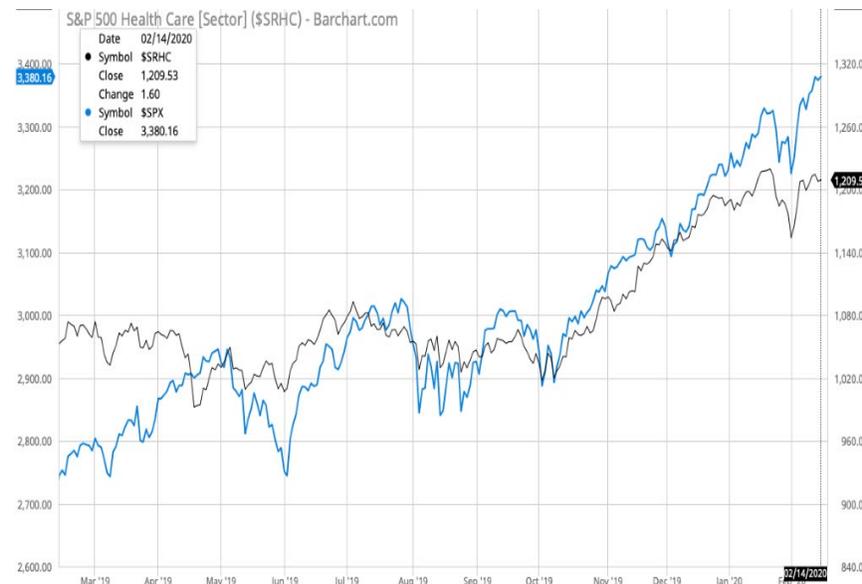
The Healthcare sector makes up roughly 14% of the overall market cap comprised in the S&P 500, this equates to just under 4 trillion USD. The sector consists of sixty component companies that all classify within the inherently broad healthcare space. The industry comprises about one fifth of the entire U.S. GDP. Compared to other industries, Healthcare is marked by varying degrees of government intervention across subdivisions, mainly within insurance and healthcare services. Recently, COVID-19 has increased demand for products and services in the Healthcare Industry, and Healthcare providers have been praised for their efforts.



- Constant demand for healthcare products
- Defensive when market volatility increases



- Drug price regulation can materially impact healthcare companies



## Performance (YTD):

**-1.77%**

## Portfolio:

Healthcare ETF (XLV)

**-2.33%**

UnitedHealth Group (UNH)

**-0.70%**

CVS Pharmacy (CVS)

**-16.44%**

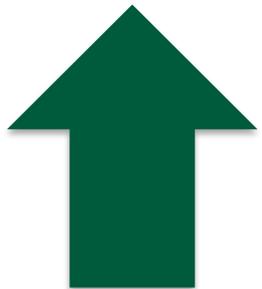
## Weighting:

Underweight

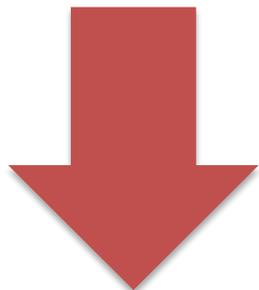


# Industrials

The Industrials sector encompasses a wide range of production. This includes companies whose businesses are dominated by one of the following activities: the manufacturing 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. The provision of transportation services, including airlines, couriers, marine, road & rail and transportation infrastructure. Historically, industrials have been a highly cyclical sector as their performance is highly contingent on the state of the economy.



- Increases in agriculture demand
- Increases need for equipment companies
- Demand for infrastructure in developing economies



- Manufacturing index in the United States has fallen
- Growth is slowing due to COVID-19
- Heavily reliant on global macroeconomic conditions



Performance (YTD):

**-19.48%**

Portfolio:

No holdings

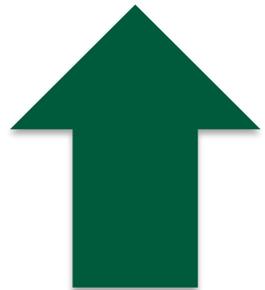
Weighting:

Underweight

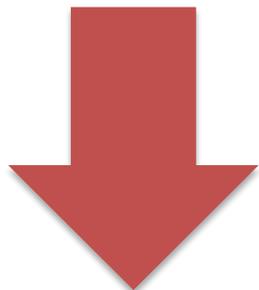


# Information Technology

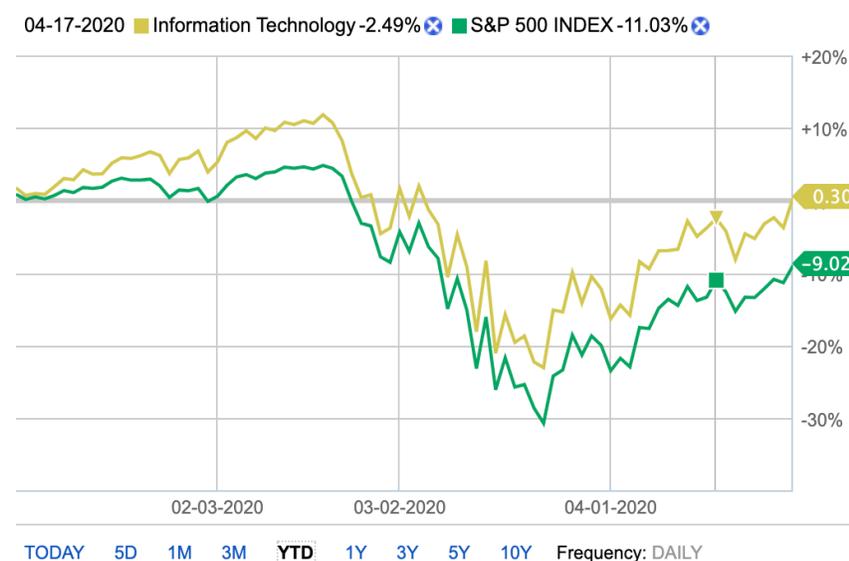
The Information Technology sector is known for innovation and invention, and high competition within the sector promotes research and development which creates a steady stream of new and improved products. The major industries within the sector are broken down into three major categories: Software & Services, Semiconductors and Semiconductor Equipment, and Technology Hardware & Equipment.



- Well-equipped to handle supply chain disruptions and volatility
- Very strong cash flows
- Consistently outperforms the market and losses are minimal when compared to overall indexes



- Supply chain problems with China
- Fear of an economic slowdown, could halt rapid growth
- Well-poised for a slowdown given the widespread adoption of technology



Performance (YTD):

**-2.49%**

Portfolio:

Microsoft

(MSFT) **+13.25%**

Amazon (AMZN)

**+28.53%**

SPDR Semiconductor  
ETF (XSD) **-11.23%**

SPDR Technology ETF  
(XLK) **-2.63%**

Weighting:

Overweight



# Materials

The Materials sector of the market encompasses a wide range of commodity-related manufacturing industries. This sector includes companies engaged in chemicals, construction materials, packaging products, metals and mining, and paper products. Some materials such as gold and silver are hedges against economic downturns.

Performance (YTD):

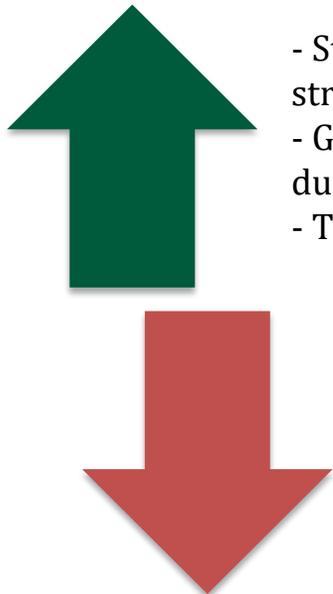
**-12.79%**

Portfolio:

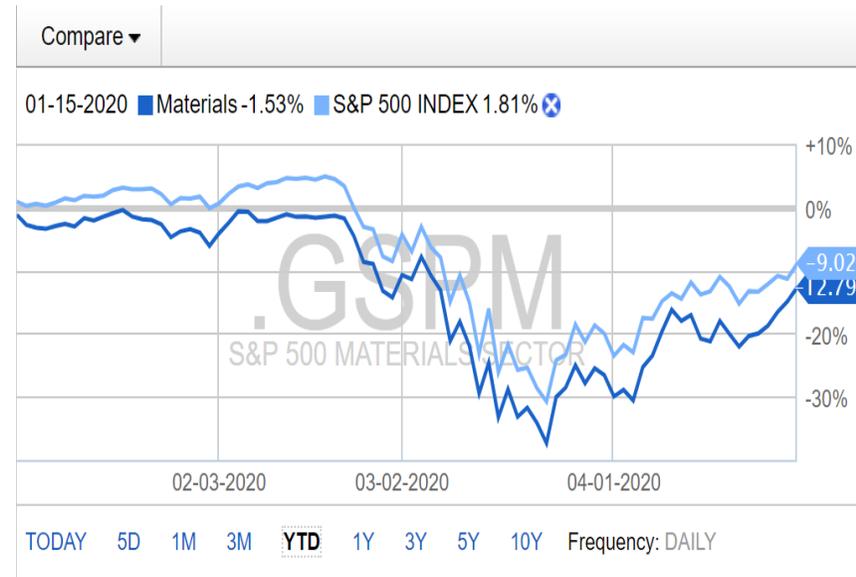
No holdings

Weighting:

Underweight



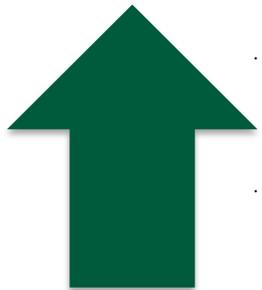
- Steel prices usually perform well in a strong economy
- Gold and silver can be safe havens during economic downturns
- Tangible assets have stable demand
- Weak manufacturing data could hurt steel prices
- Supply chain is disrupted due to low consumer confidence and demand
- Industrial economies will need time to rebound post COVID-19



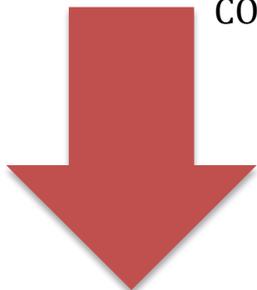


# Real Estate

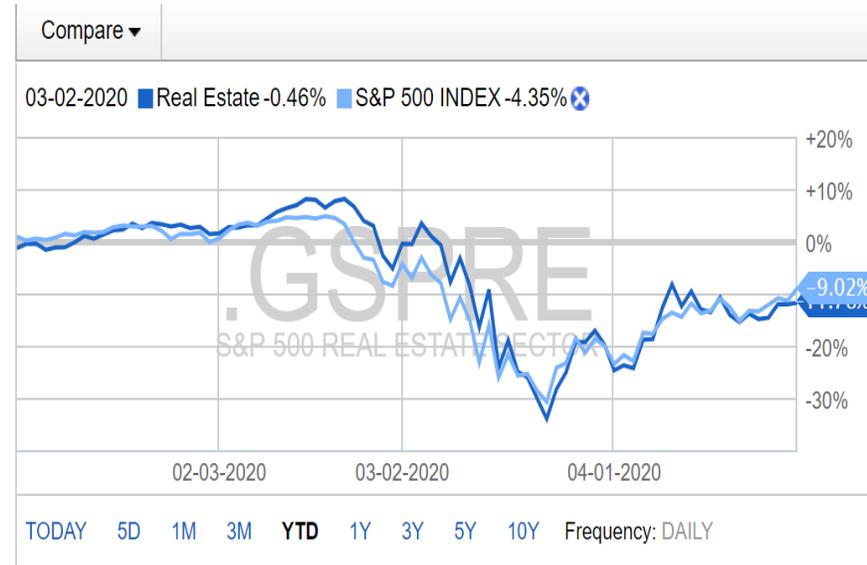
The Real Estate sector encompasses many different areas of property including development, appraisal, marketing, selling, leasing, and management of commercial, industrial, residential, and agricultural properties. However, the main four categories are land, residential, commercial, and industrial. Land refers to undeveloped or vacant lots. Residential properties are the most common. It encompasses housing for individuals, families, or groups of people. These could be single or double homes, apartments, condominiums, townhouses, etc. Commercial real estate refers to properties used by business to carry out operations. Properties in this category could be shopping malls, stores, hotels, office buildings, and parking garages. Industrial properties consist of buildings or facilities that serve as factories, construction, mechanical production centers, transportation, and warehousing.



