



Sellinger Applied Portfolio Review

Summer 2020



Overview



Overview

- The Sellinger Applied Portfolio (SAP) provides undergraduate and graduate students an opportunity to manage a pool of institutional capital within set investment parameters. The SAP allows students to learn and apply principles of asset allocation, diversification, macroeconomic theory, econometrics, fundamental research, and risk management to a pool of \$500,000
- Students may invest in U.S. listed equity securities (including ADRs) and ETFs
- Summer 2020 Term: May 11 – July 8



Sector Allocations

- We sought overweights in higher-quality portions of the market (IT, Health Care)
- Cyclical sectors (Energy, Industrials, Materials, Consumer Discretionary) were targeted as underweights due to their economic sensitivity
- The chart to the right captures the position strategies agreed upon during the first class meeting

GICS Sector	Position Strategy	Target	S&P Contribution (%)	Portfolio Contribution (%)
Consumer Staples	Overweight	13.28%	7.20%	16.97%
Health Care	Overweight	16.00%	14.20%	22.64%
Information-Technology	Overweight	24.73%	23.20%	28.63%
Cash	Overweight	11.00%	0.00%	3.71%
Telecommunications	Overweight	12.00%	10.40%	2.53%
Real Estate	Underweight	1.67%	2.90%	1.77%
Consumer Discretionary	Underweight	3.85%	9.80%	8.03%
Energy	Underweight	0.00%	4.30%	3.47%
Financials	Underweight	11.00%	13.00%	7.13%
Industrials	Underweight	4.00%	9.10%	2.48%
Materials	Underweight	0.00%	2.70%	0.00%
Utilities	Underweight	2.70%	3.30%	2.65%



Investment Guidelines and Summary

- Our investment decisions were made in accordance with the investment policy statement set forth by the University
- The following slides will dive into the portfolio's positioning, performance, and key considerations during the Summer 2020 term
- All portfolio data is as of June 30, 2020 unless otherwise noted

Investment Philosophy:

1. Allowable investments include:
 - 1.1. U.S. exchange listed stocks, including ADRs
 - 1.2. Unleveraged ETFs, including stock index ETFs and commodity ETFs
 - 1.3. Only investment grade securities
2. Unallowable investments include "sin" stocks, e.g., manufacturers of cigarettes, alcohol, firearms, or companies engaged in gambling activities. Moral and social considerations must be taken into consideration throughout the investment process, with emphasis on the United States Conference of Catholic Bishops principles of investments¹.

Investment Strategies:

1. The primary investment strategy is to select stocks that are undervalued and will outperform their industry and the S&P 500 index over the course of the investment period.
2. Diversification across sectors will be a key part of the investment strategy, although given market conditions in a particular time period, certain sectors may be significantly under-weighted and others over-weighted. Asset allocation targets include:
 - 2.1. Not more than 10% will be invested in any one stock
 - 2.2. Not more than 25% will be invested in a single index
 - 2.3. Not more than 30% will be invested in a single sector²
3. There will ordinarily be three types of investment strategies within the SAP Fund:
 - 3.1. A growth investment strategy
 - 3.2. A value investment strategy
 - 3.3. A dividend strategy



Economic Conditions

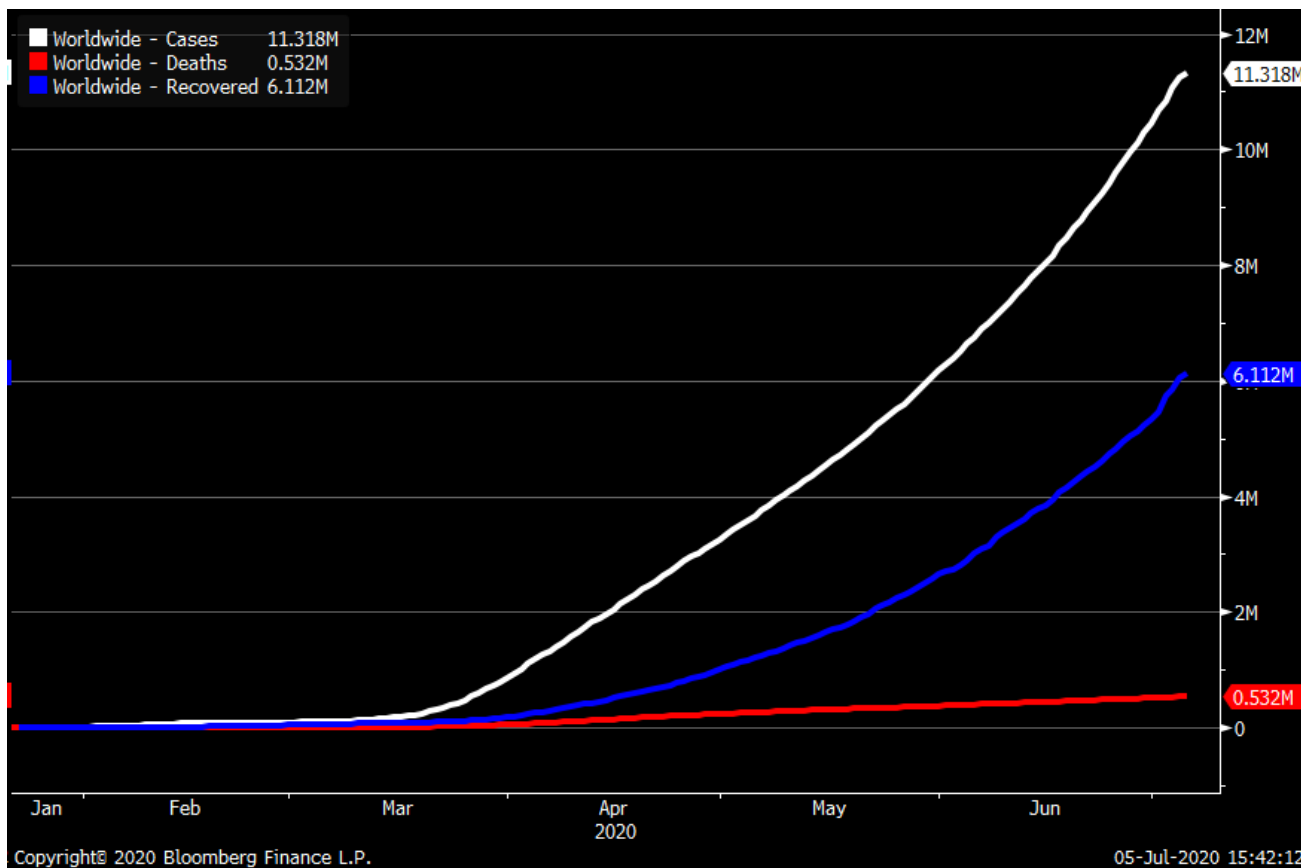


Key Factors

- Several macroeconomic, geopolitical, and public health factors underpinned our investment thinking during the term
 - COVID-19's impact (duration, recovery)
 - 2020 Presidential election
 - China/ trade negotiations
- The following slides will delve into these factors, as well as related (and broader) macroeconomic trends



COVID-19 at Large



- Over 11.3M confirmed cases as of July 5, 2020
 - EMEA: 3.996M
 - USA: 2.852M
 - APAC: 1.501M
- Its impact on global supply chains, capital markets, and employment was (and remains) significant.

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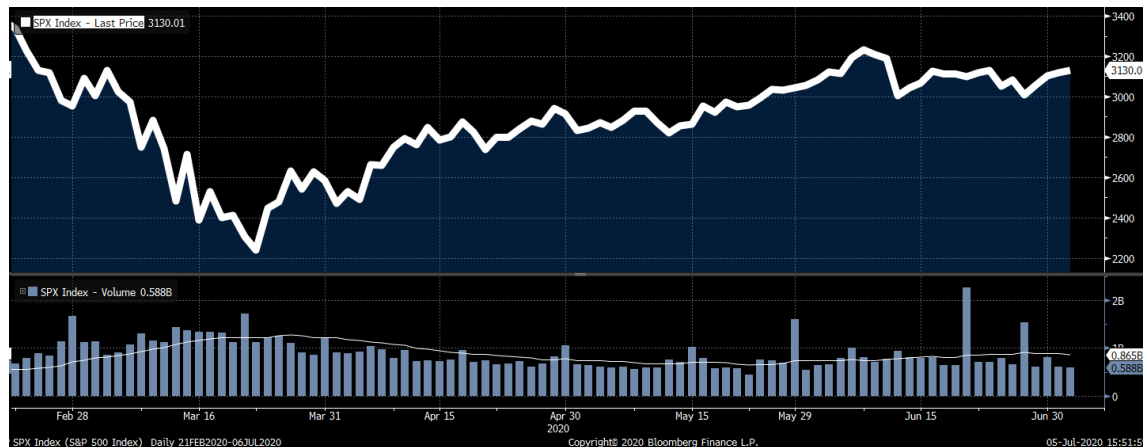
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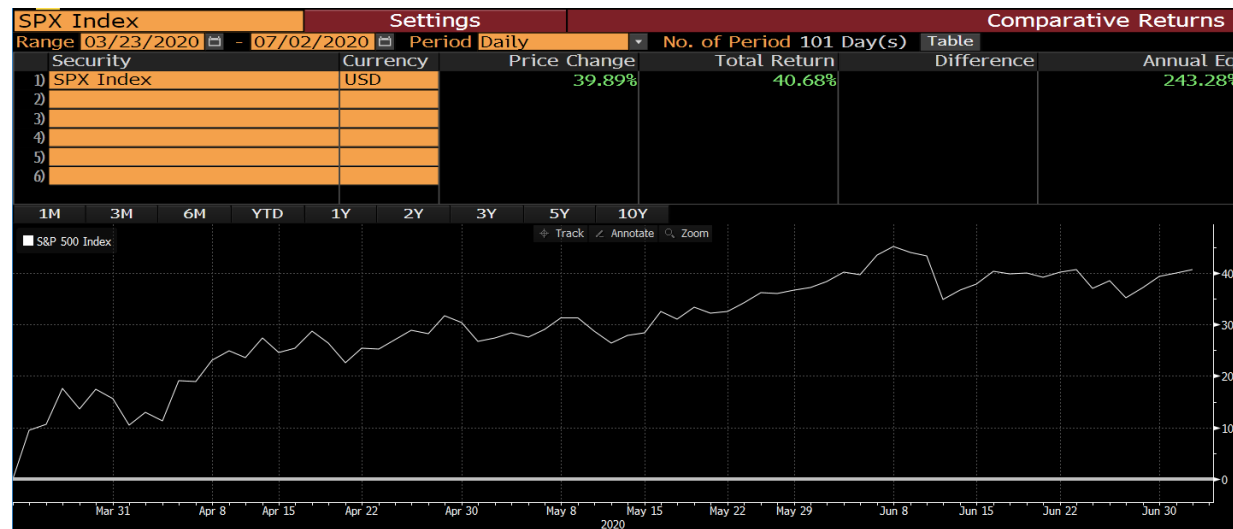
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Market Has Been a Roller Coaster



