2019

Crummer SunTrust Portfolio Recommendations: Crummer Investment Management [2019]

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20 YEAR ANNIVERSARY

Crummer SunTrust Portfolio Recommendations

CRUMMER INVESTMENT MANAGEMENT

Introduction

Dear Members of the Committee,

We would like to thank you for your service to the Crummer SunTrust Portfolio. Without your participation, Crummer students would not benefit from the unique insight you bring to managing an active portfolio.

We have been fortunate to listen and learn from some outstanding guest speakers who have been generous with their time and expertise: Phillip Rich, Seaside Bank; Chris Enger, Aviance Capital Management; Rebecca Marshall, The 4R Foundation; Joe Musumeci, Lightning Partners; Chris Castro, City of Orlando; Marc Miller, DePrince, Race and Zollo; Professor William Seyfried, Crummer Graduate School of Business; Dr. Dan Biller, Crummer Graduate School of Business; James Ferrell, Ferrell Wealth Management, Inc.; Rick Ahl, Ahl Investment Management; Sean Warrington, Alfred I. duPont Testamentary Trust; Josh Aguilar, Morningstar; Jane Garrard, Tupperware; Jay Menozzi, Orange Investment Advisors, LLC; Rob Roy, Adventist Health System; Deryck Harmer, Triloma Energy Advisors; Jennifer Anderson, Merrill Lynch; Marc Bianchi, Cowen & Company; and Derek Grimm, Merrill Lynch.

SunTrust endowed this portfolio to provide scholarships for future Crummer students and to give current students a practical, hands-on learning opportunity. This year we are pleased to be able to award $50,000 in scholarships. We are extremely grateful for SunTrust's generosity and investment in higher education. We have all learned a great deal from this experience and the responsibility of managing real money.

Our first challenge is to establish a portfolio position that takes advantage of economic opportunities while avoiding unnecessary risk and conforming to the Crummer SunTrust Investment Policy Statement (IPS). We are also tasked by the IPS to operate at two levels simultaneously – tactical for the near term, and strategic for the long run. Additionally, this portfolio presents some unusual portfolio management challenges by trading only once a year, in early May.

Our tactical approach began with a top-down sector analysis. We established an economic forecast based on research and consultation with economists, including Professor William Seyfried of the Crummer School. That forecast then drove our allocation among the eleven S&P sectors: Communication Services, Consumer Discretionary, Consumer Staples, Energy, Financials, Healthcare, Industrials, Information Technology, Materials, Telecommunications, and Utilities. This year we have forecast slowing economic growth and tilted the allocation towards defensive sectors that are less sensitive to the business cycle.

Our asset class allocation embodies the long-run strategy of our portfolio. The IPS sets asset class ranges from low to moderate risk to keep the portfolio from being whipsawed by transitory market cycles. Our equity allocations entail a moderate level of risk, consistent with our view that the stock market will continue a modest upward trend between now and April 2020. We maintain an allocation to a sector ETF in each sector to ensure diversification. Additionally, as a practical matter, we are limiting each sector to a maximum of two individual stocks. Fixed income is our anchor sector, providing a hedge against the risk of an economic slowdown adversely impacting our equity holdings. We are at the middle of our IPS range for fixed income at 15%, which is an increase from the decision of 10% last year.

Furthermore, we have incorporated a new theme into our portfolio selection process related to the rise of the global middle class. Inspired by Hans Roslings' *Factfulness*, we believe there are systematic misunderstandings about the state of the world. The biases and ignorance of rich nations obfuscate the tremendous human progress that has taken place across the globe, record-low poverty levels providing one noteworthy example. Our investment team is committed to capitalize on opportunities "hidden in plain sight." Regardless of a security's consistency with our theme, all recommendations must be undervalued after rigorous quantitative and qualitative analysis.