- Low interest rates due to decrease in 30-year mortgage rates
- Strong consumer confidence will be a positive catalyst for real estate post COVID-19



- Global growth grinding to a halt due to COVID-19
- Housing is becoming more expensive as land to build is scarce



Performance (YTD):

**-11.78%**

Portfolio:

Real Estate ETF (XLRE) **-14.88%**

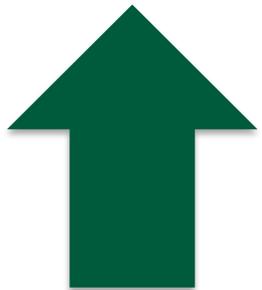
Weighting:

Neutral

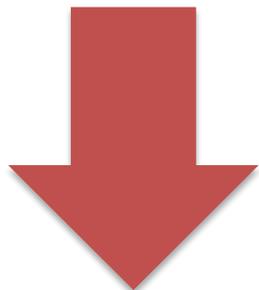


# Telecommunications Services

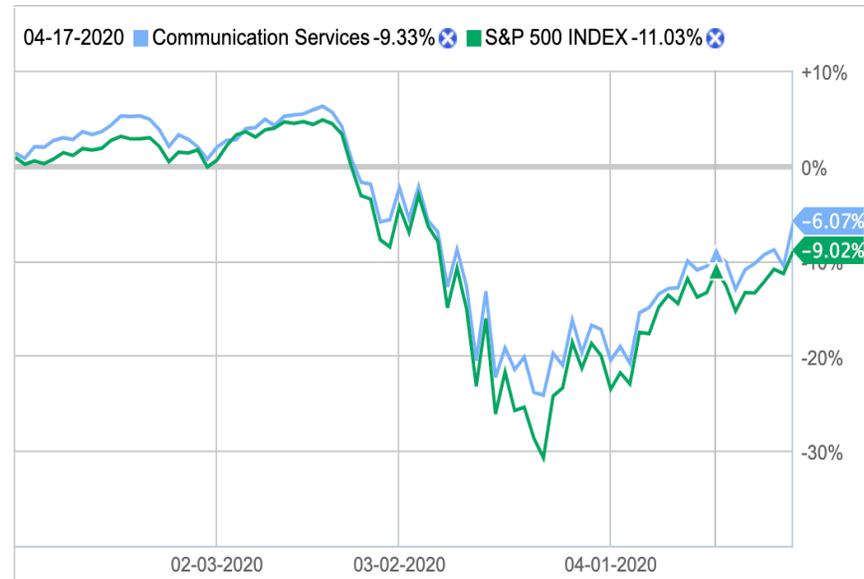
The Telecommunications sector, or telecom, consists of companies that provide communications services primarily through fixed-line, cellular, wireless, high bandwidth, and/or fiber-optic cable networks. The sector can be split into three sub-industries; integrated or diversified telecommunication services, alternative carriers, and wireless telecommunication services.



- Typically operate in line with the overall tech industry
- Telecommunication companies are often seen as a risk averse investments
- Heavily reliant on consumer data



- Increase in government regulations of telecommunication services
- Increased struggle to rollout 5G
- Underprepared firms facing an increase in usage due to COVID-19



Performance (YTD):

**-9.33%**

Portfolio:

Facebook (FB)

**-12.67%**

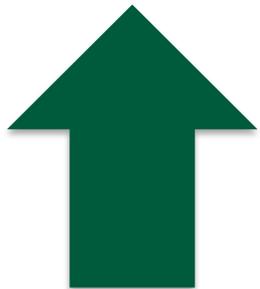
Weighting:

Overweight

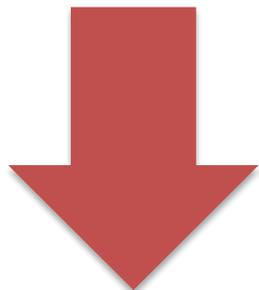


# Utilities

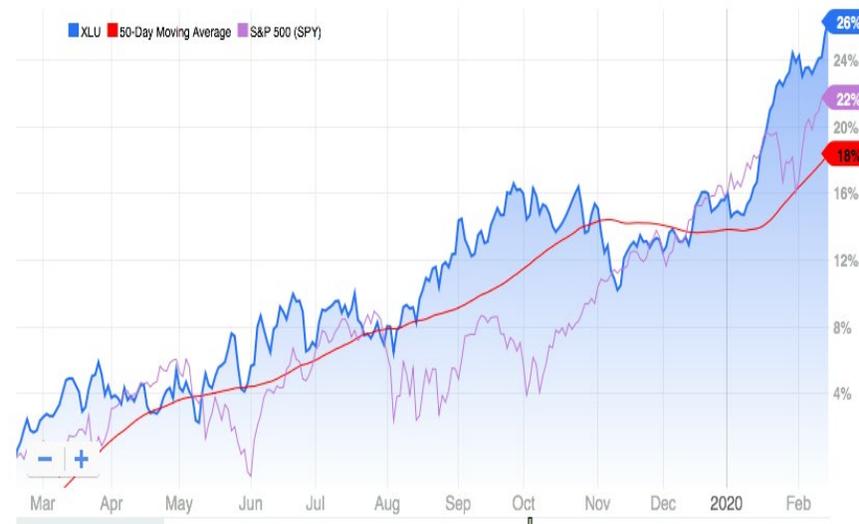
The Utilities sector is comprised of companies that provide basic amenities like water, sewage services, electricity, dams, and natural gas. While companies in this industry do return profits, they fall under public services- which in turn makes them heavily regulated. The Utility sector often rewards investors with stable and consistent dividends, and it is for this reason that they are often seen as long-term and stable investments. In 2019, the S&P 500 annual dividend yield was 1.80%, while the Utilities sector provided a dividend yield of 3.05%, which is over 1.5 times greater than the S&P's. The XLU SPDR Utilities ETF is the index that represents Utilities in the S&P 500, which currently represents 3.32% of the S&P 500 portfolio.



- Utility companies tend to be risk-averse as consumers usually pay their gas water and electric bills
- Companies have a large amount of fixed assets



- Very sensitive to changes in interest rates
- Large debt-equity ratios



## Performance (YTD):

**-9.31%**

## Portfolio:

Utilities Select Sector ETF (XLU)

**-10.25%**

## Weighting:

Underweight



Spring 2020  
**PORTFOLIO  
STRATEGY &  
COMPOSITION**

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Sector Summaries

Portfolio Strategy  
& Composition

Risk Analysis

Performance  
Review

Student  
Biographies



# Growth Strategy Overview

<b>GROWTH STRATEGY</b>	
To find stocks expected to grow faster than industry peers	
<b>BUY CRITERIA</b>	
<b>Conservative Mentality</b>	Expect stock to perform better than the industry
<b>Revenue Growth</b>	Industry Average and forecasted to continue to grow
<b>Strong Earnings</b>	5 years of CAGR
<b>ROE</b>	$\geq 15\%$ and $>$ Industry Average
<b>PEG</b>	$\leq 1.2$ and $<$ Industry Average
<b>Debt/Equity</b>	$< 1.5$ (or acceptable interest Coverage Ratio when $D/E > 1.0$ )
<b>SELL CRITERIA</b>	
<b>Price</b>	Price reaches 10% below target price or 20% above purchase price
<b>Leadership</b>	The company's leadership position changes
<b>Business Fundamentals</b>	Business fundamentals deteriorate
<b>Company Slowdown</b>	Slowing unit volume, revenue decline, weak earnings, etc.
<b>Alternative Investments</b>	Superior investment alternatives are identified



# Growth Strategy Overview

## Acquisitions

Alibaba Group Holding  
Amazon.com, Inc.  
Bristol-Myers Squibb Co.  
Costco Wholesale Corp.  
NVIDIA Corp.  
PayPal Holdings Inc.



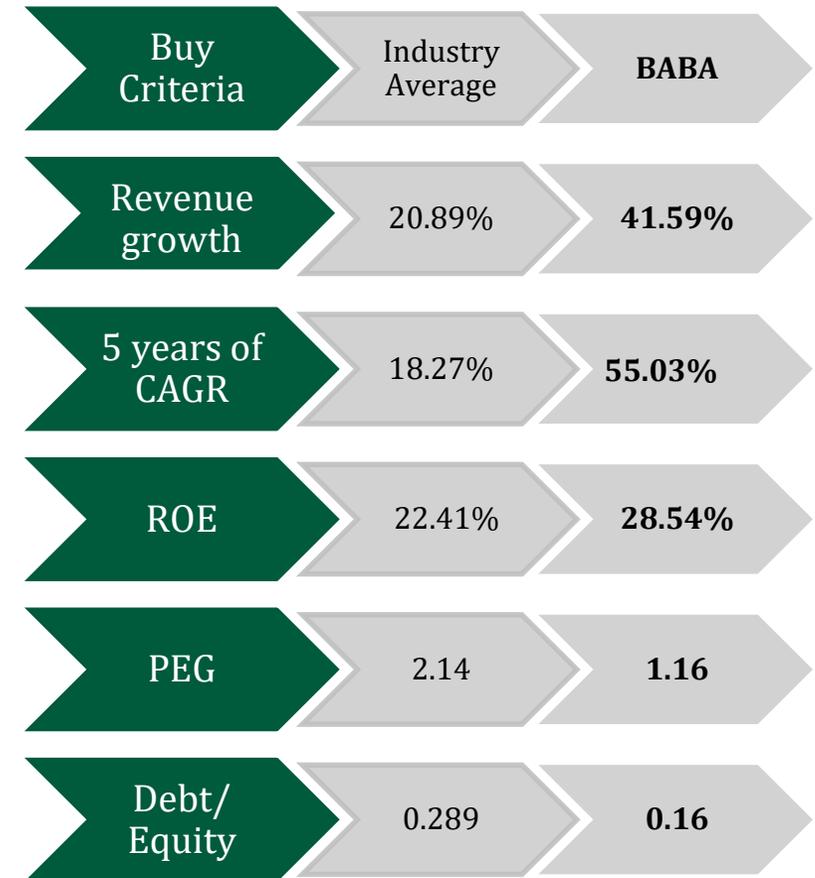
# Alibaba Group Holding LTD | BABA

**Position (Date Purchased: 2/15)**  
91 Shares | \$218.42 | \$19,876

**Sector:** Consumer Discretionary  
**Industry:** Internet Retail

Alibaba Group Holding is a multinational conglomerate headquartered in China. Alibaba operates through four core business segments: commerce, cloud computing, entertainment, and innovation. Alibaba was founded in 1999 by Jack Ma and remains one of the largest companies in China.

As a result of COVID-19, we sold our position in Alibaba in early March.



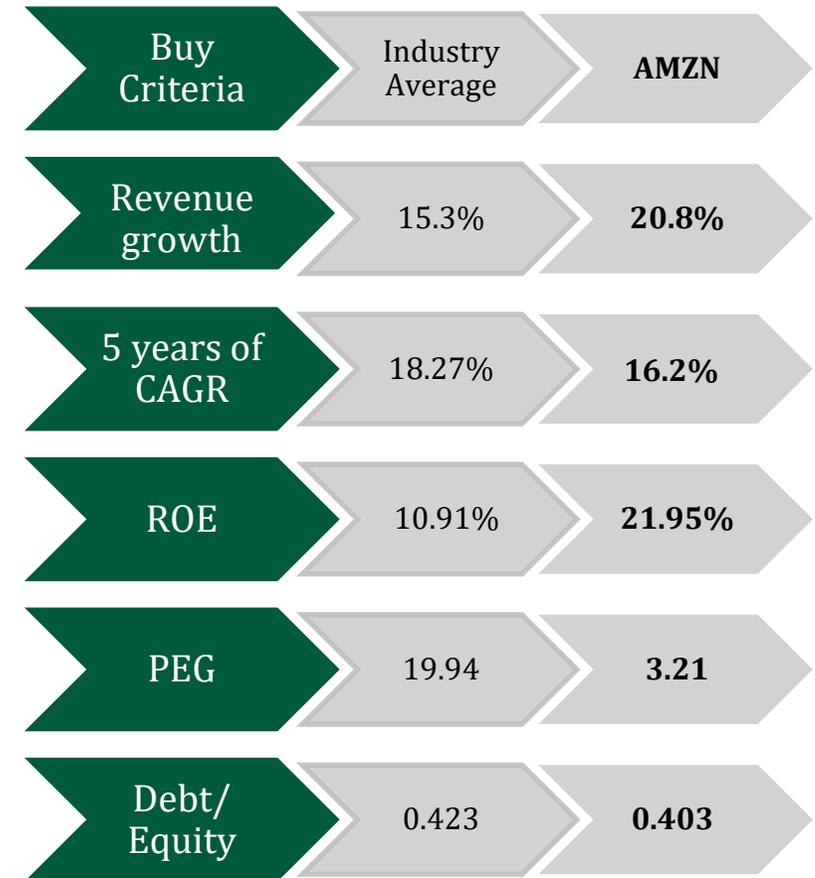


# Amazon.com, Inc | AMZN

**Position (Date Purchased: 2/6)**  
8 Shares | \$1,900.21 | \$15,201.68

**Sector:** Consumer Discretionary  
**Industry:** Internet Retail

Amazon.com, Inc. operates as a global online retailer of merchandise and content, produces television shows, movies, and consumer electronics. It operates in three segments: North America, International, and Amazon Web Services. Amazon.com is the largest e-commerce company in the US. Amazon was founded in 1997 and is currently headquartered in Seattle, WA.