- Market volumes became (and remain) incredibly elevated since late February 2020
- Since low (March 23), S&P 500 is up 40.7%



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Monetary and Fiscal Policy To The Rescue (Sort Of)

POLITICS

House Narrowly Passes \$3 Trillion Aid Package

Approval caps weeklong effort by Democratic leaders to quash rebellions by wings of party



- CARES Act provided much needed support to American public
 - Direct payments
 - Aid for state and local government
- Congress currently weighing need for second wave of fiscal stimulus

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Monetary and Fiscal Policy To The Rescue (Sort Of)

POLITICS

Fed's Jerome Powell Says Economy Faces Long, Uncertain Recovery

It will be hard for public to be 'fully confident' without a coronavirus vaccine, central bank chairman says

ECONOMY | U.S. ECONOMY

Fed Officials Project No Rate Increases Through 2022

Central bank says it will maintain current pace of asset purchases to sustain growth



- Federal Reserve slashes benchmark Federal Funds rate to zero
- Acknowledges long-term difficulty for economic conditions
- Stabilization of capital markets
 - ETF purchases
 - Corporate credit purchases
 - Municipal liquidity facility
 - Main Street lending

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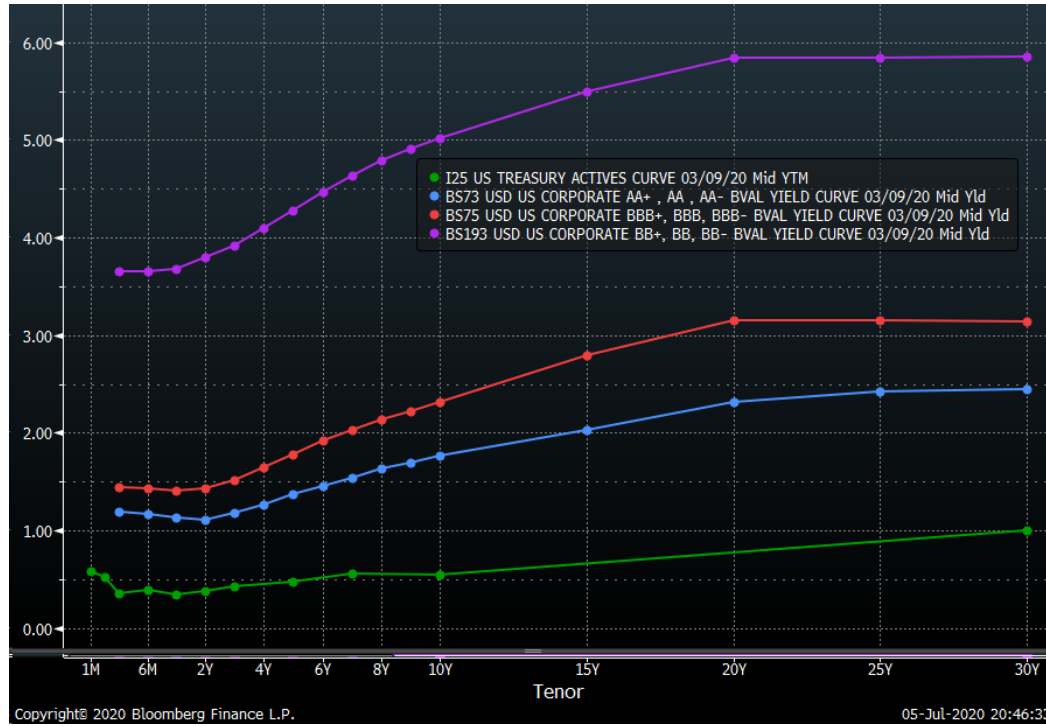
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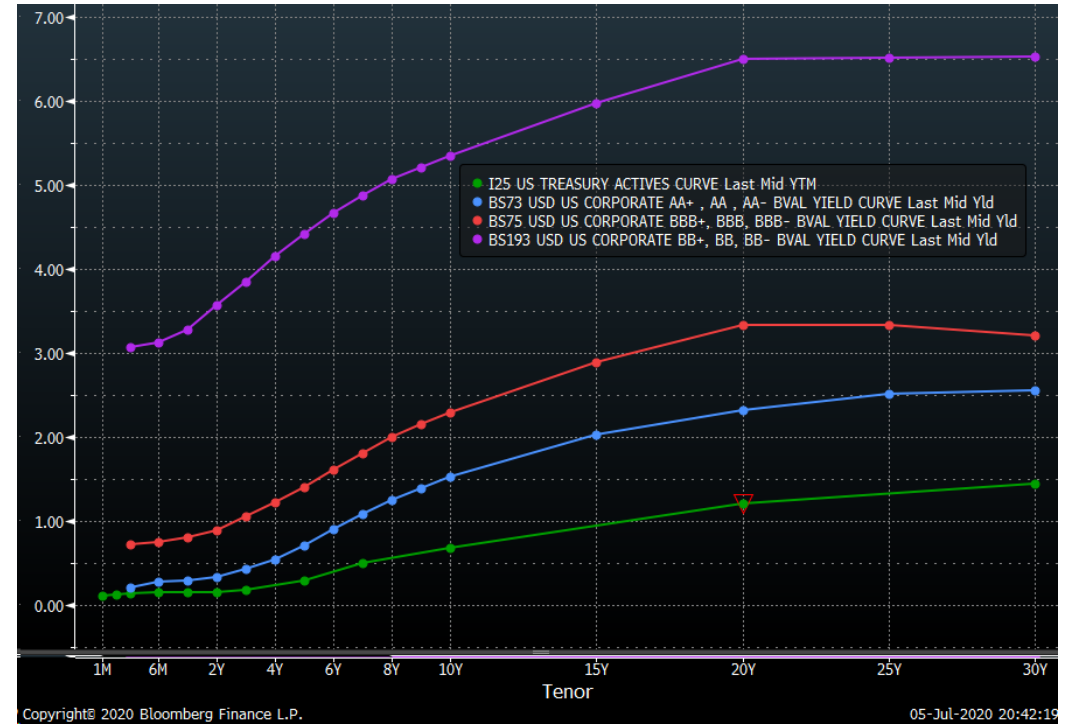
Yield Curves Have Bear Steepened

Long-term rates have risen faster than short-term rates

March 9 (10 Yr. Treasury Low)



July 5



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China Trade Tensions Continue...

China Message to U.S.: Crossing 'Red Lines' Could Put Trade Deal at Risk

Beijing quietly tells Washington that 'meddling' in Hong Kong, Taiwan and other matters could jeopardize Chinese goods purchases under the Phase One trade deal



- Continued concerns over Phase One trade deal loom
- China notes that U.S. meddling in Hong Kong and other issues could impact Chinese goods listed under Phase One

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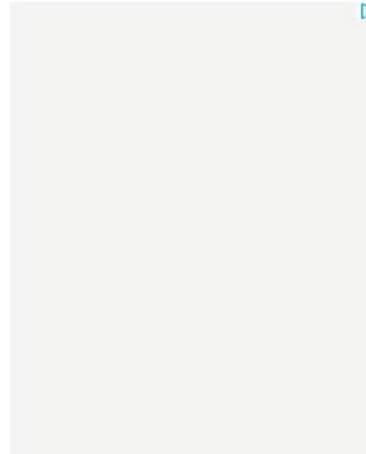
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China Trade Tensions Continue...

U.S. Moves to Cut Off Chip Supplies to Huawei

New restriction stops foreign semiconductor manufacturers whose operations use U.S. software and technology from shipping products to Huawei without first getting a license from U.S. officials



- Trump administration attempted to block Huawei from accessing intermediate goods leveraging U.S. software and technology
- Ultimately, the Commerce Department amended these efforts to allow for continued development, maintenance of critical 5G networks

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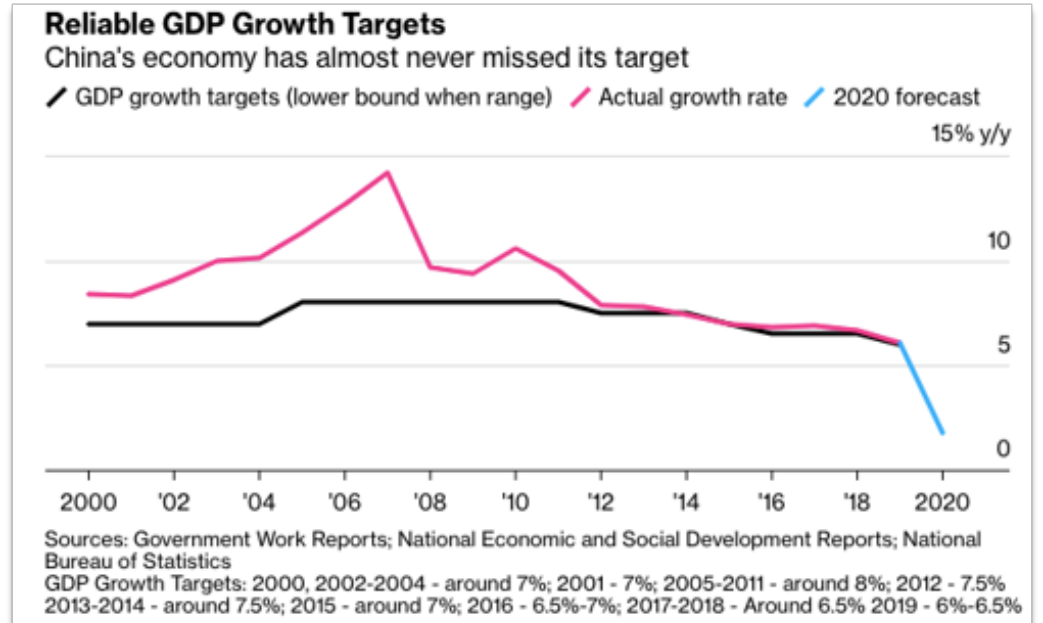
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...While It Slashes Its Growth Target