Lastly, we believe that the economic merits of capitalism will prevail against the negative sentiments, unfortunately, gaining support in the United States. The innovative capacity of the free market will avail itself and continue to raise living standards across the globe. Our optimism for the future echoes the philosophy of Warren Buffett:

> *"We believe in capitalism, we believe markets reward innovative and decisive management. Our security recommendations this year reflect that belief with strong companies that all have excellent prospects. While not every sector will prosper this year – or any year – we have chosen to focus on sectors that have the most promise and reflect our belief that markets will continue to reward those who take risk sensibly. We chose companies that we analyzed as undervalued, regardless of their popularity or lack thereof. While we considered the global political winds and domestic promises, our choices reflect our considered opinions and beliefs, grounded in economics and guided by all of those who have counseled us."*

We thank you for your time and participation in this important endeavor.

Sincerely,

Crummer Investment Management Team

From left to right: (front row) Rasha Mesharafa, Sarah Passero, Mary Karangelen, Appy Nahar, Tim Foard; (second row) Omar Hussein, Sam Philpott, Dr. Clay Singleton, Dr. Koray Simsek

Crummer Investment Management Team

Tim Foard | Communication Services & Technology

Tim Foard is a firmware developer for Toptech Systems. He earned his undergraduate degree from the University of Central Florida in 2013 with a B.S. in Electrical Engineering. He is expecting to earn his MBA in August of 2019 with a concentration in Finance.

Omar Hussein | Energy & Real Estate

Omar Hussein graduated from the University of Central Florida with a B.S.B.A in Finance and a minor in Legal Studies. He is expecting to earn his MBA in May 2019, with concentrations in Finance and Management. After graduation, he plans on attending law school to pursue a career in corporate law.

Mary Karangelen | Consumer Staples & Utilities

Mary Karangelen is Systems Engineer at Collins Aerospace. She graduated from Rollins College with a B.A. in Mathematics. She is expecting to earn her MBA in August 2019, and her current concentration is in Finance

Rasha Mesharafa | Consumer Discretionary

Rasha Mesharafa is a career changer and a new immigrant to the United States of America. She graduated from Cairo University in Egypt with a B.S. in Economics. She is expecting to earn her MBA in August 2019, and her current concentration is in Finance.

Appy Nahar | Financials

Appy Nahar is currently a finance intern with Marriott's Vacation Worldwide (VSE). She also holds a degree in Development Planning and has worked with UNICEF for a few years. Appy is expecting to earn her MBA in May 2019, and her current concentrations are in Finance and Operations. She is student representative on Crummer Alumni Board and an officer with MBA Association.

Sarah Passero| Healthcare

Sarah Passero is a Senior Analyst at BNY Mellon, specifically as an OTC Derivatives Operations Liaison for Bridgewater. She graduated from the University of Central Florida with a B.S.B.A. in Finance and minor in Accounting. She is expecting to earn her MBA in May 2019, with a concentration in Finance.

Sam Philpott | Fixed Income

Sam Philpott is expecting to earn his MBA in May 2019, with a concentration in Finance. He is also pursuing the Chartered Financial Analyst (CFA) designation. Sam attended Rollins College as an undergraduate, where he was a member of the men's basketball team. Following graduation, he will begin a career in investment banking.

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Economic Outlook

Introduction

While the Crummer Investment Management team has undertaken the responsibility of managing the Crummer SunTrust Portfolio, the team is bound by the portfolio's policy statement. Therefore, this team's focus was on engineering investment decisions based upon the Portfolio's overarching objectives of protecting its value during periods of economic bust and increasing its value during periods of economic boom, all while generating enough cash to sustain donations to Crummer's scholarship program. Through economic research and study of the market's behavior during the past year, the team has come up with a reasonable estimate of the market's behavior throughout the coming year.

Detailed discussions of various economics research published by well-reputed economic analysts and listening to industry experts like chief investment officers, portfolio managers and financial advisors, were key factors in the team's investment decisions. From these discussions, the team was able to form a consensus on the upcoming year's investment environment and the degree of its favorability, which ultimately influenced the process of individual stock selection and portfolio design. This team is well aware that the Crummer SunTrust Portfolio is risk averse, therefore, choosing stocks trading at a significant discount to market value was one of the team's main investment criteria for choosing securities.