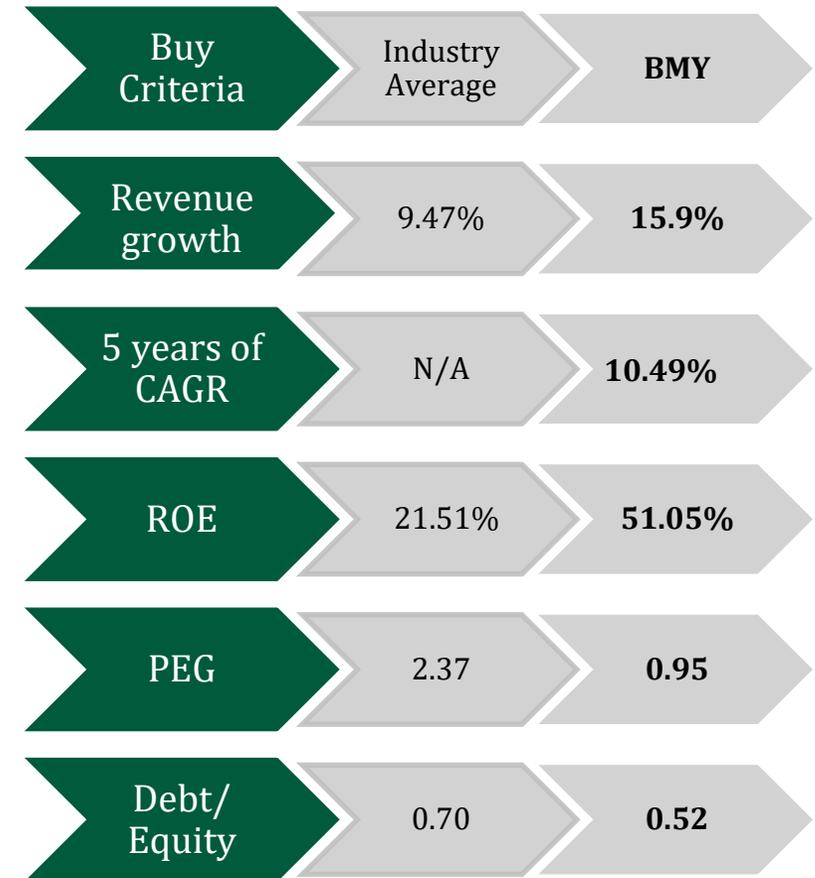
# Bristol-Myers Squibb Co | BMJ

**Position (Date Purchased: 2/4)**  
236 Shares | \$63.58 | \$15,005

**Sector:** Healthcare  
**Industry:** Drug Manufacturing

Bristol-Myers Squibb is in the business of developing, discovering, licensing, manufacturing, marketing, distributing, and selling pharmaceutical drugs. Some of the company's notable products include Opdivo, Eliquis, and Orenzia. Bristol-Myers was founded in 1887 and is currently headquartered in New York City.

Bristol-Myers was sold in late March to rebalance the portfolio, increase cash position, and distribute cash into other sectors.



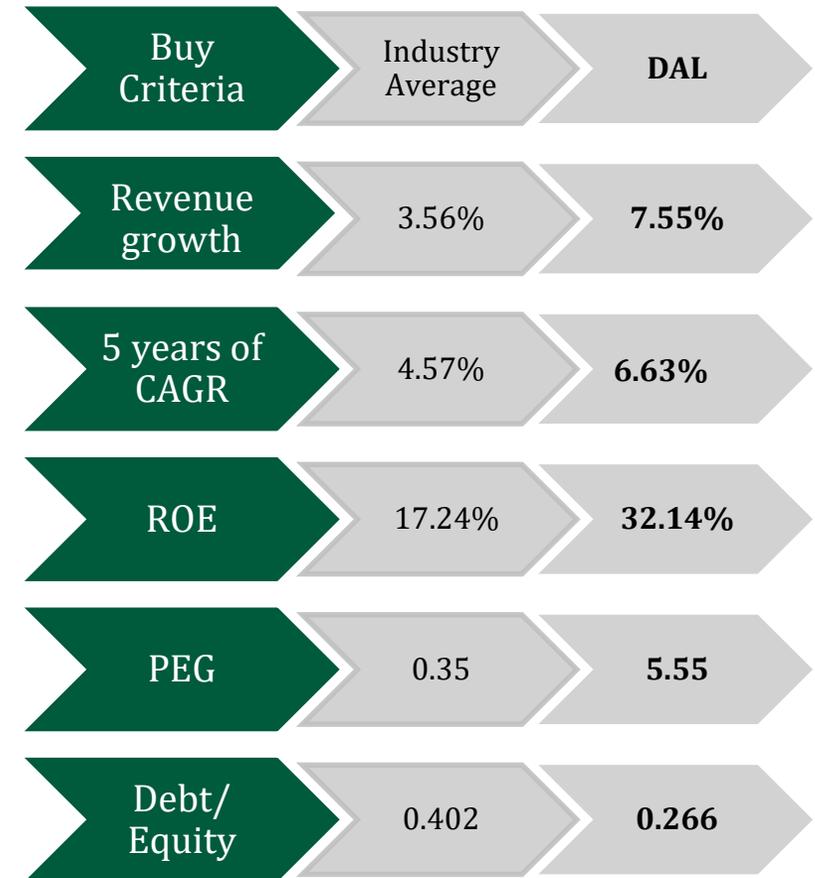


# Costco Wholesale Corp. | COST

**Position (Date Purchased: 2/13)**  
48 Shares | \$313.90 | \$15,066.96

**Sector:** Consumer Staples  
**Industry:** Discount Stores

Costco Wholesale Corporation operates 785 membership warehouses across the world as well as an online retail website. Costco's cost leadership strategy allows the retailer to offer products at low markups. It offers both branded and private-label products such as meats, baked goods, electronics, clothing, and household supplies among many other products.





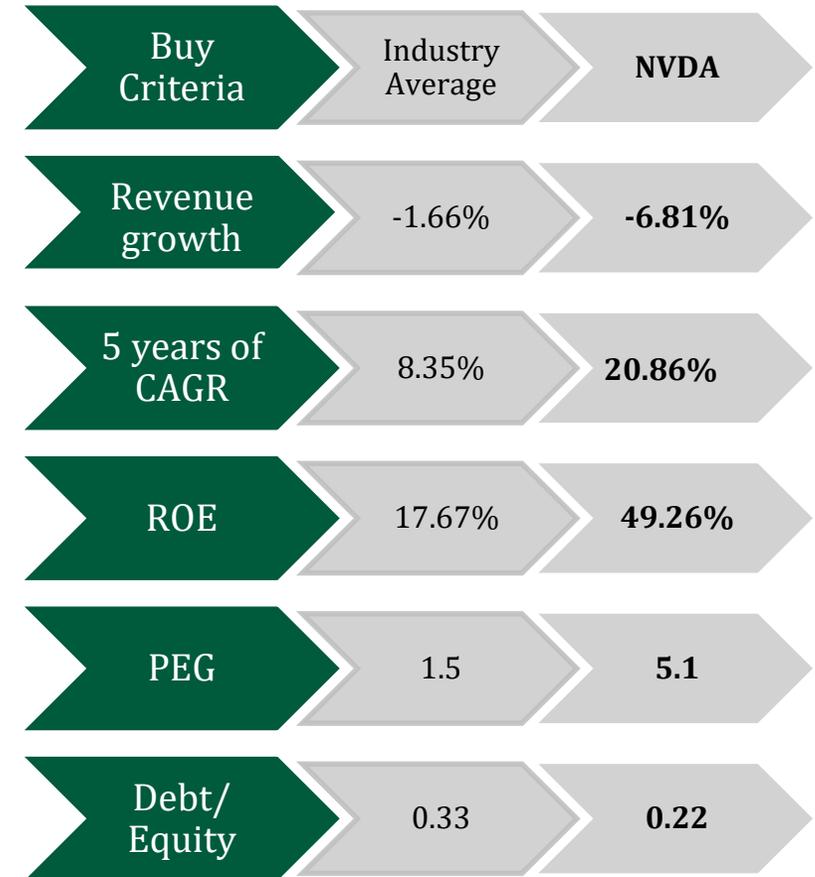
# NVIDIA Corp. | NVDA

**Position (Date Purchased: 2/4)**  
62 Shares | \$240 | \$14,880

**Sector:** Information Technology  
**Industry:** Semiconductors

NVIDIA is a semiconductor manufacturer based out of Santa Clara, California. Its two primary segments are GPU and Tegra Processor. GPU is used in gaming PCs, editing and design programs, and artificial intelligence. Tegra Processor is used for cloud-computing as well as AI engineering.

Due to the market declines triggered by COVID-19, NVIDIA hit the stop-loss point and was sold.





# PayPal Holdings, Inc. | PYPL

**Position (Date Purchased: 1/25)**

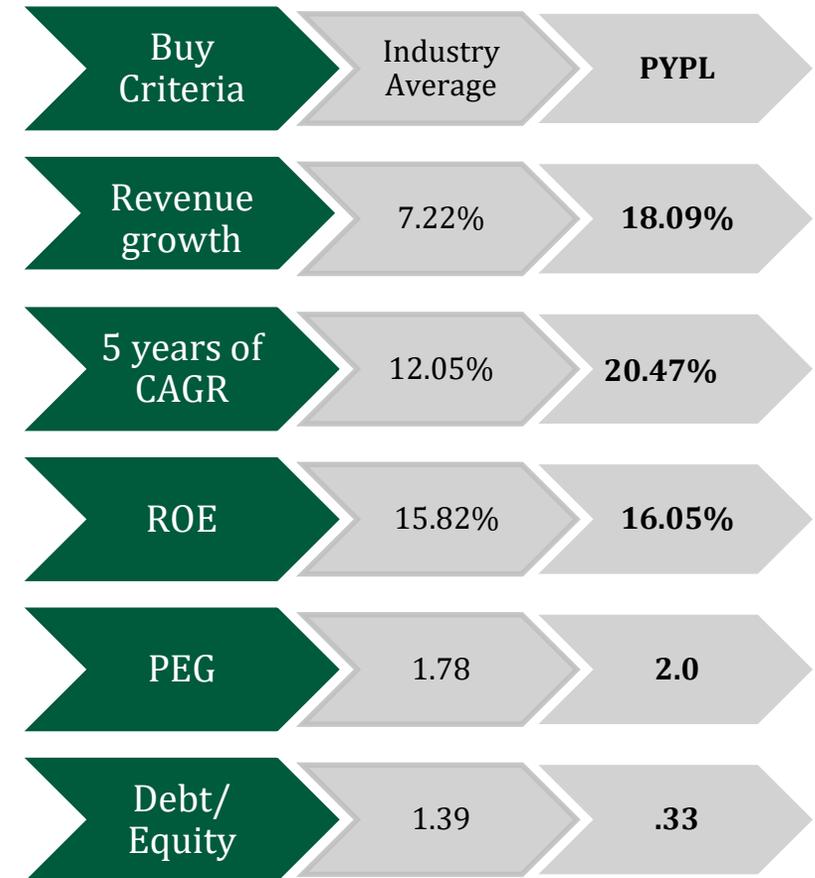
130 | \$115.24 | \$15,000

**Sector:** Financial Services

**Industry:** Software-Infrastructure

PayPal Holdings operates as a payment processor for online vendors, auction sites, and other commercial users, for which it charges a fee in exchange for benefits such as one-click transactions and password memory. It was established in December 1998, with the goal to connect people, businesses, and the economy. PayPal's products include PayPal, PayPal Credit, Braintree, Venmo, Xoom, and iZettle.

Due to the COVID-19 market decline, PayPal triggered a stop-loss and was sold.