- Country does not set a hard target for growth
- Policy efforts are focused at stimulating and renewing employment and investment
- Target figure for budget deficit: 3.6% of GDP





Amidst Pandemic, an Election Looms



- Concerns regarding health care policy, taxation, economic equality loom amidst global health crisis
- Importantly, these topics—among others—are not unique to this election. Typical with regime change

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Polls Show a Regime Change is Likely



Biden (Blue) has an over 60% implied probability of winning the 2020 Election

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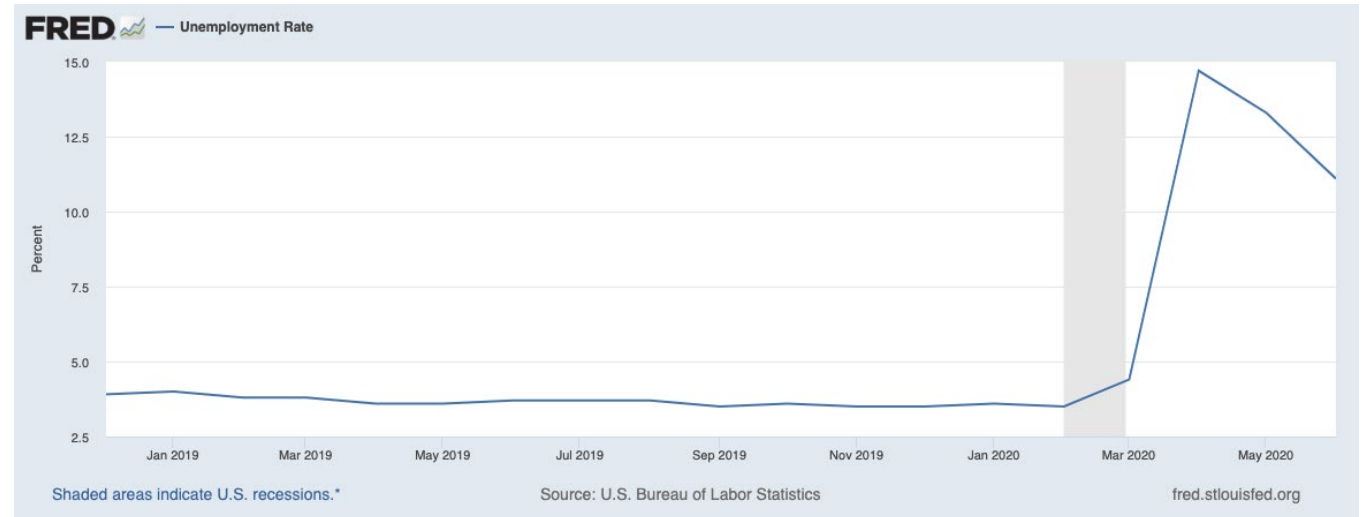
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Unemployment Remains Elevated, But is Falling

- June 2020: 11.1%
 - April: 14.7%
 - May: 13.3%
- Questions about quality of employment (seasonal) and stickiness in hard-hit industries (restaurants) remain.
- Tough to garner major insights, especially with unemployment subsidy





Growth, Inflation Are Expected to Remain Soft Over Long Term



- 10-Year Treasury-TIPS Spread shows tepid long-term inflation, an indication of lackluster growth
- Hopes for “V-Shaped” recover remain, but rebound has slowed according to yield spreads



Sector Summary



Sector Summary

Throughout the semester, the class decided on target weights of the portfolio by the S&P 500 sector. During the first class of the semester, we refined our course of action and made adjustments until the end of the course June 30, 2020.

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Consumer Discretionary

The Consumer Discretionary sector is composed of companies that primary business is the sale of non-essential goods or services to consumers. The companies in this sector typically are among the most sensitive to economic cycles. The S&P 500 portion of this index, ticker IXY, is composed of 63 companies including various retailers (online, clothing, home, discount) as well as restaurants, automotive, entertainment, hotel and travel.

- Leaders of the sector:
 - Amazon, McDonald's, Nike, Lowe's, Starbucks, Booking Holdings (Priceline), TJ Max, Target, and Dollar General
- Portfolio Owns:
 - Amazon & Ball Corporation
- Performance:
 - Outperformed the S&P 500 over the short and long term by a modest margin.
- News:
 - Strong Retail sales



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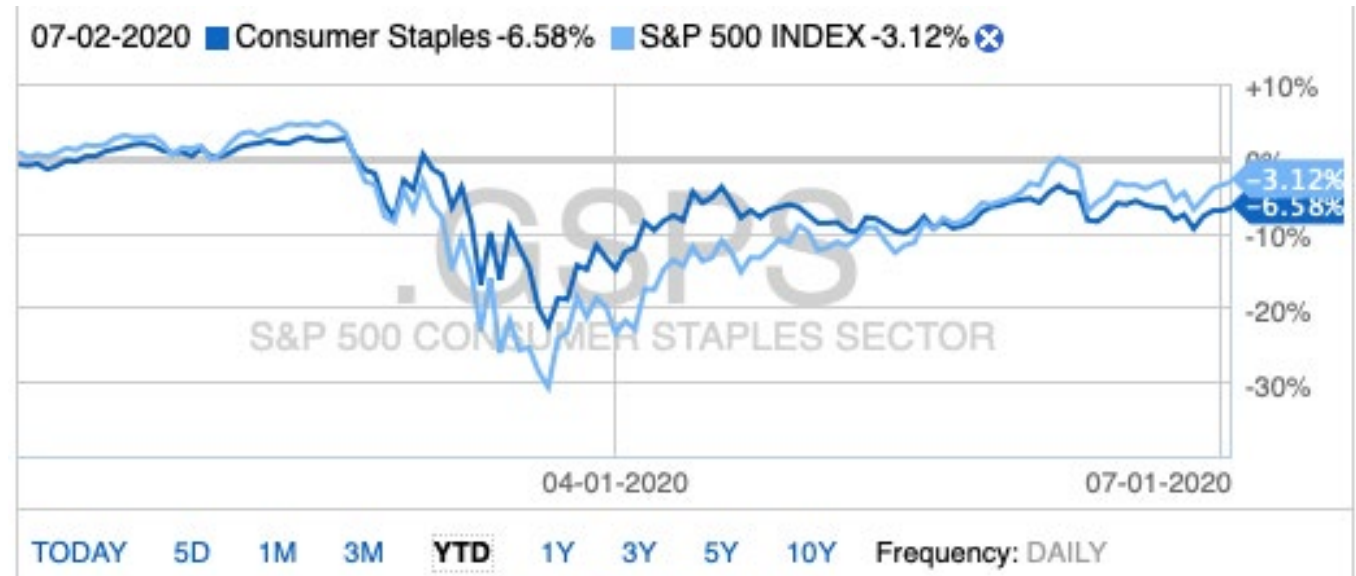
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Consumer Staples

The Consumer Staples Sector contains companies that manufacture and distribute food, beverages and tobacco. It also comprises companies that produce non-durable household goods and personal products. Finally, the Consumer Staples sector contains companies involved in food and drug retailing as well as consumer super centers. The Consumer Staples Sector consists of six industries. These are identified as Beverages, Food and Staples Retailing, Food Products, Household Products, Personal Products, and Tobacco. Companies within the Consumer Staples Sector market and sell essential products that the consumer is unable or unwilling to go without, regardless of their financial situation. Stocks of companies within this sector are non-cyclical, that is, their growth depends little on the current economic situation.

- Leaders of the sector:
 - Dollar General, Costco, Clorox, Target
- Portfolio Owns:
 - Conagra Brands, Dollar General, Costco, XLP ETF, Coca-Cola
- Performance:
 - Underperformed the S&P 500
- News:
 - Coronavirus
 - Consumer Confidence and slowed Consumer spending



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Communication Services

The Communication Services sector is composed of companies with revenue generated from fixed-line, cellular, wireless, high bandwidth and fiber optic cable networks.

- Leaders of the sector:
 - Zoom, Netflix, Disney
- Portfolio Owns:
 - Facebook, XLC ETF, & AT&T
- Performance:
 - Underperformed the S&P 500
- News:
 - 5G
 - Shift to online



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Energy

The Energy sector comprises companies involved in the exploration, production, transportation, and distribution of various energy crude and refined products (oil, shale, natural gas, gasoline, lubricants, etc.). The sector accounts for 3% of the Index, ahead of both the utilities and real estate sectors.

- Leaders of the sector:
 - Exxon, Chevron, Occidental, Haliburton
- Portfolio Owns:
 - VDE ETF
- Performance:
 - Underperformed the S&P 500
- News:
 - Glut of supply- Saudi Arabia & Russia





Financials

The Financial Sector comprises companies involved in banking, mortgage finance, consumer finance, specialized finance, investment banking and brokerage, asset management, corporate lending, insurance, financial investment, real estate investment trusts (REITS) and real estate management and development. The Financial Sector is one of the largest components of the S&P 500. It consists of seven distinct industries: The Banks, Capital Markets, Consumer Finance, Diversified Financial Services, Insurance, Mortgage Reits and Thrifts & Mortgage Finance. The performance of the Financial Sector is a bell weather for the economic health in the United States. Companies within the Financial Sector provide loans for businesses, mortgages to homeowners, and insurance to consumers.

- Leaders of the sector:
 - Ameriprise Financial, Bank of America, JPMorgan
- Portfolio Owns:
 - XLF ETF, SCHD ETF
- Performance:
 - Underperformed the S&P 500
- News:
 - Interest Rates
 - Uncertainty of health of economy



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Healthcare

The Health Care Sector encompasses two main industry groups. The first includes companies who manufacture health care equipment and supplies or provide health care related services, including distributors of health care products, providers of basic health-care services, and owners and operators of health care facilities and organizations. The second regroups companies primarily involved in the research, development, production and marketing of pharmaceuticals and biotechnology products.

- Leaders of the sector:
 - JNJ, Merck, PFizer, CVS, Biogen, DaVita
- Portfolio Owns:
 - LHC Group, CVS, XLV ETF, UnitedHealth Group
Vertex Pharmaceuticals, Merck
- Performance:
 - Outperformed the S&P 500
- News:
 - Covid-19 and Possible Vaccines



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Industrials

The industrial sector is comprised of companies that are in the manufacturing industry. The manufacturing firms normally specialize in areas such as aerospace, defense, engineering, construction, distribution of capital goods, and building products. This sector also includes companies who make and sell equipment and machinery. This sector's performance is reliant on supply and demand of building materials and historically has done well during bull runs and has contractions during recessions.