Economic Thesis

Although we are witnessing the second longest economic expansion period on record since June 2009, it is the team's consensus that the economy will continue to expand from mid-2019 into 2020, albeit with some degree of slowing down. It is the team's belief that the boosting effect of the 2017 Tax Act cut will start to fade in 2019, thus negatively impacting real disposable income. As real disposable income has a high positive correlation to real GDP, we estimate that real GDP growth will slow down in 2019. The team's economic forecasts take into consideration the U.S.-China trade tensions, which are a significant risk as they could escalate to non-tariff barriers and boycotts.

GDP

In 2018, the United States' economy was still experiencing the positive effects of the Tax Act cut and that was reflected in its real GDP growth. Last year's management team had expected a real GDP growth of 2.8%, whereas the actual growth surpassed their expectation at 2.9%. Considering this year's team's economic research, the team forecasts a 2% real GDP growth for 2019, due to less support from fiscal policy (the fading of the tax reform act effect) and expected continued gradual monetary policy normalization practiced by the Federal Reserve.

Unemployment

The unemployment rate is currently 3.8%, which is lower than the 3.9% forecasted by last year's management team. However, the current unemployment rate is higher than the 3.5% rate that was forecasted in December 2018 by the Federal Open Market Committee for 2019. This management team believes that unemployment will not recede further in 2019 and forecasts it to stay around 3.8%. The tailwinds resulting from the fiscal stimulus provided by the Trump administration tax cut are fading in 2019 and will hamper further declines in the unemployment rate. Accordingly, no further tightening of the labor market is anticipated.

Inflation

The portfolio management team believes that inflation will not rise above 2% in 2019, aided by the fact that no further tightening of the labor market is expected. Due to an expected slowdown in economic growth in 2019, consumer spending prompted by increase in real disposable income will slow down, which is why the team expects inflation to stabilize at 2%.

Interest Rates

For the short-term interest rates, the management team expects the federal funds rates to stay at its current 2.5% throughout 2019. Given the forecasted economic growth slowdown, the team believes that the Federal Reserve will scale back the amount of stimulus tightening that it believes will be necessary and a rate hike in 2019 or early 2020 is unlikely. The FOMC currently is pausing its once quarterly rate hikes in response to concerns of foreseen slowdown in economic growth.

Barring an unexpected uptick in inflation, the management team expects no additional rate hikes through April 2020.

Fixed Income

The expectation of stabilizing interest rates in 2019 and possibly into 2020, supports the Crummer SunTrust Portfolio management team's decision to allocate 15% to fixed income securities. With an expectation of an economic growth slowdown, the team believes that increasing allocations to 15%, compared to last year's 10%, acts a buffer against possible market downturn.