# Value Strategy Overview

VALUE STRATEGY	
To find stocks priced less than their intrinsic value	
BUY CRITERIA	
Price/Sales	< Industry Average
Price/Book	< Industry Average
Dividends	> Industry Average
Free Cash Flow	Positive
SELL CRITERIA	
Mergers or acquisitions	Any news in regard to M&A activity
Earnings	Significant restatement
Executive Management	Changes to management
Price Targets	Exceeds initial price target
Price	Trending downwards towards a stop loss mark



# Value Strategy Overview

## Acquisitions

Allstate Corp.  
Gilead Sciences, Inc.  
Herman Miller, Inc.  
McKesson Corp.



# Allstate Corp. | ALL

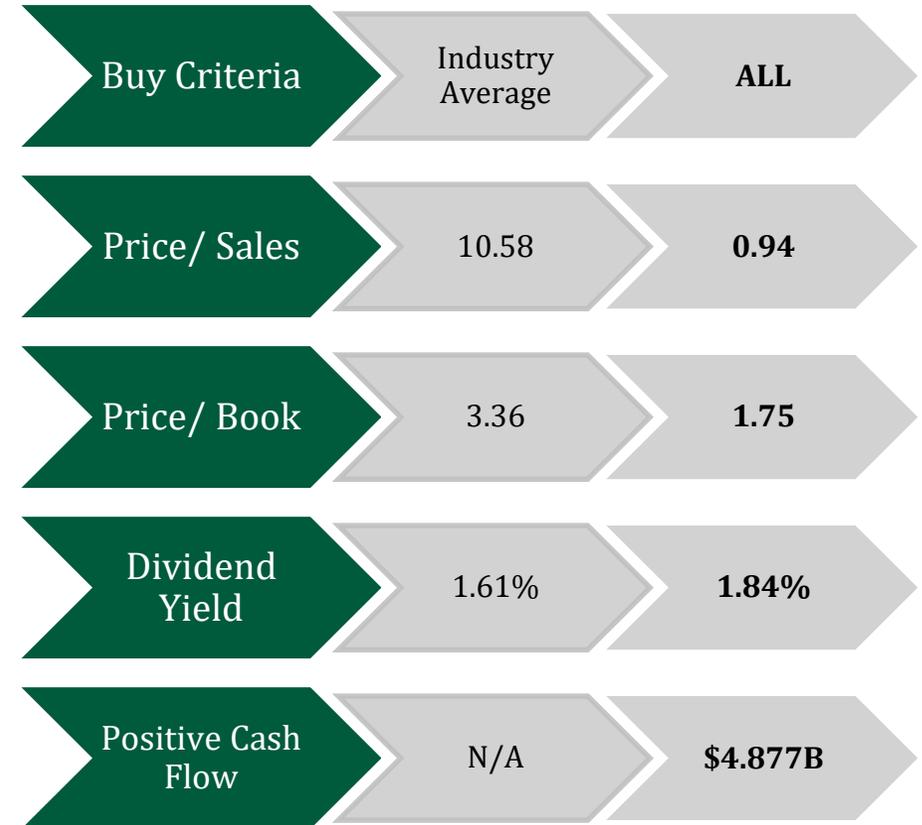
**Position (Date Purchased: 1/29)**  
130 shares | \$115.37 | \$14,997.45

**Sector:** Financials

**Industry:** Insurance

The Allstate Corporation operates within the direct property and casualty insurance industry where they provide financial protection for businesses and individuals. Allstate began as a division of Sears in 1931 but has since spun off as an independently traded company in 1993. Allstate has become one of the industry leaders for the insurance industry in terms of market share across the United States, where its largest areas of operation include New York, California, Texas, and Florida. In recent years, Allstate has looked to expand its business through acquisitions such as Squaretrade (\$1.4B).

Allstate was later sold off due to losses following COVID-19.





# Gilead Sciences Inc. | GILD

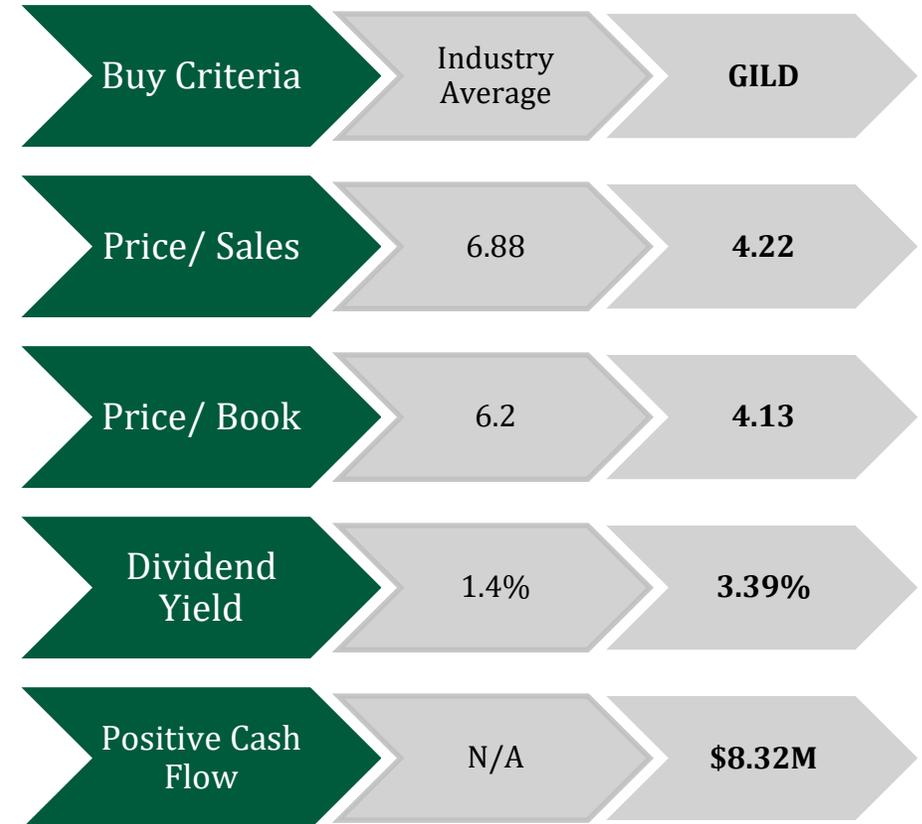
**Position (Date Purchased: 3/10)**  
132 Shares | \$75.51 | \$9,967.32

**Sector:** Healthcare

**Industry:** Drug Manufacturers-General

Gilead Sciences Inc. is a manufacturer of both over the counter and prescription drugs as a supplier for pharmacies. Founded in 1987, some of its most profitable products include antiviral drugs for the treatment of HIV, Hepatitis, and Influenza.

Gilead was later sold off after stop-losses hit following the outbreak of COVID-19 as an international pandemic.





# Herman-Miller Inc. | MLHR

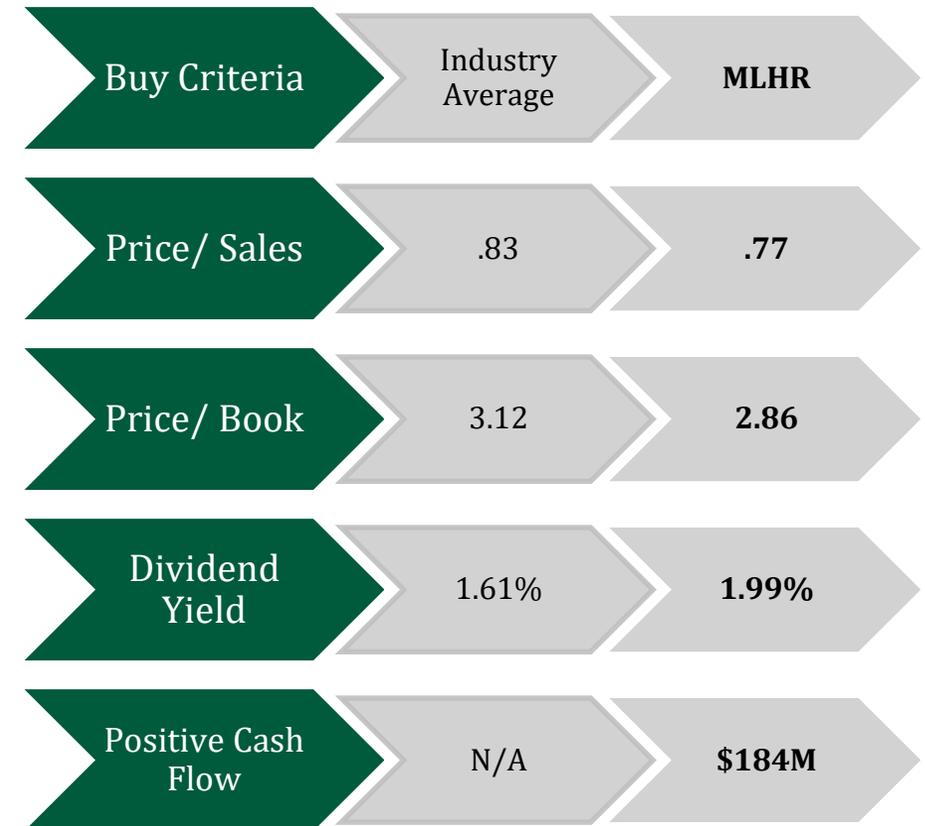
**Position (Date Purchased: 1/29)**  
250 | \$40.28 | \$10,069.23

**Sector:** Industrials

**Industry:** Business Equipment and Supplies

Herman Miller Inc. manufactures and designs interior furnishings for office buildings, healthcare facilities, etc. Founded in 1923, Herman Miller has since become one of the largest manufacturers of furniture in the United States.

Herman Miller was later sold a few months later due to lower than expected return.





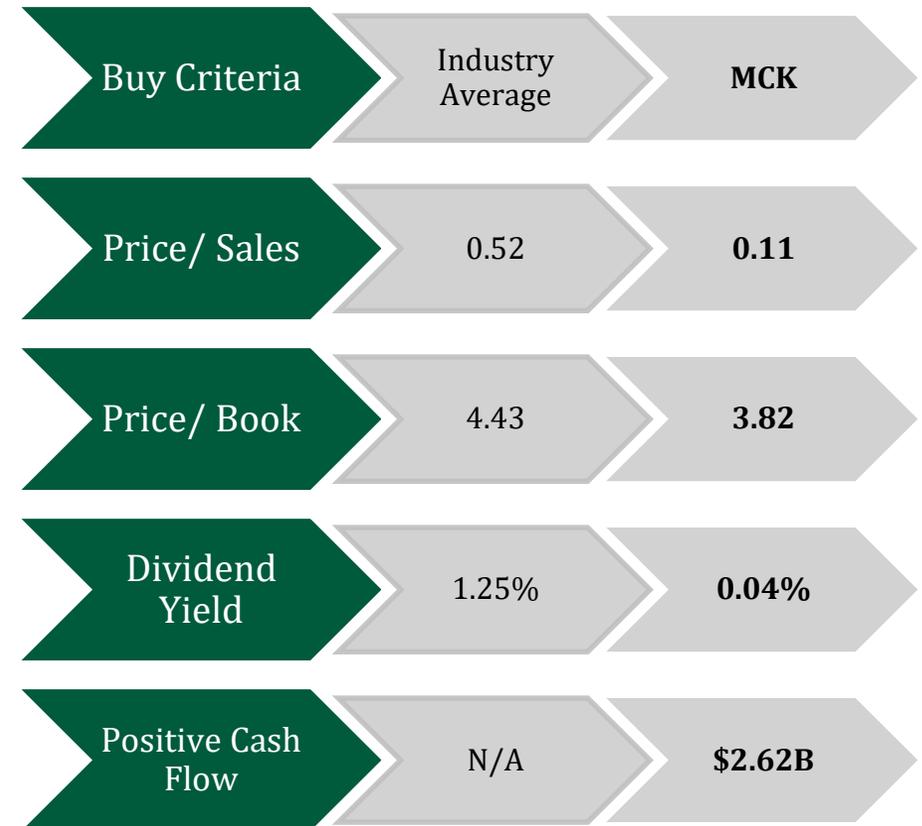
# McKesson Corp. | MCK

**Position (Date Purchased: 3/31)**  
75 Shares | \$133.27 | \$9,995.25

**Sector:** Healthcare

**Industry:** Medical Distribution

Founded in 1833, McKesson is a healthcare and information technology company that specializes in pharmaceutical and medical/surgery solutions for healthcare facilities and individuals. McKesson primarily operates within the United States, but also does a large amount of business throughout Europe. The company has a long history of being one of the main suppliers of drugs and pharmaceuticals across the country. McKesson was later sold off due to complications regarding Covid-19





# Dividend Strategy Overview

<b>DIVIDEND STRATEGY</b>	
To find stocks that are fairly priced and offering a dividend yield greater than the S&P 500 or the Industry Average	
<b>BUY CRITERIA</b>	
<b>Dividend Yield</b>	≥ SPDR S&P Dividend ETF
<b>Quick Ratio</b>	≥ Industry Average
<b>Cash Dividends</b>	Positive total cash Dividends paid annually
<b>Positive Total Cash</b>	From investing and operating activities
<b>Constant Dividend</b>	Required
<b>Dividend Growth</b>	Historical and potential Dividend growth
<b>SELL CRITERIA</b>	
<b>Dividends</b>	Dividends are cut
<b>Free Cash Flow</b>	Diminishes or is no longer positive
<b>Alternative Investments</b>	Superior investment alternatives are identified



# Dividend Strategy Overview

## Acquisitions

McDonalds Corp.  
Waste Management, Inc.