- Leaders of the sector:
 - 3M, Caterpillar, Northrop Gruman
- Portfolio Owns:
 - L3Harris Corporation
- Performance:
 - Underperformed the S&P 500
- News:
 - Recovering Retail Sales



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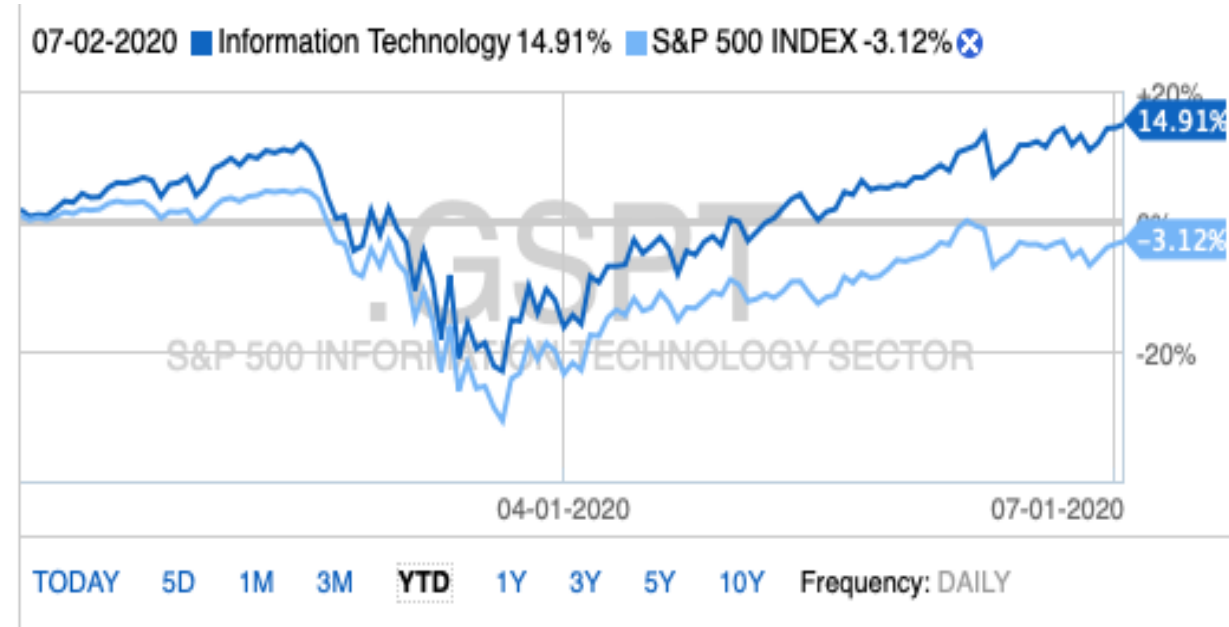
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Information Technology

The Information Technology (IT) sector comprises companies involved in cloud computing, networking and network security, software development, data processing, hardware creation and semiconductor production, among other related fields. The sector is the largest weight (26.6)% of the market-cap weighted Index. A repeated copy of the Index Weights chart from the Energy section is provided below for convenience.

- Leaders of the sector:
 - NVIDIA, QUALCOMM, Intel, Apple, Cisco
- Portfolio Owns:
 - Microsoft Corp, Salesforce, XLK ETF, XSD ETF
- Performance:
 - Outperformed the S&P 500
- News:
 - US-China trade tensions
 - 5G





Materials

The material sector is made up of companies that operate in the commodity-related manufacturing industries. This includes companies that are in the business of manufacturing glass, chemicals, papers, packaging products, metals, minerals, and mining companies. This sector provides a full cradle to grave of discovery, development, and processing of raw materials.

- Leaders of the sector:
 - Sherwin-Williams, Newmont Corp., Vulcan Materials
- Portfolio Owns:
 - None
- Performance:
 - Underperformed the S&P 500
- News:
 - Global downturn



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Utilities

The Utilities Sector encompasses those companies considered electric, gas or water utilities, or companies that operate as independent producers and/or distributors of power. This industry has a market capitalization of \$1.37 trillion and an enterprise value of \$66.77 billion with a market weight of 3.24% of the SP 500. This makes it one of the smaller sectors. The top 5 revenue companies are NextEra, Duke, Enbridge, Dominion and The Southern Co. and these account for \$370 billion of the market cap.

- Leaders of the sector:
 - NRG Energy, PPL Corp., Exelon
- Portfolio Owns:
 - XLU ETF
- Performance:
 - Underperformed the S&P 500
- News:
 - Strongly defensive during downturns
 - Stable cash flows



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Real Estate

The real estate industry is comprised of three main segments. These segments are residential real estate, commercial real estate, and industrial real estate. The industry is also made up of Real Estate Investment Trusts (REITs) other than mortgage REITs which are part of the financial sector. These facets include, development of properties, appraisals, rentals, selling and management of said properties. The real estate industry also includes many jobs such as agents, brokers, building managers, real estate attorneys, and many others. This industry is very unique and has remained mostly consistent due to the fact that people always need a home to live in and businesses always need office space to operate in.

- Leaders of the sector:
 - Invesco Mortgage Capital, VNQ ETF, Tanager Factory Outlet Centers
- Portfolio Owns:
 - XLRE ETF
- Performance:
 - Underperformed the S&P 500
- News:
 - Low interest rates
 - Increases New Home Sales
 - Weak Existing Home Sales



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Sector Allocation

Sector	Position Strategy	Target	Portfolio Contribution	S&P Contribution (%)	Portfolio Contribution (%)
Consumer Discretionary	Underweight	3.85%	Underweight	9.80%	8.03%
Consumer Staples	Overweight	13.28%	Overweight	7.20%	16.97%
Energy	Underweight	0.00%	Underweight	4.30%	3.47%
Financials	Underweight	11.00%	Underweight	13.00%	7.13%
Health Care	Overweight	16.00%	Overweight	14.20%	22.64%
Industrials	Underweight	4.00%	Underweight	9.10%	2.48%
Information-Technology	Overweight	24.73%	Overweight	23.20%	28.63%
Materials	Underweight	0.00%	Underweight	2.70%	0.00%
Telecommunications	Overweight	12.00%	Underweight	10.40%	2.53%
Utilities	Underweight	2.70%	Underweight	3.30%	2.65%
Real Estate	Underweight	1.67%	Overweight	2.90%	1.77%
Cash	Overweight	11.00%	Overweight	0.00%	3.71%

**S&P sector contributions as of 30/06/2020*

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Portfolio Strategy & Composition



Portfolio Strategy & Comp.....

Strategy overview

- This class's session is from May 11th until July 8th. Given we started in the throes of an unprecedented worldwide pandemic, our strategic outlook was different than most previous classes. We will not recount all the variables, but the pandemic, the shutdown of the U.S. economy, the unrelenting volatility consistently at 30+, with tremendous uncertainty led us to the following strategy:
- We would invest the large cash stockpile accumulated in the fund \$154,000, approximately 31% of the funds value. Return on cash is virtually nil with present interest rate of returns.
- We would not divest or reinvest in existing portfolio companies, trusting the work of our peers.
- We would recommend strategies in only Growth and Value.
- We were not looking to sell any of our recommendations due to the 8 week class time frame, and the directive to invest for the long term. We did not see a clear path to a dividend strategy in this environment.
- The following slides identify the screening criteria and positions taken during this summer semester.

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Growth Strategy Criteria

BUY CRITERIA	
Conservative Mentality	Expect stock to perform better than the Industry
Revenue Growth	Industry Average and forecasted to continue to grow
Strong Earnings	5 years of CAGR
ROE	$\geq 15\%$ and $>$ Industry Average
PEG	≤ 1.2 and $<$ Industry Average
Debt/Equity	< 1.5 (or Acceptable Interest Coverage Ratio when D/E > 1.0)

Growth Acquisitions
Salesforce.com Inc.

Vertex Pharmaceuticals Inc.

LHC Group Inc.

Ball Corp.

Teledoc Health Inc.



Salesforce.com Inc./ CRM

Position (Purchased on 5-20-20)

60 Shares: \$10,561.20

- **Salesforce is the world's #1, cloud based, customer relationship management solution that brings companies and customers together. It's one integrated CRM platform that gives all your departments — including marketing, sales, commerce, and service — a single, shared view of every customer.**
- **Founded in San Francisco in 1999, they have created an ecosystem of Admins, Developers, Consultants and Users that are inspired by the #Trailblazer movement to continue disrupting CRM, and fostering equality and diversity. Salesforce is an industry in its own right. The latest projections until 2024 for SaaS(Software as a Service), includes \$1.2 trillion of new business revenues, 4.2 million new jobs, and ecosystem revenues predicted to grow almost 6 times larger than Salesforce itself.**



Vertex Pharmaceuticals Inc./ VRTX

Position (Purchased on 5-26-20)

35 Shares \$10,089.10

- Vertex is a global biotechnology company, founded in Cambridge, Massachusetts in 1989. The company invests in scientific innovation to help create transformative medicines.
- The company discovered and developed the first medicines to treat the underlying cause of cystic fibrosis.
- Vertex has more than a dozen ongoing research programs focused on the underlying mechanisms of other serious diseases and is committed to collaborating with global experts as a cornerstone to solving some of science's most difficult problems, in turn driving long-term shareholder value.



LHC Group Inc./ LHCG

Position (Purchased on 6-4-20)

120 Shares \$19,191.60

- LHC Group was founded in Lafayette, Louisiana in 1994. It currently has an equity value of \$5.3 billion and is positively seated to be a successful and forceful company in the healthcare sector as it continues to consolidate due to regulation and costs.
- The LHC Group is a major player with a national market share of 4.7% mainly in the northeast, southeast, and southern regions of the U.S. These locations are geographically grouped near aging populations.
- This group offers diverse services: Home, hospice, Health Centers, Palliative care.
- LHCG has the ability to actively acquire proper fit companies due to D/E ratio and completed a successful acquisition and merger with Almost Family Group in 2018.
- They are the leader in Quality ratings amongst all Home Health Companies with an experienced leadership team having deep experience in Government and Private sector insight.
- Partnerships with 350 leading hospitals whose business models are not competitive with LHCG, but complimentary.