Market Outlook

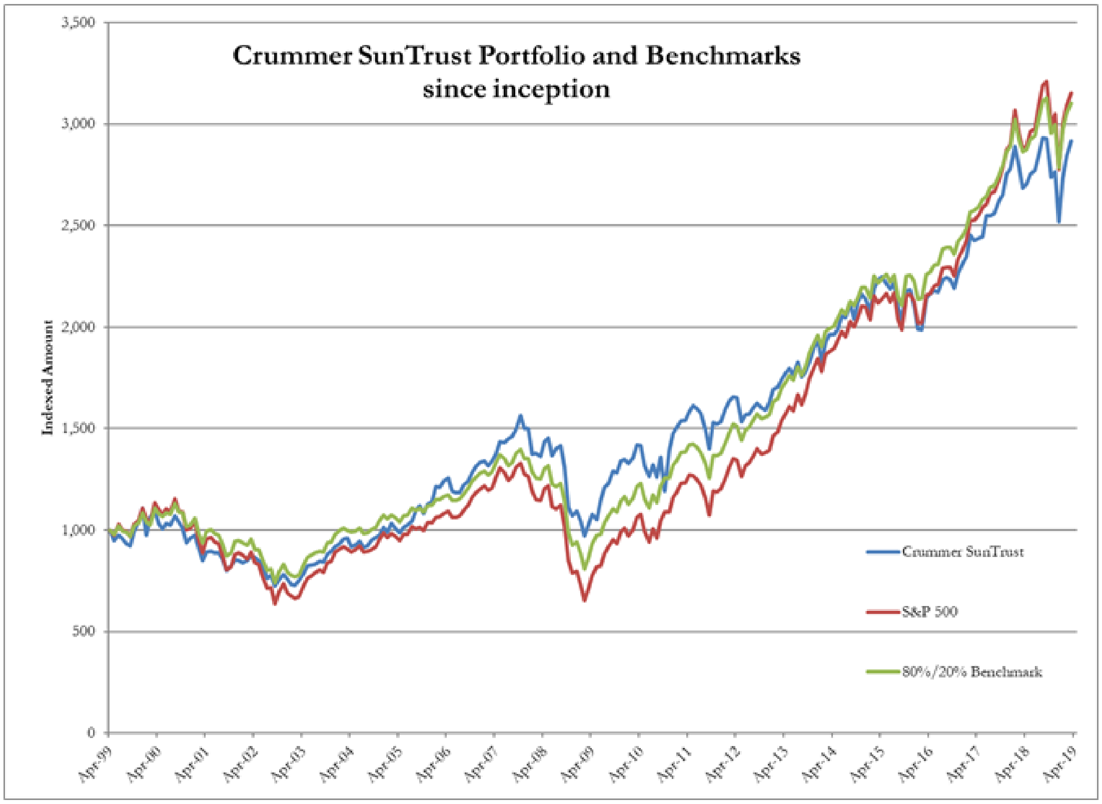
The strong momentum that fueled the tailwinds for economic growth in the United States for the last 114 months since June 2009 is expected to slow down in 2019. The management team's economic and market outlook consensus is that 2019 can be described as "the end of easy". With that in mind, the team made sector adjustments and tilts, by overweighting those sectors that can perform well during economic growth slowdown and underweighting sectors that are likely to underperform. A recession is unlikely in 2019 and for most of 2020. The team will take precautionary measures when allocating assets that keep the portfolio intact and preserve its value in case of an unlikely economic downturn (the worst-case scenario).

Performance of the Crummer SunTrust Portfolio

On an absolute basis, the Portfolio has seen reasonably good performance. After last year's trades, the Portfolio stood at $892,163 (May 1, 2018) and we ended our reporting year (March 31, 2019) at $961,780 – a 7.8% increase after accounting for our scholarship donation of $40,000 in May. Given the recent Federal Reserve announcement that it does not expect to increase rates this year and will end their asset draw down in September, we believe, on balance, the next twelve months will be good for the markets.

This year marks the twentieth anniversary of the first $100,000 SunTrust contribution in April 1999. Subsequent annual contributions brought the total investment to $500,000. Since inception, the Portfolio has generated over $435,000 in scholarships, including the 2019 contribution of $50,000.

The chart below shows the Portfolio's performance relative to the S&P 500. Since July 2013, the Portfolio has trailed the index by an increasing margin. With the Fed's modest interest rate hikes, bonds returned 1.8% May 1 through March 31, with an indexed 80% equity–20% bond benchmark portfolio mirroring the S&P 500. Both indexes have outperformed the Portfolio since early 2012.



2018 – 2019 Plan Year Performance Highlights

From May 2018 through March 2019, the S&P 500 index outgained the portfolio by 1.2% (9% to 7.8%). Moreover, the 80/20 benchmark beat the portfolio by 0.1%. Although absolute performance without considering asset allocation is incomplete, the portfolio did not fare much better on a risk-adjusted basis. From May 2018 through March 2019, the portfolio returned 7.8% with a monthly standard deviation of 4.8% (reward-to-risk of 1.62%) while the S&P 500 returned

9% with a monthly standard deviation of 4.8% (reward-to-risk of 1.87%) and the 80/20 portfolio returned 7.9% with a monthly standard deviation of only 3.9% (reward-to-risk of 2.02%). The portfolio's since-inception annual return is 14.6% (with an annual standard deviation of 13.8%) versus the S&P 500 index's return of 15.8% (with an annual standard deviation of 14.5%) and the 80/20 benchmark's return of 15.5% (with an annual standard deviation of 11.7%) over the same period. Computing the since-inception reward-to-risk ratios, the portfolio (1.05%) has underperformed both the S&P 500 (1.09%) and the benchmark (1.33%).