# McDonald's Corp. | MCD

**Position (Date Purchased: 2/26)**  
70 Shares | \$213.52 | \$14,946.40

**Sector:** Consumer Staples  
**Industry:** Fast Food

McDonald's Corporation is the one of the world's largest fast food chains, operating 24/7 in 4,000 locations in the United States and 118 countries all around the world. McDonalds prides itself on providing a quick affordable meal to customers. The company uses a franchise model while profiting on the company real estate.

Buy Criteria	Industry Average	MCD
Dividend Yield	2.90%	5.00%
Quick Ratio	.86	.53
Constant Dividend	-	Yes
Positive Total Cash	-	Yes



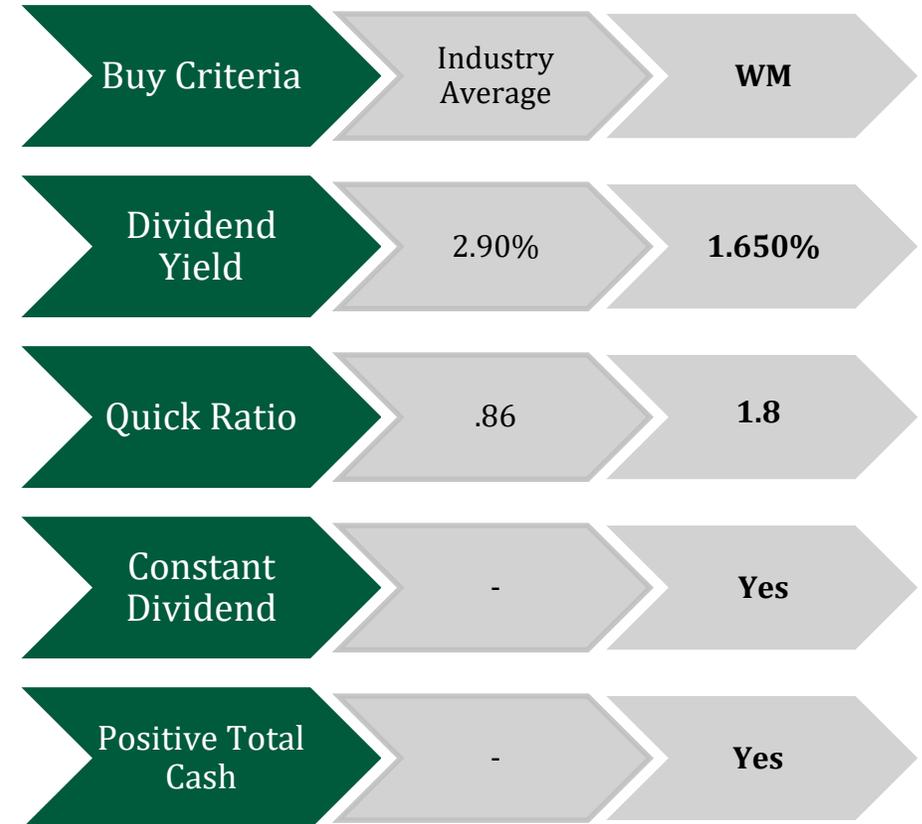
# Waste Management, Inc. | WM

**Position (Date Purchased: 2/24)**  
81 Shares | \$123.46 | \$15,000.00

**Sector:** Industrials

**Industry:** Waste Removal

Waste Management, Inc. provides waste management services including collection, transfer, recycling, resource recovery, and disposal services. They also operate waste-to-energy facilities. The company is well diversified in their industry, as they serve many commercial, industrial, and residential customers throughout North America.





# COVID-19 Strategy

In late January, it was reported that COVID-19 had killed 170 people in Wuhan, China. Given these events, our class began to discuss the effects of the Coronavirus and its ramifications in the market. On Friday February 28<sup>th</sup>, it was reported that Wall Street had its worst week since 2008, after the S&P 500 fell 11.5%. Our class took a defensive strategy to mitigate downside risk and safeguard profit. Our initial strategy was to reduce exposure to sectors such as Consumer Discretionary, Energy, Financials, and Industrials. By having underweighted exposure and lack of exposure to some of the worst-performing sectors within the S&P 500, our portfolio was able to outperform the S&P 500. We sold Allstate, Alibaba, Bristol Myers, Capital One, McDonald's, Miller Herman, Nvidia, PayPal, and Waste Management. Given the market conditions, our class believed it would be better to invest in ETFs instead of single stocks to limit risk.





# ETFs Overview

## Acquisitions

Vanguard Energy ETF  
SPDR S&P Semiconductor  
Schwab US Dividend Equity ETF



# Vanguard Energy ETF| VDE

**Position (Date Purchased: 4/7)**  
481 Shares | \$43.00 | \$25,000

**Sector:** Energy

The Vanguard Energy ETF tracks the performance of the MSCI US Investable Market Energy 25/50 Index, which measures the energy sector return. The fund is passively managed, using a full-replication strategy when possible and a sampling strategy if regulatory constraints dictate. It includes stocks of companies involved in the exploration and production of energy products such as oil, natural gas, and coal.

Buy Criteria	Industry Average	VDE
Dividend Yield	7.01%	8.83%
Constant Dividend	-	Yes
Positive Total Cash	-	Yes



# SPDR S&P Semiconductor| XSD

**Position (Date Purchased: 4/7)**  
170 Shares | \$88.43 | \$15,033.10

**Sector:** Information Technology  
**Industry:** Semiconductor

The S&P Semiconductor Select Industry Index (the "Index") represents the semiconductors segment of the S&P Total Market Index. The industry of semiconductors is highly concentrated, XSD has an equal-weighting scheme which tilts its portfolio away from industry giants such as Intel and toward smaller growth companies.





# Schwab US Dividend Equity ETF | SCHD

**Position (Date Purchased: 3/31)**  
333 Shares | \$44.06 | \$14,538.15

**Sector:** Consumer Staples, Info Tech, Industrials and Healthcare

SCHD is an exchange traded fund based on the Dow Jones U.S. Dividend 100 Index. The fund focuses on Consumer Staples, Info Tech, Industrials and Healthcare





# Mistake/ Missed Opportunity

## Invesco QQQ Trust | QQQ



On March 14<sup>th</sup>, a group pitched Invesco QQQ Trust, which is an exchange-traded fund based on the NASDAQ-100 Index. It focuses heavily on Information Technology and Communication Services sectors. From 2/19/20 to 3/16/20, Invesco QQQ has outperformed the S&P 500 Index by 0.97%, trading lower by 28.56% vs. the S&P 500's 29.53%. This was due to QQQ's underweight exposure and lack of exposure to some of the worst-performing sectors within the S&P 500. There was a limit order on the fund for 18 shares at \$170.00. The limit was never hit, and thus the fund was never added to our portfolio. On April 16<sup>th</sup>, the day the portfolio was closed, QQQ was trading at \$213.25



# Unique Attributes

Alibaba Group Holdings Ltd.

Significant year over year revenue growth with opportunities to expand into the growing fintech and cloud computing markets.

Amazon.com Inc.

Amazon has a huge opportunity to expand their market share as the utilization of online shopping is likely to increase due to COVID-19.

Bristol-Myers Squibb Co

The acquisition of Celgene and the eight new drugs in the pipeline present substantial opportunities for growth.

Costco Wholesale Corp.

Costco has consistent revenue growth due to their significant market penetration in the U.S. with expansion to international markets.

NVIDIA Corp.

NVIDIA recently unveiled a new line of graphics cards, and they have been working with Tesla to create more efficient cloud computing and AI technology.



# Unique Attributes

PayPal Holdings Inc.

A first mover in the electronic payment industry, PayPal continues to grow both organically and through acquisitions, such as Venmo.

Allstate Corp.

A large existing market share and increasing policy prices will lead to increased and sustainable profitability into the future.

Gilead Sciences Inc.

Remdesivir, drug in the testing phase, has potential to be an effective way to treat COVID-19 symptoms and could drastically increase sales into the future.

Herman Miller Inc.

A staple industrials stock with a long history of profitability and returns proves to be a safe investment option.

McKesson Corp.

A long history of dominance in the market for pharmaceutical suppliers. The company has scaled effectively and sustained distribution infrastructure to ensure financial stability.



# Unique Attributes

McDonald's Corp.

One of the largest fast food chains in the world. Additionally, the stock seems to be resilient during a recession.

Waste Management Inc.

Waste Management is the largest waste hauler in the U.S. Additionally, it has been moving in a greener direction by reducing carbon emissions from its fleet of vehicles.

Vanguard Energy ETF

While this is an Energy fund, we used this investment as more of a dividend strategy with a nearly 9% dividend.

SPDR S&P Semiconductor

This ETF fund has the highest percentage of "pure-play" semiconductor stocks in the market.

Schwab US Dividend Equity  
ETF

This fund was purchased as a result of our altered COVID-19 strategy.



Spring 2020  
**RISK ANALYSIS**

Overview

Sector Summaries

Portfolio Strategy  
& Composition

**Risk Analysis**

Performance  
Review

Student  
Biographies



# Portfolio Risk Analysis: Beta Ranking by ETF

## ETFs & Betas

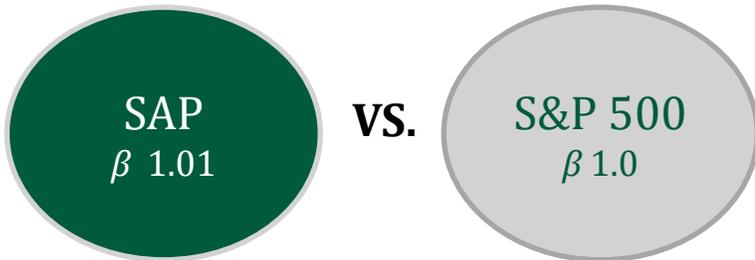
- Economic conditions greatly affect the betas of certain industries
- A beta of 1 means the stock or ETF tracks the market's movement
- If a beta is less than 1, the stock or ETF has less volatility than the market
- Our portfolio's weighted beta is 0.99, a value representing the performance of our portfolio correlated with the returns of the market