Ball Corporation/ BLL

Position (Purchased on 6-4-20)

135 Shares \$10,160.10

- The Ball Corp. was founded in 1880 and is headquartered in Bloomfield, Colorado. There are currently 18,000 employees with their main products being metal cans, packaging and space manufacturing. • \$26 per share on the NYSE on December 17, 1973 under the ticker BLL.
- Ball is a worldwide leader in recyclability of metal cans and this is a major driver of industry growth. In addition, Ball leads this sector in recognizing consumer awareness around packaging materials, developing carcinogen free, lightweight packing, and tamper-proof, "safe" packaging. It applies these developments to all sectors: beverage, personal care, automotive, electronics, paint and healthcare.

In addition, Ball Corp. has aerospace and mission system divisions set for explosive growth in the defense sector. Ball has developed to create and design spacecraft and payload. They also manufacture tactical systems, sensors, and instruments for electronic warfare.



Teladoc Health Inc./ TDOC

Position (Purchased on 6-22-20)

100 Shares \$20,799.00

- Billed as the first and largest **telemedicine company** in the United States and headquartered in Purchase New York, **Teladoc Health** was launched in 2002 and has acquired companies such as BetterHelp in 2015, Best Doctors in 2017, and Advance Medical in 2018.
- Teladoc Health offers the only comprehensive virtual care solution capable of serving organizations and people anywhere. Their services span the spectrum of healthcare needs, from simple to complex. They seamlessly connect general medical, mental health, and complex care to deliver convenience, outcomes, and value.
- Teladoc Health collaborates with the world's leading insurers, employers, and hospitals and health systems to deliver industry-leading virtual care. They develop tailored solutions and are continually modernizing the healthcare experience to help more people access high-quality care.
- Teladoc Health divides its services into six categories: platform and program services, guidance and support, expert medical services, mental health services, telehealth, and integrated virtual care.^[2] As a software company, Teladoc Health is involved with [artificial intelligence](#), analytics, and "licensable platform services."^[2] The company primarily uses telephone and videoconferencing software to provide [on-demand](#) remote medical care,^{[5][42]} with patients able to log on to the service at any time and be connected with a board-certified, state-licensed physician within several minutes.^[8]



Value Strategy Criteria

BUY CRITERIA	
Price/Sales	< Industry Average
Price/Book	< Industry Average
Dividends	> Industry Average
Free Cash Flow	Positive

Value Acquisitions

L3 Harris Technologies Inc.

Visa Inc. class A

Dollar General Corp.

Nike Inc.



L3Harris Technologies Inc./ LHX

Position(Purchased on 6-1-20)

75 Shares \$14,640.00

- Headquartered in Melbourne, Florida and founded in 2019. L3H was originally two separate companies
 - L3 Technologies
 - Harris Corporation
- L3 Harris Technology is a global aerospace and defense company
 - Focuses on technology driven solutions for sea, land, air, space, and cyber
- 6th largest defense contractor in the world
- Products they specialize in:
 - Wireless equipment, Tactical radios, Avionics, Night vision equipment
 - Terrestrial & spaceborne antennas, Microwave & electronic weaponry/warfare
- LHX business sectors have higher margins vs. Their competitors
- FCF projected @2.3-2.7B this year with 3.5B available in 2021
- 40 % market share of military communications.
- Completed and submitted 41 RFPs worth 64B in revenue in 2020.



Visa Inc. class a/ V

Position (Purchased on 6-22-20)

100 Shares \$19,259.00

- Visa Inc was founded in 1958 as BankAmericard. It is headquartered in Foster City, CA. and currently has 19,500 employees. The IPO for Visa was February 2008 for \$44 a share. It's symbol is V.
- Visa is the world's largest retail electronic payments network and Manages world's leading electronic payments brand .Here are the brands and businesses Visa operates; Visa, Visa Electron, PLUS, and Interlink, which are licensed to financial institutions, and multiple payment card types, including credit, debit, prepaid, and commercial payments, Visa enables global commerce. A paramount shift towards electronic payment and away fro cash is accelerating due to the Covid -19 virus pandemic. Customers and Vendors are concerned cash is a germ carrying mechanism and once cards become the standard payment method, customers will be unlikely to revert.
- In addition , being the dominant worldwide leader presents Visa with revenue growth opportunities from the penetration of card payments into non-traditional categories. Food and drug in particular are industries shifting to e-commerce & electronic payments.



Dollar General Corp./ DG

Position (Purchased on 6-29-20)

110 Shares \$20,769.10

- Dollar General was founded in 1939 and is based in Goodlettsville, Tennessee. The company currently has 16,000+ stores and is the leading small box discount retailer of dollar store chain in the United States. It offers a broad array of basic, everyday national brand & private label merchandise. The typical DG store stocks approximately 10,000 different items, including consumables, seasonal, home products, & apparel. Most items have a retail between \$1-\$10.
- It offers these items to consumers, who are usually low-& middle-income residents of small towns Better than 70% of their stores serve communities with populations of less than 20,000 residents. DG stores average 10,000 square feet store and their online presence continues to grow, just like their store count, adding over 1000 units in 2019. Revenue growth was 27% in 019 and same store sales were an impressive 3+%.



Nike Inc./ NKE

Position (Purchased on 6-29-20)

100 Shares \$9598.00

- Phil Knight, a good miler, and Bill Bowerman, a track coach who tinkered with shoe designs, met at the University of Oregon in 1957. The two men formed Blue Ribbon Sports in 1962 in an effort to make quality American running shoes. The company rebranded as NIKE in 1972, named for the Greek goddess of victory. Nike went public in 1980.
- Nike, Inc.'s principal business activity is "the design, development and worldwide marketing of high quality footwear, apparel, equipment and accessory products". Nike sells its products to about 20,000 retail accounts in the US and in approximately 110 countries around the world. Independent contractors manufacture almost all of Nike's products. Most footwear products are produced outside the United States, while apparel products are produced both in the United States and abroad. Revenues for the fiscal year ending May 31, 1999 were \$8.8 billion, compared with \$9.6 billion in the previous fiscal year.
- Nike footwear is specifically designed for athletic use, placing considerable emphasis on high quality construction and innovative design. However, a large percentage of the products are worn for casual or leisure purposes. Nike markets and sells a wide variety of products, including shoes for running, basketball, cross training, women and children. All of which are currently its top-selling product categories.



Risk Analysis



Modern Portfolio Theory (MPT) and Risk

- Optimal Portfolio Construction achieved through asset allocation and diversification
 - Optimal Return for Specified Risk Tolerance
 - Minimize Asset Positive Asset Correlation
 - Diversification reduce risk
- Basic Measurements of Risk are Diversification, Valuation Relative to S&P, Alpha, Beta, Expected Return, Standard Deviations, VaR
- More Sophisticated Measurements of Risk include Sharpe Ratio (ex-ante and ex-post) Sortino ratio, Market Correlation, Max Drawdown, Tracking Error, Volatility, Efficient Frontier Comparisons



Risk and Investment Team Overview

- Key Economic Risk Factors Identified
 - Potential for High Level of Homeowner and Small Business Defaults
 - High Unemployment
 - Forced Business Closings
 - Ongoing Trade Dispute with China and Europe
- Portfolio Risk
 - Significant Cash Balance putting drag on performance
 - Missed rebound in April
- Portfolio
 - Significant Underweight in Financials, Energy and Materials
 - Backtesting (as of June 30)
 - March Return -4.56% for Portfolio
 - S&P return -12.46% (SPY as Proxy)
 - YTD Return 11.87% for Portfolio
 - S&P -3.18% (SPY as Proxy)
 - Portfolio Beta 0.84
 - Sharpe ratio (ex-post) 1.17
 - Stock Market Correlation 0.95
 - Targeted Putting Money to Work
 - Cash reduced to 3.7% of Portfolio



Risk Analysis - Diversification

Sector	Position Strategy	Target	S&P Contribution (%)	Portfolio Contribution	Portfolio Contribution (%)
Consumer Discretionary	Underweight	3.9%	10.5%	Underweight	8.05%
Consumer Staples	Overweight	13.3%	7.4%	Overweight	16.95%
Energy	Underweight	0.0%	3.0%	Overweight	3.43%
Financials	Market	11.0%	10.6%	Underweight	7.12%
Health Care	Market	16.0%	15.4%	Overweight	22.69%
Industrials	Underweight	4.0%	7.9%	Underweight	2.48%
Information-Technology	Underweight	24.7%	25.7%	Overweight	28.63%
Materials	Underweight	0.0%	2.5%	Underweight	0.00%
Telecommunications	Overweight	12.0%	10.8%	Underweight	2.53%
Utilities	Underweight	2.7%	3.3%	Underweight	2.63%
Real Estate	Underweight	1.7%	2.9%	Overweight	1.76%
Cash	Overweight	11.0%	0.0%	Overweight	3.72%
*S&P Sectors Composition 30/04/2020					

- Investment Strategy:
 - Create Diversified Investment Portfolio by following the weighting so the U.S. S&P Stock Index
 - Portfolio risk was adjusted by shifting S&P Sector Weights to account for current news and economic cycle
- Position Strategy = Investment Teams Beginning Viewpoint on Sector Risks
- Portfolio Contribution = Investment Teams Ending Viewpoint on Sector Risk and Closing Investment Strategy
- Significant Sector Risks Investment Team Wanted to Actively Avoid
 - Financials (Underweight) – Increased risk of defaults as businesses and consumers lost revenue and salaries during lockdown
 - Industrials (Underweight) – Supply chain and manufacturing issues caused by sick employees and forced shutdowns
 - Materials (Underweight) – Shutdown Manufacturing
 - Energy (Underweight) – Team ended Market Weighted – OPEC production cuts resulted in sector rally

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Valuation vs S&P

	Your Portfolio	Relative to S&P 500		Your Portfolio	Relative to S&P 500
Price/Prospective Earnings	24.20	1.06	Projected EPS Growth - 5 yr %	13.01	1.50
Price/Book Ratio	4.12	1.44	Yield %	1.46	0.83
Return on Assets (ROA)	8.70	0.94	Average Market Cap \$mil	123,112.64	0.94
Return on Equity (ROE)	24.67	0.92			

- Price/Book Ratio high relative to S&P: Portfolio tilted towards high technology companies like Amazon, Microsoft, Salesforce, Teladoc which are valued by the market on their intellectual property
 - Impact of COVID restrictions for these companies muted and they recovered quickly
 - Will continue to benefit from the work from home trend
- EPS Growth exceeds S&P: Portfolio tilted towards high growth investments driving ROA, ROE and Yield lower than S&P average
 - Microsoft, Amazon, Salesforce, Facebook, Vertex Pharmaceutical and the Semiconductor and Technology ETF's have higher EPS growth and will continue to benefit from the stay at home orders justifying the shift to lower ROA and ROA investments.