Industry	Ticker	Market Value	Weight	Raw Beta	Weighted Beta	Return	Ind Weight	Ind Beta Weight	Ind Weight Return
Materials		\$0.00	0.00%						
Energy	VDE	\$14,227.50	2.94%	1.84	0.05415080685	-6.55%	100.00%	1.84	-6.55%
Healthcare	XLV	\$18,098.39	3.74%	0.7	0.02620574419	9.70%	28.11%	0.20	2.73%
Healthcare	UNH	\$21,079.90	4.36%	0.63	0.02747056618	35.56%	32.74%	0.21	11.64%
Healthcare	CVS	\$14,854.50	3.07%	0.77	0.02365959346	-5.11%	23.07%	0.18	-1.18%
Healthcare	MCK	\$10,358.25	2.14%	0.88	0.0188550451	5.07%	16.09%	0.14	0.82%
Telecommunications	XLC	\$83.82	0.02%	0.84	0.00014564160	-4.02%	0.83%	0.01	-0.03%
Telecommunications	FB	\$9,870.00	2.04%	1.07	0.02184537202	-1.67%	97.54%	1.04	-1.63%
Telecommunications	T	\$165.31	0.03%	0.72	0.00024620118	-20.53%	1.63%	0.01	-0.34%
Information-Technology	XLK	\$54,163.11	11.20%	0.99	0.1109167926	8.46%	46.92%	0.46	3.97%
Information-Technology	MSFT	\$45,455.37	9.40%	0.96	0.09026407687	26.77%	39.38%	0.38	10.54%
Information-Technology	XSD	\$15,818.50	3.27%	1.34	0.04384586193	4.56%	13.70%	0.18	0.62%
Industrials		\$0.00	0.00%						
Utilities	XLU	\$14,015.78	2.90%	0.47	0.01362616503	-9.17%	100.00%	1.00	-9.17%
Financial Services	XLF	\$88.59	0.02%	1.3	0.00023822457	2.95%	0.55%	0.01	0.02%
Financial Services	SCHD	\$15,968.70	3.30%	0.98	0.03237085366	9.83%	99.45%	0.97	9.78%
Consumer Discretionary		\$0.00	0.00%						
Real Estate	XLRE	\$8,684.14	1.80%	0.66	0.01185575638	-14.88%	100.00%	1.00	-14.88%
Consumer Staples	XLP	\$28,694.67	5.94%	0.59	0.03501964675	-2.73%	33.18%	0.20	-0.91%
Consumer Staples	CAG	\$12,060.91	2.49%	0.67	0.01671526993	15.18%	13.95%	0.09	2.12%
Consumer Staples	KO	\$11,017.54	2.28%	0.6	0.01367396302	-11.59%	12.74%	0.08	-1.48%
Consumer Staples	COST	\$15,434.88	3.19%	0.75	0.02394545179	2.44%	17.85%	0.13	0.44%
Consumer Staples	AMZN	\$19,265.52	3.99%	1.25	0.04981375305	26.73%	22.28%	0.28	5.96%
Cash	Cash	\$154,033.40	31.86%	0					
Market Benchmark	S&P 500			1.00		-14.74%			

Note: Values as of 4/16/2020, sorted by raw beta and sector



# Portfolio Risk Analysis: Raw Beta

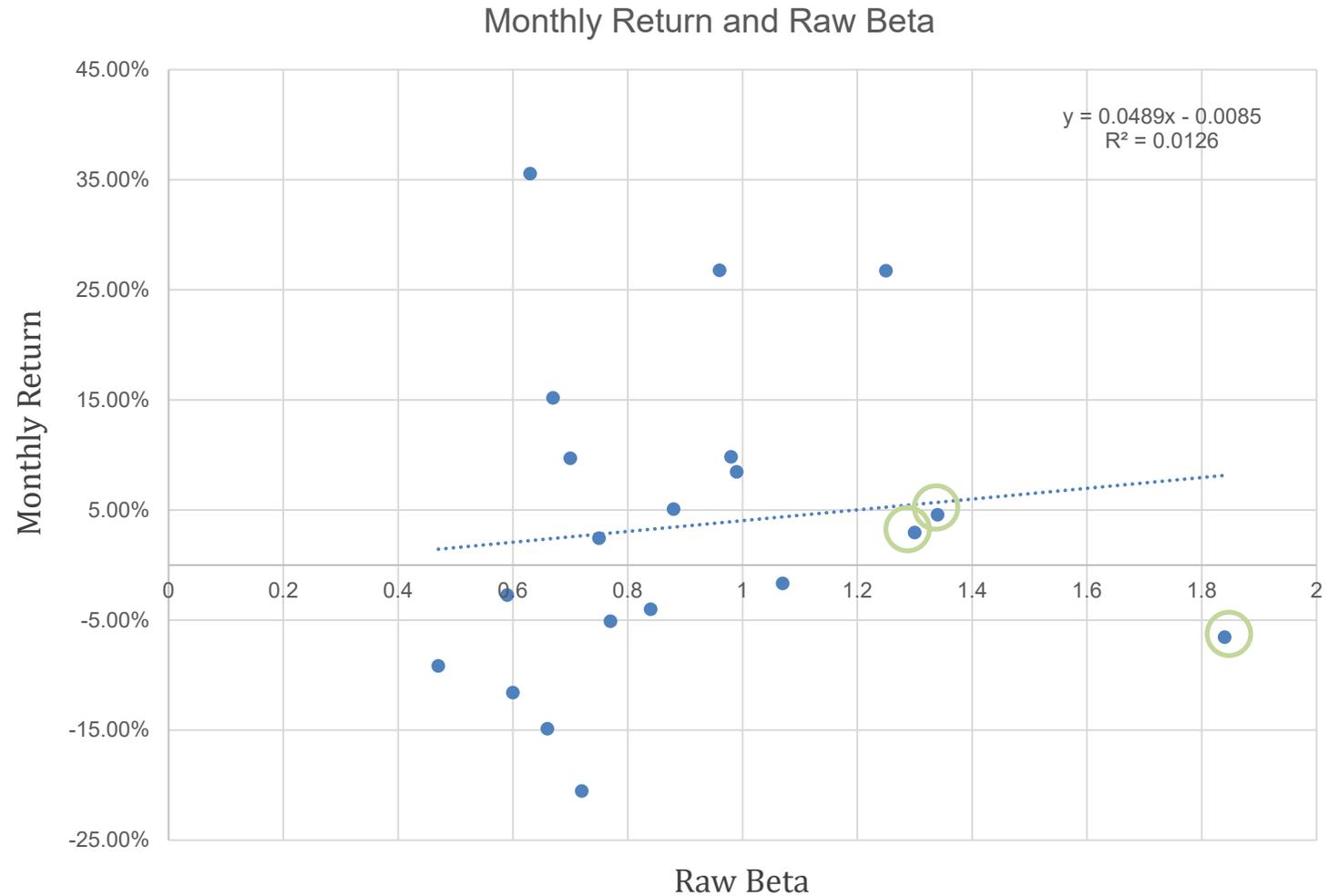


## Highest Raw Betas in the Fall 2019 Portfolio

- VDE, XSD and AMZN are the stocks with the highest betas in our portfolio after our major drop in the month of March

## Risk ≈ Reward

- These stocks, though having the highest risks, did not necessarily outperform the remainder of the portfolio
- Our trendline proves that there is still a positive correlation between risk and return



Note: Raw beta uses data from 1 year



# Portfolio Risk Analysis: Weighted Beta

SAP  
 $\beta$  0.99

VS.

S&P 500  
 $\beta$  1.0

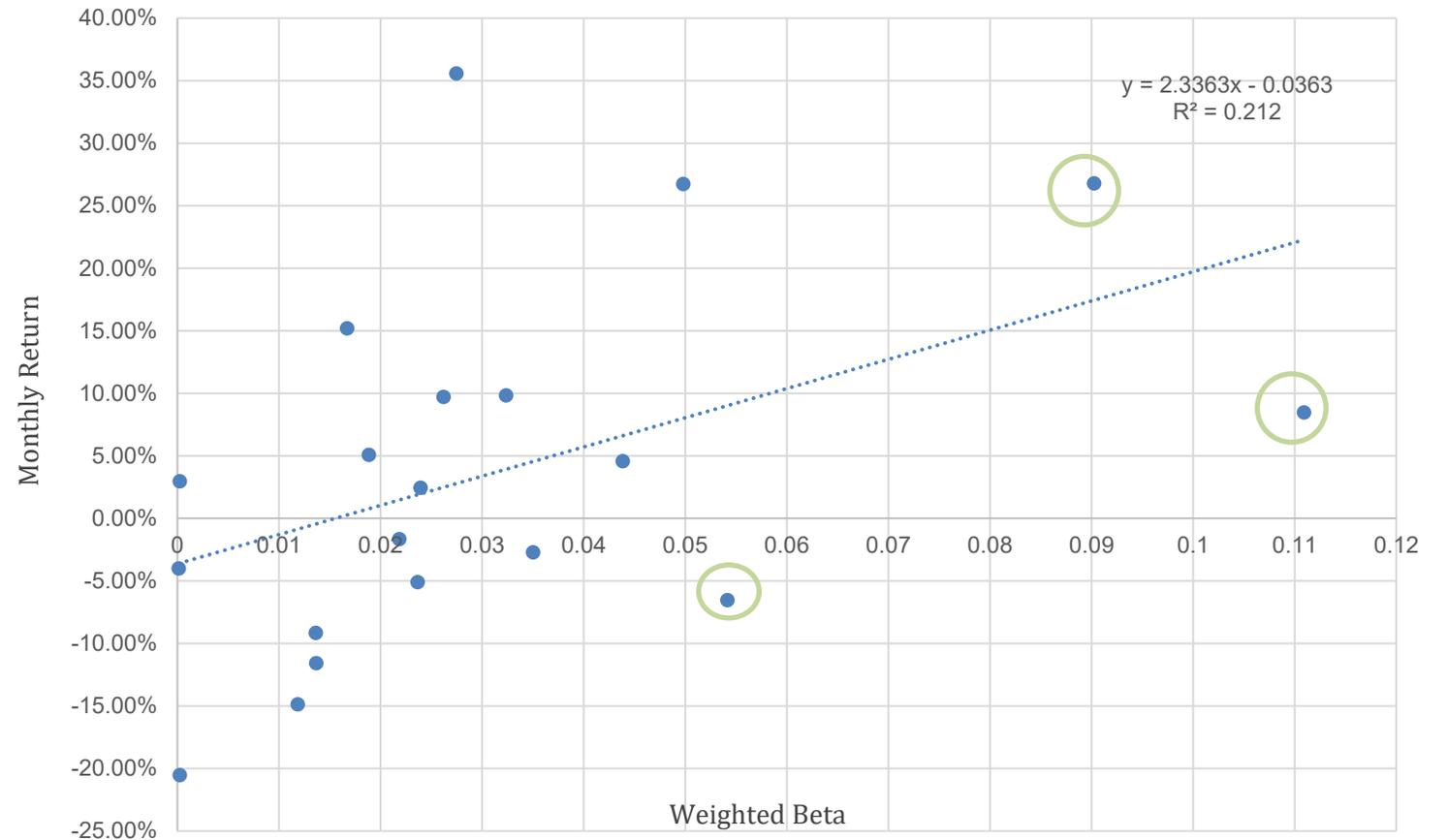
## Highest Weighted Betas in the Fall 2019 Portfolio

- VDE, XLK and MSFT are the stocks with the highest weighted beta in the portfolio

## High Risk $\neq$ High Reward

- The high-risk stocks in our portfolio did not generate the highest rewards
- We hold several negatively weighted beta stocks, making the trendline positive
- The stocks that are near zero are stocks that we have sold but have extra shares left in our portfolio from when we hit the limit.

### Monthly Return and Weighted Beta



Note: Weighted beta is an adjustment of a security's raw beta multiplied by its' weight in the total portfolio



# Correlation Matrix

	XLP	CAG	KO	COST	AMZN	XLF	SCHD	XLV	UNH	CVS	MCK	XLK	MSFT	XSD	VDE	XLC	FB	T	XLU	XLRE	
XLP	1.0000																				
CAG	0.6934	1.0000																			
KO	0.9570	0.5106	1.0000																		
COST	0.7035	0.3968	0.6429	1.0000																	
AMZN	0.3330	0.4299	0.2163	0.5701	1.0000																
XLF	0.9300	0.6040	0.9364	0.4825	0.1588	1.0000															
SCHD	0.9684	0.6794	0.9455	0.5582	0.2246	0.9882	1.0000														
XLV	0.9779	0.7458	0.9143	0.6310	0.3562	0.9273	0.9693	1.0000													
UNH	0.9114	0.6523	0.8540	0.6236	0.3480	0.8478	0.8956	0.9542	1.0000												
CVS	0.9122	0.7022	0.8544	0.5036	0.1809	0.9471	0.9609	0.9353	0.8889	1.0000											
MCK	0.8515	0.4195	0.8694	0.7550	0.4086	0.8093	0.8232	0.8054	0.7450	0.7661	1.0000										
XLK	0.9614	0.6593	0.9408	0.6683	0.4101	0.9464	0.9672	0.9602	0.9013	0.9069	0.8815	1.0000									
MSFT	0.8044	0.5834	0.7663	0.7540	0.7338	0.6907	0.7368	0.7970	0.7531	0.6442	0.8250	0.8737	1.0000								
XSD	0.9312	0.7138	0.8846	0.5272	0.2963	0.9648	0.9797	0.9600	0.8953	0.9543	0.7939	0.9628	0.7477	1.0000							
VDE	0.8890	0.6330	0.8757	0.3781	0.0771	0.9815	0.9686	0.9040	0.8202	0.9502	0.7192	0.8918	0.5873	0.9567	1.0000						
XLC	0.9568	0.6369	0.9437	0.5741	0.2625	0.9865	0.9928	0.9595	0.8927	0.9520	0.8475	0.9760	0.7593	0.9820	0.9612	1.0000					
FB	0.9186	0.6629	0.8881	0.4832	0.1881	0.9759	0.9799	0.9422	0.8677	0.9588	0.7793	0.9406	0.6828	0.9832	0.9747	0.9846	1.0000				
T	0.9098	0.4543	0.9438	0.5328	0.0253	0.9452	0.9356	0.8723	0.8259	0.8944	0.7808	0.8711	0.5838	0.8679	0.9175	0.9277	0.8965	1.0000			
XLU	0.9610	0.5388	0.9811	0.6918	0.2915	0.9110	0.9316	0.9201	0.8688	0.8437	0.8772	0.9465	0.8037	0.8804	0.8382	0.9299	0.8726	0.9099	1.0000		
XLRE	0.9571	0.5185	0.9848	0.6390	0.2546	0.9395	0.9498	0.9343	0.8926	0.8711	0.8675	0.9509	0.7775	0.9063	0.8807	0.9533	0.9054	0.9344	0.9836	1.0000	

Note: 1 Year Correlation Matrix measured taken on 4/16/2020



Spring 2020  
**PERFORMANCE  
REVIEW**

Overview

Sector Summaries

Portfolio Strategy  
& Composition

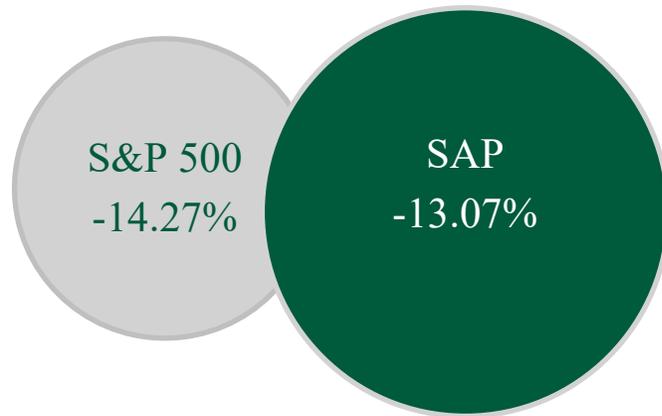
Risk Analysis

Performance  
Review

Student  
Biographies



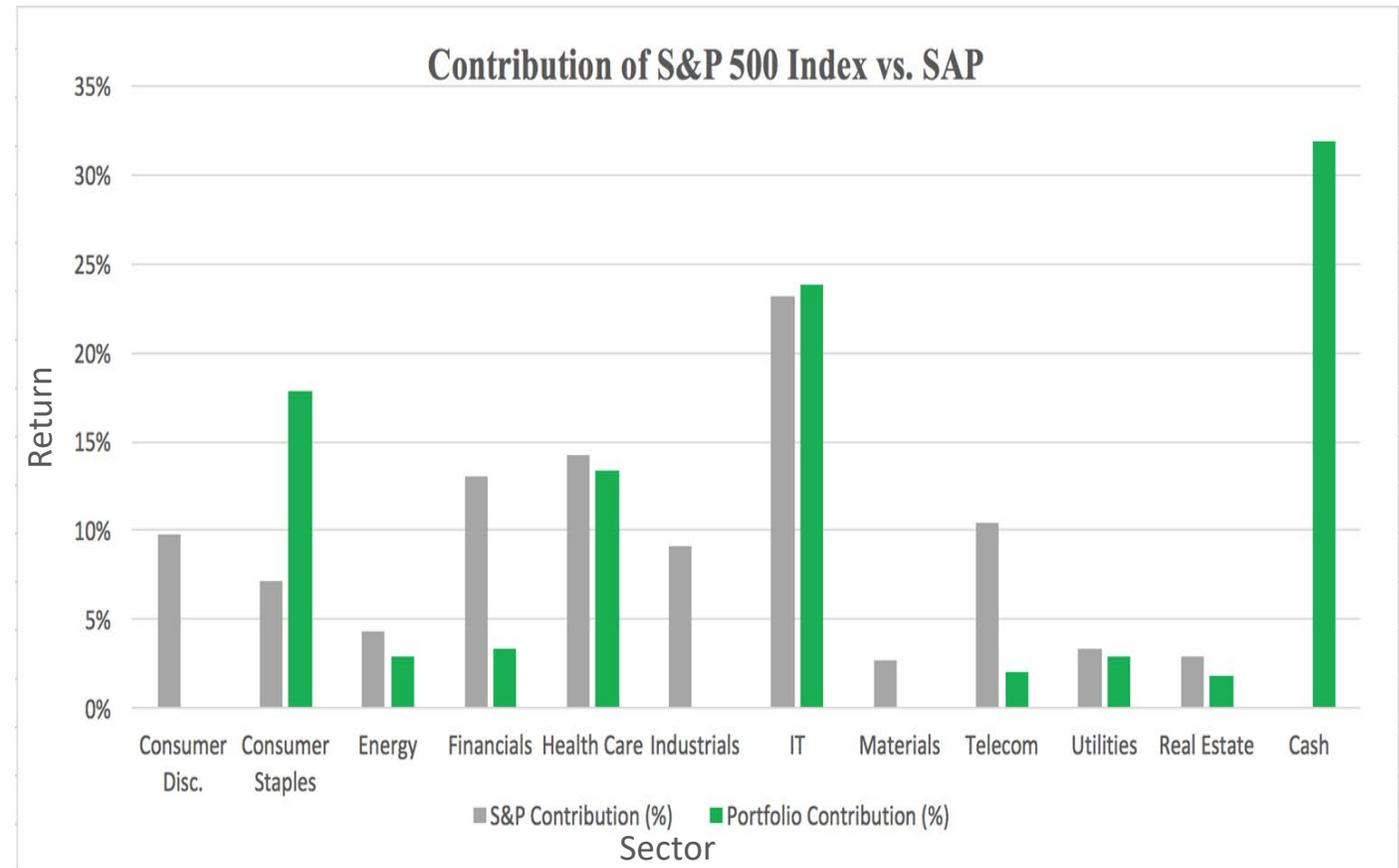
# Portfolio Performance Spring Semester 2020



Performance as of: (01/03/2020) – (04/14/2020)

## Performance Difference

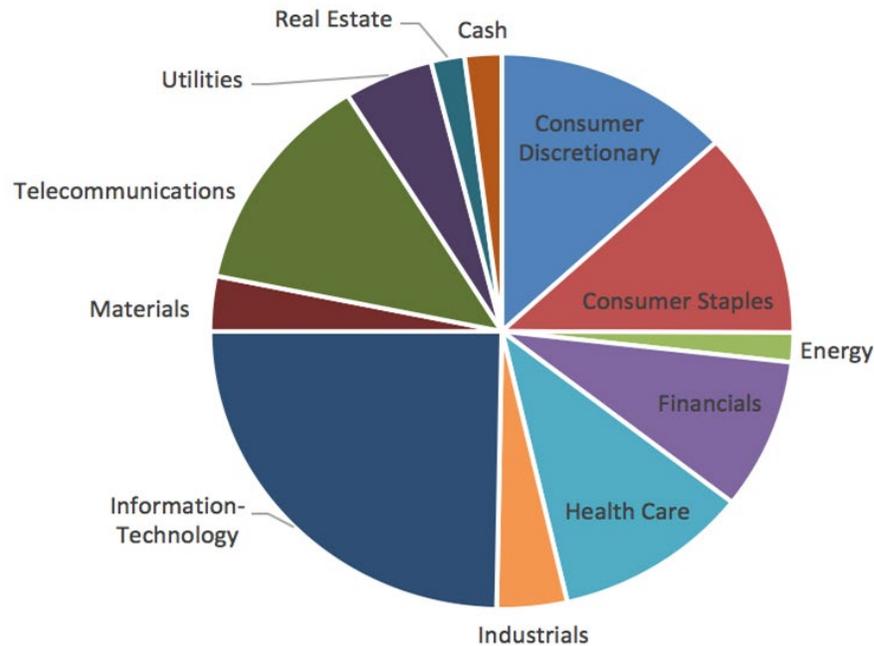
- The graph is our portfolio contribution by sector compared to the S&P 500 Index. Our highest performing sectors was IT, Consumer Staples, and Healthcare. Our portfolio outperformed the S&P 500 by 120 bp.



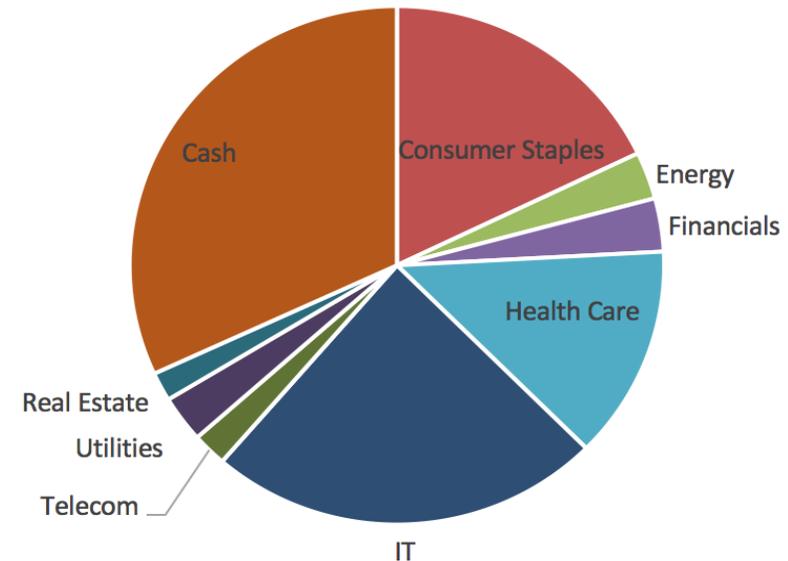


# Changes to Portfolio Contribution By Sector

SAP Portfolio Contribution by Sector 2.4.2020



SAP Portfolio Contribution by Sector 4.17.2020

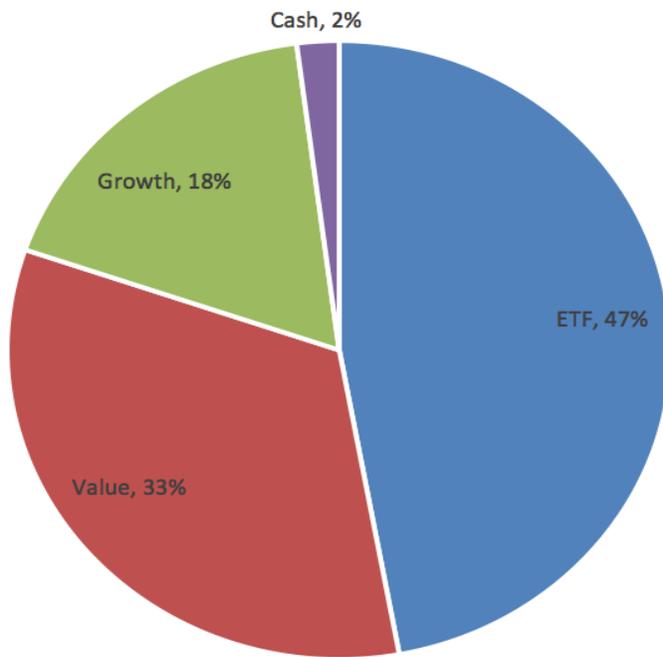


- Consumer Discretionary
- Consumer Staples
- Energy
- Financials
- Health Care
- Industrials
- Information-Technology
- Materials
- Telecommunications
- Utilities
- Real Estate
- Cash