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Backtesting: 07/2018 – 06/2020

Metric	Provided Portfolio	SPDR S&P 500 ETF Trust
CAGR	23.18%	8.76%
Expected Return	25.02%	10.86%
Stdev	17.71%	19.90%
Max. Drawdown	-13.86%	-19.43%
Sharpe Ratio (ex-ante)	1.31	0.46
Sharpe Ratio (ex-post)	1.17	0.43
Sortino Ratio	1.93	0.61
Active Return	14.43%	N/A
Tracking Error	6.46%	N/A
Information Ratio	2.23	N/A
US Stock Market Corre	0.95	1

- Portfolio Characteristics
 - Expected Return during period ~ 1.5x greater than S&P* with ~ 0.9 of the S&P variation
 - Sharpe Ratio (ex-post) is 1.17 compared to 0.43 for the S&P 500
 - Portfolio's Sortino Ratio (1.93) also compares favorably with the S&P 500 (0.61)
 - Portfolio's Tracking Error was 2.23 indicating that the high total return did come with significant volatility in return

*SPY used to model performance of S&P 500 Index



Risk and Return Metrics

	Potfolio	SPY
Historical Value At Risk	-8.98%	-11.55%
Analytical Value at Risk	-6.35%	-8.59%
Conditional Value at Risk	-9.69%	-12.46%
Max Drawdown (July 2018 - June 2020)	-13.86%	-19.43%

- Portfolio Characteristics
 - Portfolio demonstrates Historical, Analytical and Conditional Value at Risk significantly lower than that observe for SPY
- Between July 2018 and June 2020 maximum loss observe for Portfolio would have been 13.86%
 - Compares favorably to the -19.43% loss observed for SPY



Correlation Between Holdings

Ticker	Name	XLP	CAG	DG	KO	COST	AMZN	NKE	BLL	XLF	V	SCHD	XLV	LHCG	UNH	CVS	VRTX	TDOC	MCK	XLK	CRM	MSFT	XSD	VDE	LHX	XLC	FB	T	XLU
XLP	Consumer Staples Select Sector SPDR ETF																												
CAG	ConAgra Brands, Inc.	0.69																											
DG	Dollar General Corporation	0.49	0.26																										
KO	Coca-Cola Company	0.72	0.22	0.22																									
COST	Costco Wholesale Corporation	0.75	0.55	0.52	0.42																								
AMZN	Amazon.com, Inc.	0.50	0.39	0.37	0.16	0.57																							
NKE	Nike, Inc.	0.51	0.36	0.37	0.20	0.28	0.42																						
BLL	Ball Corporation	0.53	0.05	0.44	0.59	0.63	0.25	0.18																					
XLF	Financial Select Sector SPDR ETF	0.82	0.41	0.34	0.65	0.46	0.50	0.67	0.37																				
V	Visa Inc.	0.69	0.35	0.47	0.52	0.68	0.56	0.55	0.58	0.74																			
SCHD	Schwab US Dividend Equity ETF	0.87	0.48	0.47	0.59	0.61	0.63	0.73	0.41	0.93	0.82																		
XLV	Health Care Select Sector SPDR ETF	0.72	0.35	0.42	0.43	0.63	0.65	0.51	0.37	0.70	0.71	0.84																	
LHCG	LHC Group	0.23	0.28	0.01	-0.04	0.35	0.33	0.43	0.23	0.20	0.37	0.25	0.39																
UNH	UnitedHealth Group Incorporated	0.44	0.24	0.25	0.27	0.42	0.50	0.18	0.07	0.45	0.40	0.49	0.77	0.33															
CVS	CVS Health Corporation	0.48	0.30	0.44	0.27	0.52	0.41	0.42	0.21	0.46	0.40	0.49	0.67	0.56	0.61														
VRTX	Vertex Pharmaceuticals Incorporated	0.24	-0.03	0.33	0.02	0.45	0.43	0.31	0.34	0.24	0.41	0.35	0.64	0.57	0.57	0.56													
TDOC	Teladoc Health Inc	-0.04	0.06	0.03	-0.34	0.17	0.47	0.26	-0.01	0.09	0.07	0.10	0.22	0.35	0.19	0.27	0.45												
MCK	McKesson Corporation	0.42	0.16	0.42	0.21	0.40	0.35	0.55	0.46	0.50	0.48	0.48	0.47	0.57	0.37	0.49	0.61	0.52											
XLK	Technology Select Sector SPDR ETF	0.75	0.54	0.43	0.38	0.62	0.74	0.71	0.33	0.82	0.85	0.89	0.68	0.34	0.41	0.41	0.38	0.28	0.49										
CRM	Salesforce.com Inc	0.49	0.11	0.38	0.36	0.41	0.66	0.56	0.46	0.68	0.81	0.71	0.58	0.36	0.33	0.37	0.47	0.30	0.51	0.81									
MSFT	Microsoft Corporation	0.69	0.54	0.33	0.38	0.62	0.80	0.47	0.34	0.71	0.77	0.78	0.65	0.31	0.40	0.31	0.24	0.31	0.89	0.73									
XSD	SPDR S&P Semiconductor ETF	0.71	0.46	0.40	0.36	0.50	0.66	0.77	0.29	0.86	0.76	0.91	0.71	0.28	0.42	0.41	0.32	0.20	0.48	0.91	0.71	0.78							
VDE	Vanguard Energy ETF	0.76	0.38	0.45	0.57	0.40	0.56	0.65	0.28	0.86	0.70	0.92	0.73	0.01	0.50	0.29	0.21	0.02	0.40	0.80	0.63	0.64	0.82						
LHX	L3harris Technologies Inc	0.45	0.15	0.25	0.47	0.43	0.27	0.23	0.53	0.47	0.56	0.47	0.40	0.17	0.18	0.12	0.19	0.17	0.46	0.36	0.46	0.32	0.32	0.39					
XLC	Communication Services Sel Sect SPDR ETF	0.75	0.45	0.51	0.52	0.52	0.66	0.71	0.36	0.87	0.76	0.87	0.65	0.25	0.52	0.40	0.37	0.23	0.65	0.89	0.75	0.69	0.85	0.87	0.46				
FB	Facebook, Inc.	0.55	0.32	0.51	0.28	0.40	0.63	0.59	0.25	0.69	0.56	0.66	0.47	0.17	0.49	0.25	0.38	0.28	0.63	0.74	0.62	0.52	0.74	0.71	0.31	0.91			
T	AT&T Inc.	0.74	0.26	0.41	0.66	0.50	0.36	0.64	0.46	0.81	0.67	0.84	0.66	0.04	0.32	0.38	0.25	0.07	0.45	0.68	0.56	0.52	0.71	0.83	0.51	0.72	0.51		
XLU	Utilities Select Sector SPDR ETF	0.75	0.35	0.43	0.75	0.52	0.18	0.44	0.61	0.65	0.67	0.67	0.46	0.13	0.13	0.24	0.12	-0.21	0.30	0.52	0.49	0.42	0.45	0.56	0.54	0.54	0.32	0.70	
XLRE	Real Estate Select Sector SPDR	0.77	0.30	0.52	0.69	0.56	0.49	0.43	0.61	0.76	0.68	0.76	0.62	0.10	0.44	0.33	0.25	-0.06	0.43	0.64	0.64	0.52	0.61	0.78	0.49	0.75	0.61	0.78	0.76

- >0.7 Red
- 0.4 – 0.69 Yellow

• < 0.39 Green

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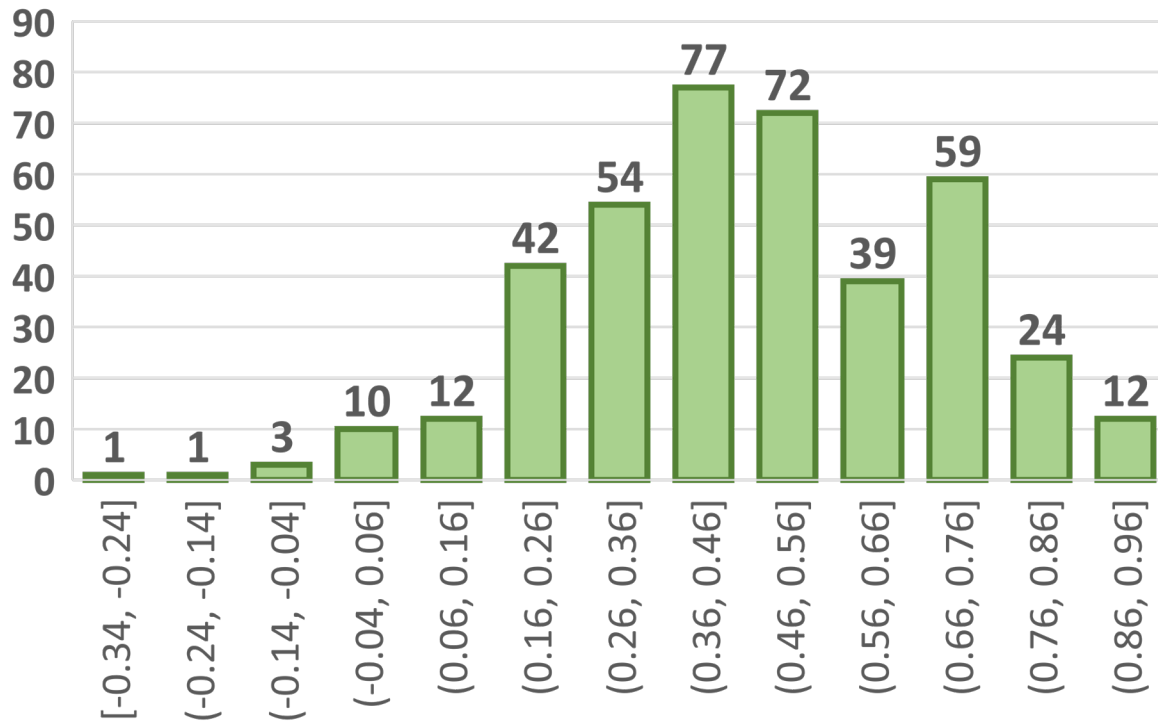
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Correlation Between Holdings

Distribution of Portfolio Correlations



- Correlation Statistics

- Average 0.473
- Sample Stdev 0.218
- Median 0.470

- Highly Correlated Holdings

- Individual Technology Holdings highly correlated with Technology Sector ETF (XLX), Semiconductor ETF (XSD) and Communications Select ETF (XLC)
- High correlation between XLX, XSD and XLC, XLP
- Several holding highly correlated with Consumer Staples Sector



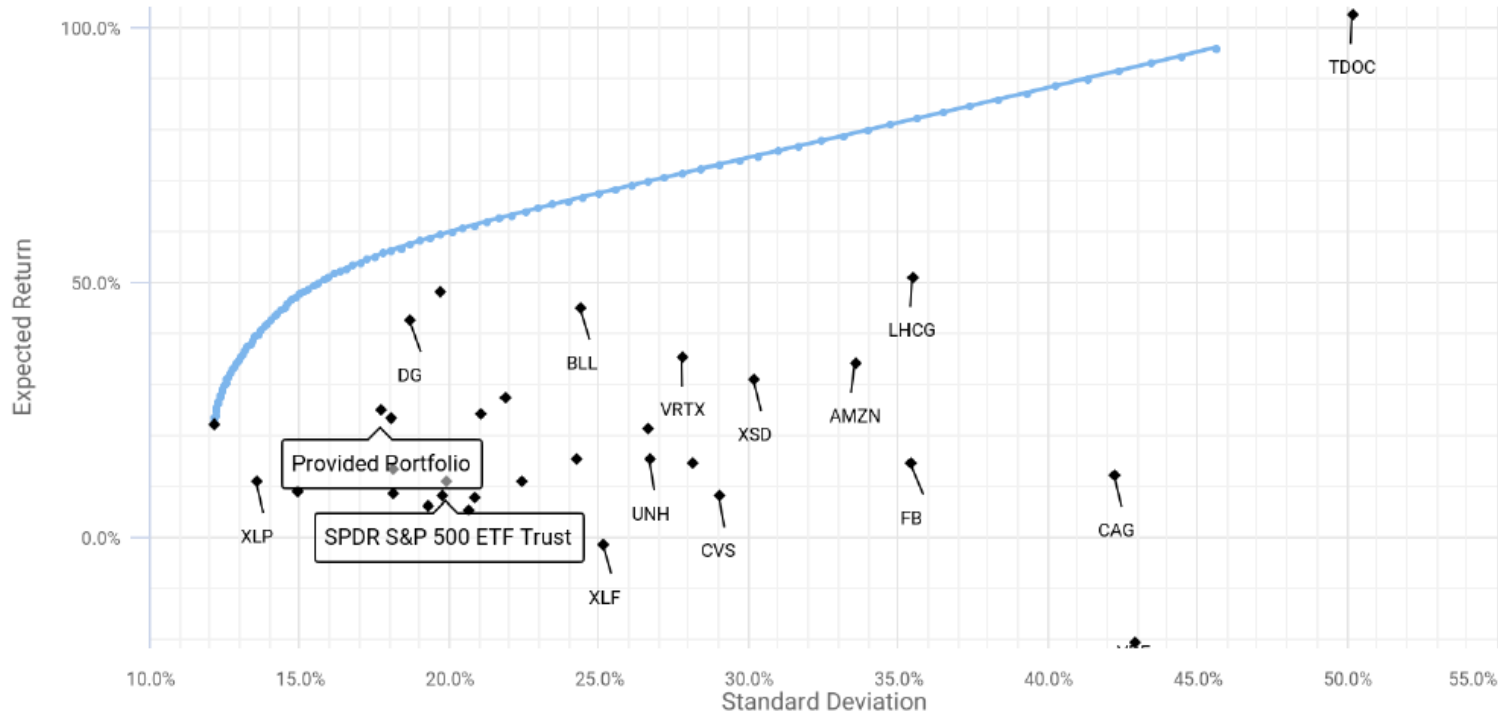
Portfolio Correlation with S&P

- XLP, XLF, SCHD, XSD, and XLC, VDE Show >0.85 Correlation with S&P 500
- Not surprising that Portfolio also exhibits high correlation with S&P 500
 - U.S. Market Correlation 0.95
 - Beta 0.84

Ticker	Name	SPDR S&P 500 ETF Trust
XLP	Consumer Staples Select Sector SPDR ETF	0.85
CAG	ConAgra Brands, Inc.	0.47
DG	Dollar General Corporation	0.47
KO	Coca-Cola Company	0.57
COST	Costco Wholesale Corporation	0.61
AMZN	Amazon.com, Inc.	0.69
NKE	Nike, Inc.	0.72
BLL	Ball Corporation	0.43
XLF	Financial Select Sector SPDR ETF	0.94
V	Visa Inc.	0.84
SCHD	Schwab US Dividend Equity ETF	0.98
XLV	Health Care Select Sector SPDR ETF	0.81
LHCG	LHC Group	0.29
UNH	UnitedHealth Group Incorporated	0.52
CVS	CVS Health Corporation	0.48
VRTX	Vertex Pharmaceuticals Incorporated	0.40
TDOC	Teladoc Health Inc	0.19
MCK	McKesson Corporation	0.54
XLK	Technology Select Sector SPDR ETF	0.94
CRM	Salesforce.com Inc	0.78
MSFT	Microsoft Corporation	0.82
XSD	SPDR S&P Semiconductor ETF	0.92
VDE	Vanguard Energy ETF	0.92
LHX	L3harris Technologies Inc	0.48
XLC	Communication Services Sel Sect SPDR ETF	0.93
FB	Facebook, Inc.	0.75
T	AT&T Inc.	0.82
XLU	Utilities Select Sector SPDR ETF	0.63
XLRE	Real Estate Select Sector SPDR	0.79



Resampled Efficient Frontier (Jul 2018 - Jun 2020)



• Efficient Frontier

- Current portfolio can be optimized to improve reward and reduce risk
 - Reduce covariance between investments
 - Covariance driven by investments highly correlated to Technology and Consumer Staples Sectors
- Risk-reward profile for period evaluated better than S&P 500
 - Upside Capture ratio was 116%
 - Downside Capture ratio was 67%
- Investment Selections driven to reduce economic risk caused by Pandemic



Performance Review



Performance Review

- The performance review section will analyse the portfolio for the Summer Session of 2020.
- This section will detail the following:
 - Performance against the index
 - Alpha & Beta calculation
 - Overview of best and worst performing holdings and additions.
- The class spanned from 5/11/20 to 7/8/20 (only 42 trading days).
- This analysis will use a terminal date of 6/30/20.
- Active management of the portfolio began when the first trades were proposed on 5/18/20 and executed on 5/20/20.

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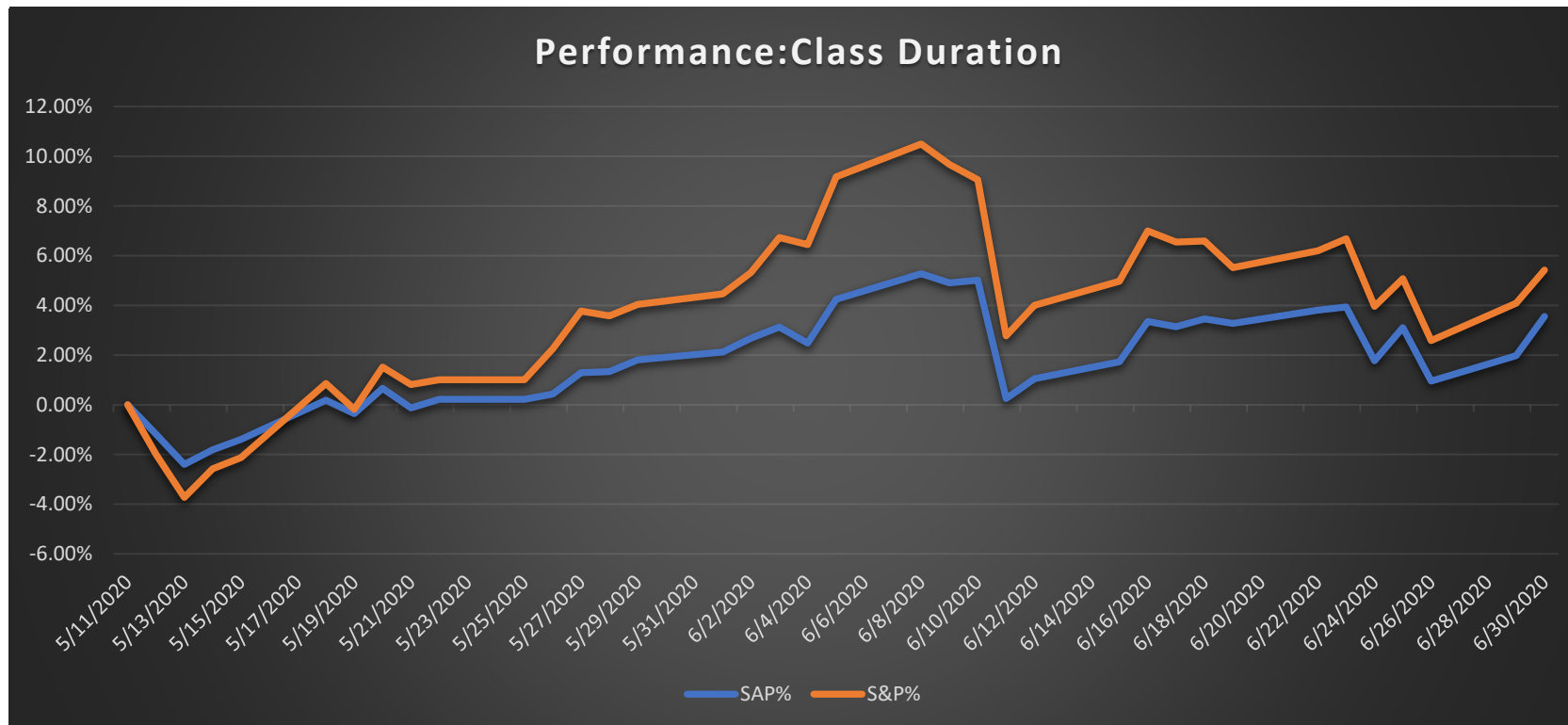
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SAP vs S&P 500 Index



- Portfolio fell behind S&P prior to our active management of portfolio due to inherited cash drag of \$154,129.
- Cash was used for purchases
 - 5/20 - Salesforce
 - 5/26 - Vertex
 - 6/1 - L3 Harris
 - 6/4 - Ball Corp & LHC Group
 - 6/22 - Teladoc Health & Visa
 - 6/29 - Dollar General & Nike
- Five of our major purchases made into a climbing market which experienced a major correction on 6/11.
- Underperformed S&P for the short duration of class
 - Raw Return Difference -1.87%.