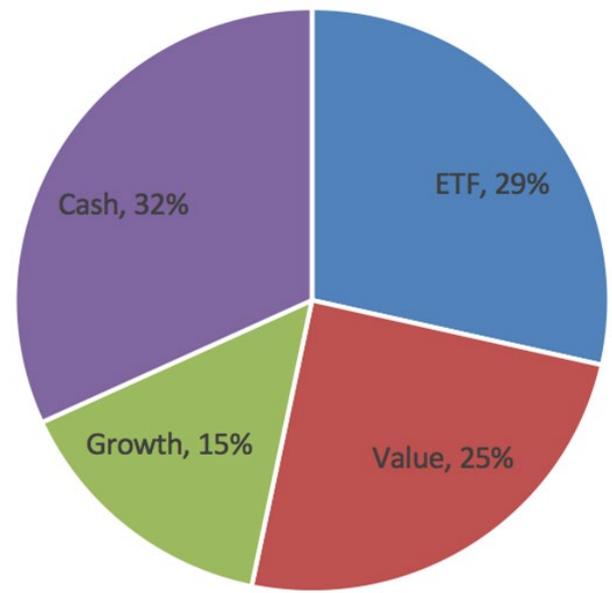


# SAP Portfolio Breakdown by Strategy

SAP Portfolio By Strategy 2.4.2020



SAP Portfolio By Strategy 4.17.2020

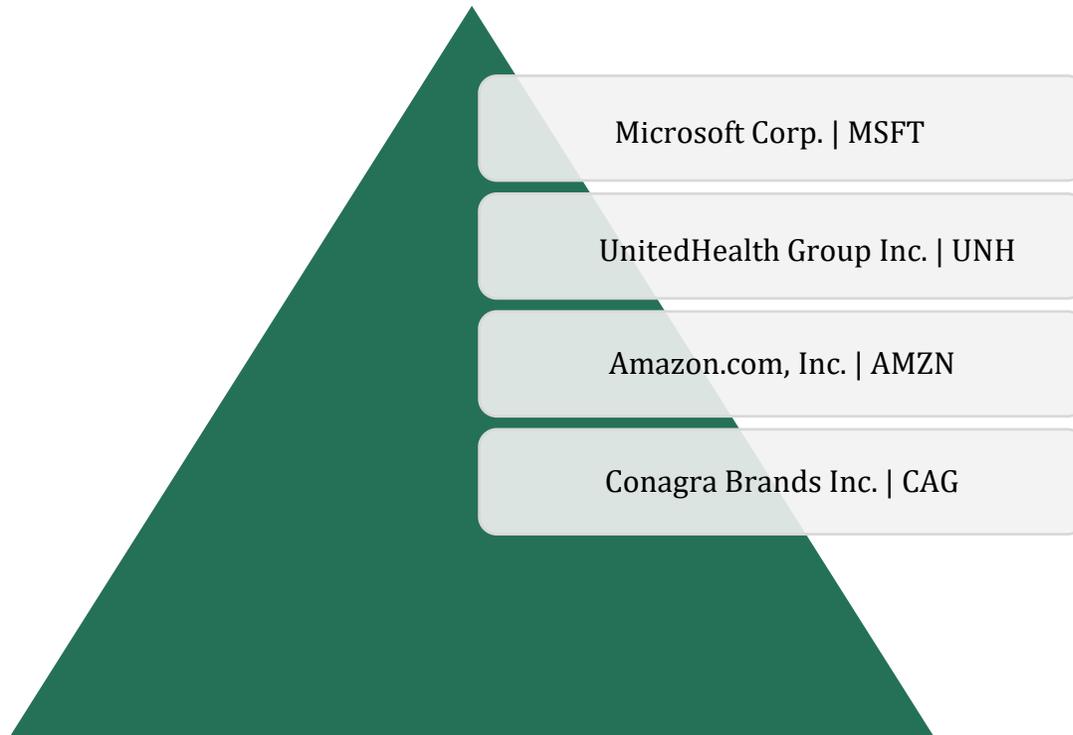


■ ETF ■ Value ■ Growth ■ Cash

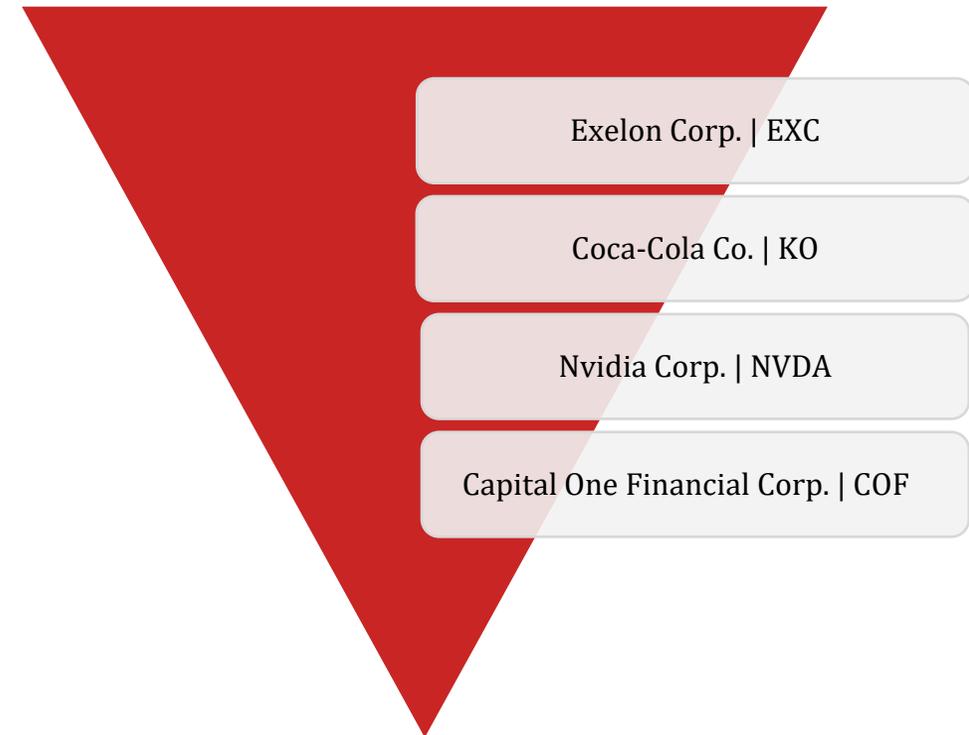


# Performance Attribution

## Outperforming Investments (Spring)



## Underperforming Investments



*Note: Data as of 4/17/2020*



# Top Outperformer – Information Technology

## Position

257 Shares | \$139.66 | \$35,873.70

## Microsoft Corp. | MSFT



Since purchased on September 12, 2019, Microsoft has been the SAP Fund's top overall outperformer to date. In the Fall semester, the class purchased 255 shares of MSFT at \$139.66 and has since jumped to **\$178.60** for a net gain of **27.88%** versus the S&P 500 net loss of **-4.83%** over the same period.

The SAP Fund has seen a gain of around **\$10,000** since purchasing MSFT in the Fall semester as this blue-chip stock is constantly progressing its business with its Cloud systems, LinkedIn, and the popular Microsoft Suite products. Like many companies, MSFT saw a massive dip in mid-March as the Dow Jones had its biggest drop in history. The stock since shrugged off its losses and is back near its all-time high.



# Top Outperformer - Healthcare

## Position

71 Shares | \$205.09 | \$14,561.85

## UnitedHealth Group Inc. | UNH



Since purchased on October 7, 2019, UnitedHealth Group Inc. has been a top outperformer for the Fund. 71 shares of UNH were purchased at \$220.12 and has since jumped to \$285.30 for a net gain of **29.61%** versus the S&P 500 with a loss of **-1.06%** over the same period.

UnitedHealth Group has seen some incredible gains after being added to the SAP fund, up approximately **\$4,628** since October. It has mostly been an uphill climb; however, UNH saw a massive drop off in mid-March, as did the entire market. The stock has since recovered and generates strong returns.



# Top Outperformer – Information Technology

## Position

8 Shares | \$1900.21 | \$15,201.68

Amazon.com, Inc. | AMZN



Since purchased on March 24, 2020, Amazon has been one of the Fund's top outperformer to date. 8 shares of Amazon were purchased at \$1,900.21 and has since jumped to \$2,375.00 for a net gain of 24.99% versus the S&P 500 20.78% over the same period.

AMZN was pitched utilizing a growth strategy as the company's revenue growth and return on equity were significantly higher than its competitors. At the price of our acquisition we believed Amazon was truly undervalued and a great investment

Amazon shares dropped to around \$1,900 because of the market volatility and lack of sales due to COVID-19. This proved to be an incredible buying opportunity for the blue-chip company, and after the purchase the stock has shot up to its all time high of \$2,375.00. This produced a return of 24.99% or a profit of \$3,798.32.



# Top Outperformer – Consumer Staples

## Position

355 Shares | \$29.06 | \$10,315.06

## Conagra Brands Inc. | CAG



Since purchased on October 7, 2019, Conagra Brands has been one of the Fund's top performers to date. 355 shares of CAG were purchased at \$29.05 and has since jumped to \$33.19 for a net gain of 14.11%.

Since its acquisition, the Fund has gained \$1,453.19 from Conagra Brands. CAG is the parent company of well-known brands such as Vlasic, Chef Boyardee, SlimJim, and Orville Redenbacher's. Conagra was originally pitched as a value stock, meeting all criteria required. This decision was further supported by their commitment to producing health-conscious products, focus on value over volume, and diversity of products offered.

Although initially impacted by COVID-19, Conagra quickly recovered near the 52-week high. This jump following the coronavirus outbreak was due to their promising Q4 earnings report, which revealed an increase in demand for their subsidiaries' products due to coronavirus stockpiling by consumers.



# Top Underperformer – Utilities

## Position

225 Shares | \$44.59 | \$10,032.75

## Exelon Corp. | EXC



Since purchased on November 7, 2019, Exelon was one of the Fund's worst performers to date. 225 shares of EXC were purchased at \$44.59 and hit a 20% stop-loss when the stock price dropped to \$34.57 for a net loss of **21.14%**.

EXC was pitched under a value strategy with a lower Price/Book and Price/Sales ratio, and a higher dividend yield than both the industry average and its major competitors. This investment decision was supported because at the time, Exelon was undervalued in its industry and unaffected by rising costs of coal and natural gas prices. There were regulations in place to support growth in the future.

The position realized positive gains, peaking in mid-February at slightly above \$50 per share, but due to COVID-19, the position fell steeply throughout the remainder of February and March. Due to lockdowns and business shutdowns worldwide, there has been a substantial drop in demand for gas, which has negatively affected Exelon and firms throughout the industry.



# Top Underperformer – Consumer Staples

## Position

234 Shares | \$53.28 | \$11,017.54

## Coca-Cola Co. | KO



Since purchased on November 20, 2019, Coca-Cola Co. has been one of the Fund's worst performers. 233.92 shares of KO were purchased at \$53.28 and have since dropped to \$47.10 for a net loss of **11.59%**.

As a dividend aristocrat, Coca-Cola, was pitched under a dividend strategy. Coca-Cola generates revenue through finished goods, or products ready in bottles and cans, and syrups which are later bottled and distributed. The decision to invest in Coca-Cola was fueled by their dominance within the non-alcoholic beverage market, consistent dividend growth, promising acquisitions, and strong marketing presence.

Prior to COVID-19, Coca-Cola was one of our best performing stocks, up nearly 13%. However, KO derives 15% of their revenue from the Asia-Pacific region, which has been widely hurt by the pandemic. Additionally, overall consumer spending has dropped which has hampered revenue growth.



# Top Underperformer – Information Technology

## Position

62 Shares | \$250.87 | \$15,553.93

## NVIDIA Corp. | NVDA



Since purchased on February 6, 2020, Nvidia was one of the Fund’s worst performers to date. 62 shares of NVDA were purchased at \$250.87 and hit a 20% stop-loss when the stock price dropped to \$197.60 for a net loss of **21.23%**.

NVDA was pitched under a growth strategy. Our investment decision was fueled by Nvidia’s upcoming product lines and ventures, in addition to the increasing demand for computing power as A.I. becomes more prevalent.

NVDA is a volatile stock. It quickly rose to a peak of \$316.32 two weeks after investing. NVDA saw great volatility due to COVID-19 following its peak in mid-February, falling to a 20% stop-loss less than a month later. As a result, our position was sold at \$197.60. It continued to show its volatility after sale, as the stock price has jumped up nearly 45% to \$288 since the stop-loss.



# Top Underperformer – Financials

## Position

160 Shares | \$93.64 | 14,981.79

## Capital One Financial Corp. | COF



Since purchased on September 23, 2019, Capital One has been one of the Fund's worst performers to date. 160 shares of Capital One were purchased at \$93.64. COF dropped to \$74.32 on March 11, 2020 and all 160 shares were sold on this date. This incurred net loss of **-20.63%** compared to a **-8.12%** return for the S&P 500 over the period.

COF was pitched under the value strategy, as it had a much lower Price/Book and Price/Sales ratio than industry average. In addition to this, the firm pays out higher dividends than most of its competitors. The investment was justified by low consumer debt levels, and solid results from Capital One's investment to grow its digital transformation.

The investment steadily grew its first few months in the portfolio, peaking at over \$106 per share in late January. However, due to COVID-19, the position dropped quickly in the closing weeks of February and opening weeks of March, and the stop-loss order was executed.