SAP vs S&P 500	5/11/2020	06/30/2020	Raw Return	Annualized
SAP Portfolio	\$ 496,231.24	\$ 513,851.10	3.55%	29.01%
SPDR S&P 500 ETF (SPY)	\$ 292.50	\$ 308.36	5.42%	47.03%

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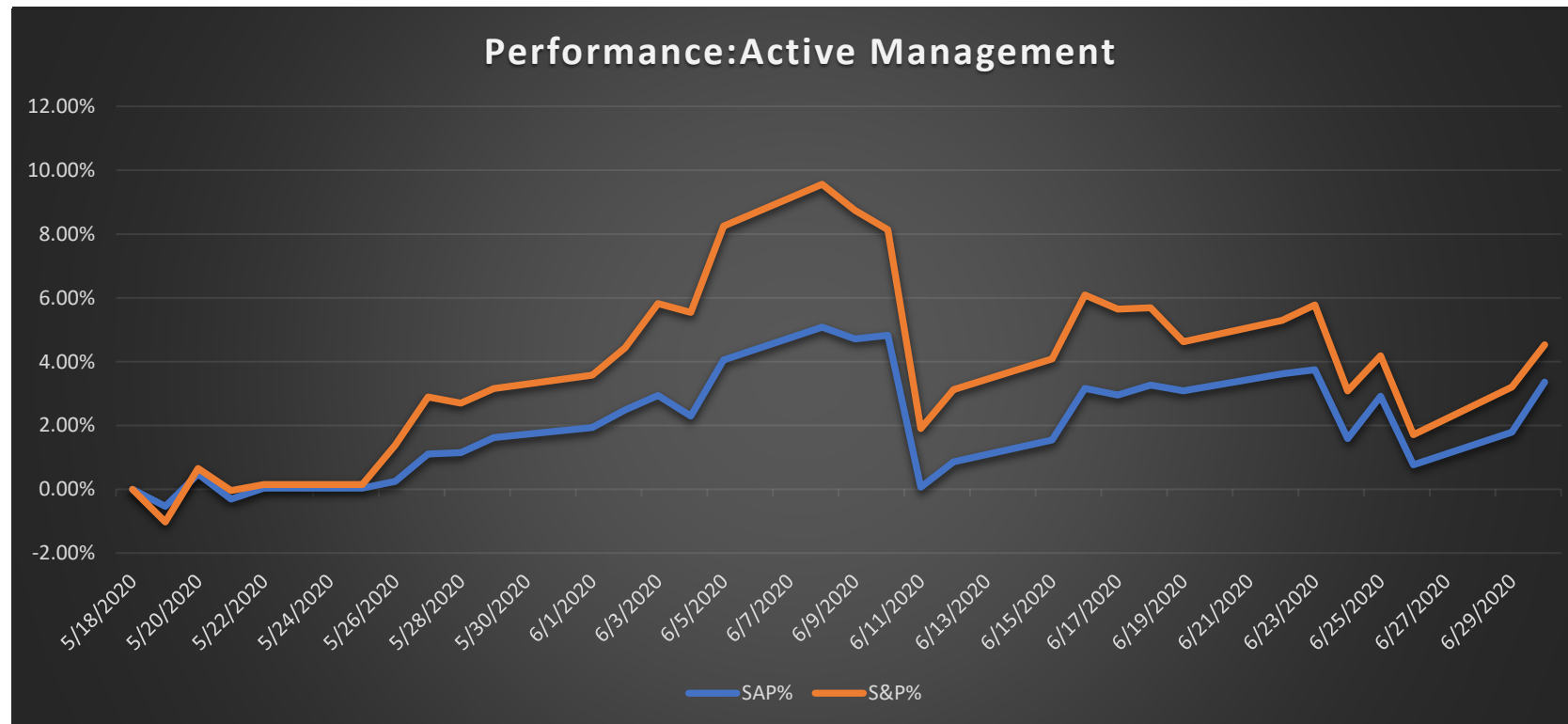
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SAP vs S&P 500 Index



- Although class began on 5/11 the first opportunity to trade was not until 5/18.
- Did not achieve allocation of <5% cash balance until 6/29.
- When comparing the results of this time period Sellinger Applied Portfolio (SAP) performs better.
 - Raw return difference -1.17%.
- Cash drag prevented SAP from fully benefiting from the gains in the market from 5/26 - 6/8.
- Although during this time we did not outperform the market, we believe the portfolio is in a good position to outperform S&P 500 moving forward.

SAP vs S&P 500	5/18/2020	06/30/2020	Raw Return	Annualized
SAP Portfolio	\$ 497,141.70	\$ 513,851.10	3.36%	27.29%
SPDR S&P 500 ETF (SPY)	\$ 295.00	\$ 308.36	4.53%	38.17%

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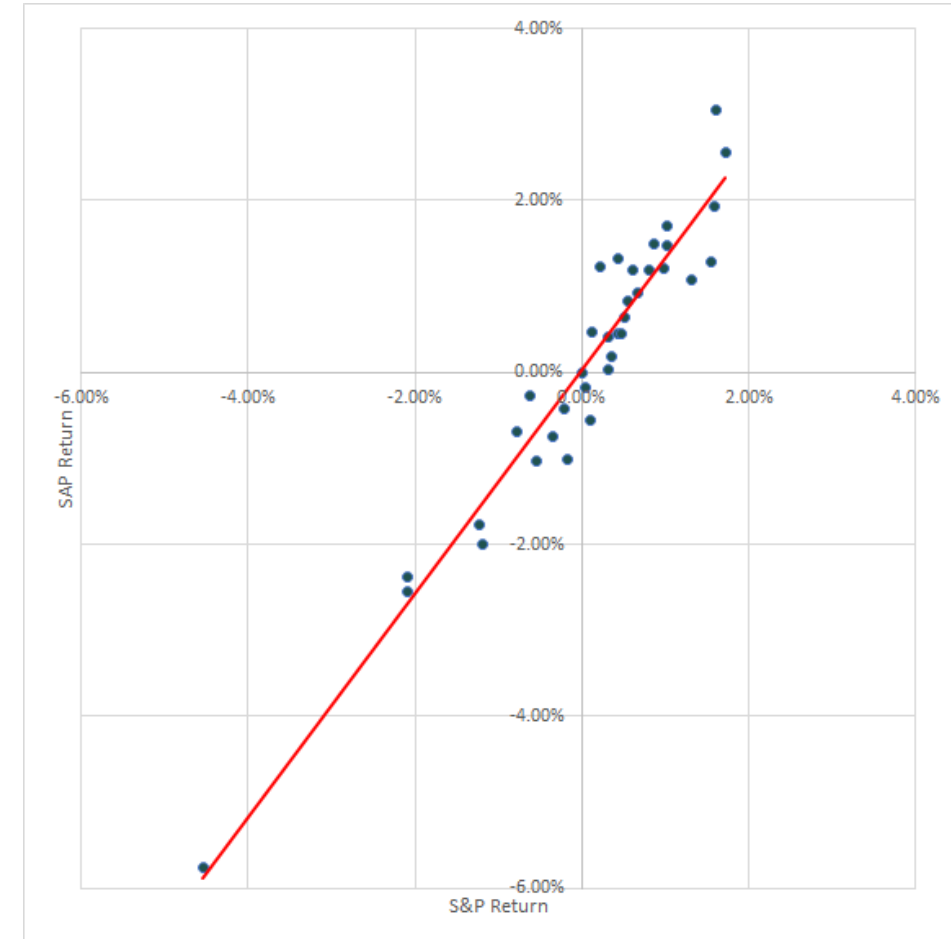
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Alpha and Beta

- Regression of daily returns of portfolio shows a historical Beta and Alpha.
- Beta of evolving portfolio over Summer 2020 session is 1.30.
- Alpha very low .02%
- Although portfolio has changed over the course of semester, this is a valuable tool in projecting the future returns of the portfolio based on market performance.





Best Returns: Overall Holdings

Reflects total return from beginning of Summer 2020 Course (5/11/20 to 6/30/20)

1.



+14.52%

2.



Technology Select Sector SPDR® ETF

+9.82%

3.



+9.38%

4.



+9.27%

5.



SPDR® S&P Semiconductor ETF

+9.03%

6.



+9.00%

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Worst Returns: Overall Holdings

Reflects total return from beginning of Summer 2020 Course (5/11/20 to 6/30/20)

1.



-13.08%

2.



-8.25%

3.



-7.67%

4.



-2.07%

5.



-1.89%

6.



Health Care Select Sector SPDR® ETF

-0.61%



Overall Return Analysis

- 5 of 6 of the portfolio top performers had benefit of being held when class began allowing more time to appreciate.
- Best returns in portfolio are from technology and medical companies that are positioned to thrive in a COVID-19 economy
- The portfolio worst performers were subject to timing issues with many of the beginning values (5/11) or purchase prices near highs.
- No common sector to tie stock together but COVID-19 may have affected Costco, CocaCola, and Health Care ETF.
- Short time horizon makes overall conclusions from analysis difficult.



Best Returns: Summer 2020 Stocks

Reflects total return from acquisition date to the end of the quarter (6/30/20)

1.



+9.00%

2.



+6.43%

3.



+2.16%

4.



+0.90%

5.



+0.71%

6.



+0.30%

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Worst Returns: Summer 2020 Stocks

Reflects total return from acquisition date to the end of the quarter (6/30/20)

1.



-13.08%

2.



Technology Select Sector SPDR® ETF

-8.25%

3.



-7.67%

- Teladoc is a prime example of effect of timing on the short term returns of the portfolio. First arrow in the chart shows when stock was proposed, second arrow shows when purchase was executed.
- Although these companies did not perform over this time period, they have long-term potential and will likely provide positive returns over a longer time horizon.



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Performance Review Conclusions

- Cash drag inherited prevented the portfolio from fully benefitting during ongoing recovery seen in May and early June.
- High Beta suppressed returns when portfolio was nearer fully invested, and the market experienced a downturn in mid-June.
- Short time horizon made results heavily timing dependent when our management was based in value and growth strategies.
- Additions focused on companies that would not be adversely affected by COVID-19 and may benefit from changes in behaviors brought on by the crisis. The management team projects those changes will result in future returns for portfolio.