Equity Sector Performance

For the 2018-19 portfolio year, the portfolio's tactical equity investments were allocated among the S&P's ten sectors: Consumer Discretionary, Consumer Staples, Energy, Financials, Healthcare, Industrials, Information Technology, Materials, Real Estate, and Utilities. Last year, the portfolio was tilted toward sectors that were expected to outperform, e.g. Energy, Healthcare, Technology and Financials. The Sector Index column of the chart below shows that the sectors performed about as expected in the late stages of a recovery, with Consumer Staples outperforming Consumer Discretionary (23.7% to 14.6%), and Industrials outperforming Financials (9.2% to -1.5%). The Healthcare sector had unexpectedly positive returns while and Energy was down marginally. Each Crummer SunTrust portfolio sector holds the sector SPDR ETF – even so, superior stock selection allowed the portfolio to outperform in three of the ten sectors: Energy, Financial, and Real Estate. The portfolio did not have any Utility holdings. Some of the best stock selections came from Real Estate – Innovative Industrial Properties, Industrials – Waste Management, and Health Care – Roche Holdings. Last year, Standard & Poors' split Communications Service from Technology.

May 2018 through March 2019 Performance		
Sector	**Crummer SunTrust**	**Sector Index**
Consumer Discretionary	1.9%	14.6%
Consumer Staples	23.3%	23.7%
Energy	4.2%	-0.7%
Financial	1.1%	-1.5%
Healthcare	17.0%	24.4%
Industrial	8.8%	9.2%
Materials	-5.5%	13.8%
Real Estate	33.3%	27.8%
Technology	8.9%	18.4%
Utilities	0.0%	38.4%

Bonds and Cash

By the end of May 2018, the Portfolio had distributed $40,000 in scholarships, leaving 1% allocated to cash, 84% allocated to equities, and 15% allocated to bonds (DoubleLine Low Duration and the Hartford Floating Rate High Income funds). The bond investment gained 1.8% from May 2018 through March 2019. After the proposed trades, the Portfolio will hold less than 1.0% in cash and will generate $50,000 in scholarships – supporting future Crummer students and fulfilling the spirit of the original gift.

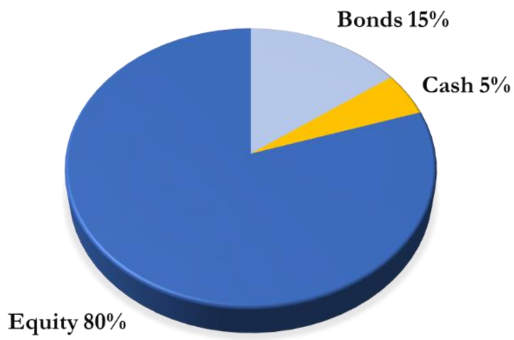
Portfolio Design

1. Asset Allocation

Strategically, we allocated funds between stocks and bonds to reflect our economic outlook of slow market growth over the next year. The management team looked at performance and volatility to identify the most desirable asset allocation. The asset class benchmarks and their target ranges are provided by the IPS as suitable for the portfolio's long-term horizon.

Our overall allocation recommendation for our 2019 portfolio, as shown in our pie chart below, is 80% equity (35% individual stocks, 45% ETFs), 15% bonds, and 5% cash pre-scholarship. Our increased allocation to fixed income relative to last year has a tactical component in that we propose to invest at the low to middle end of the yield curve. Thus, we hope to earn incremental yield by moderately extending the maturity of our holdings. Currently, our bond holdings have an average effective duration of 1.07 in our fixed income funds. Furthermore, we have proposed reducing the credit risk of our holdings to reflect our outlook of slowing economic growth. Given that we do not expect interest rate hikes during our holding period, we believe we are justified in shifting our fixed income strategy compared to the previous teams who invested heavily in low duration bonds as an antidote to Fed rate hikes.

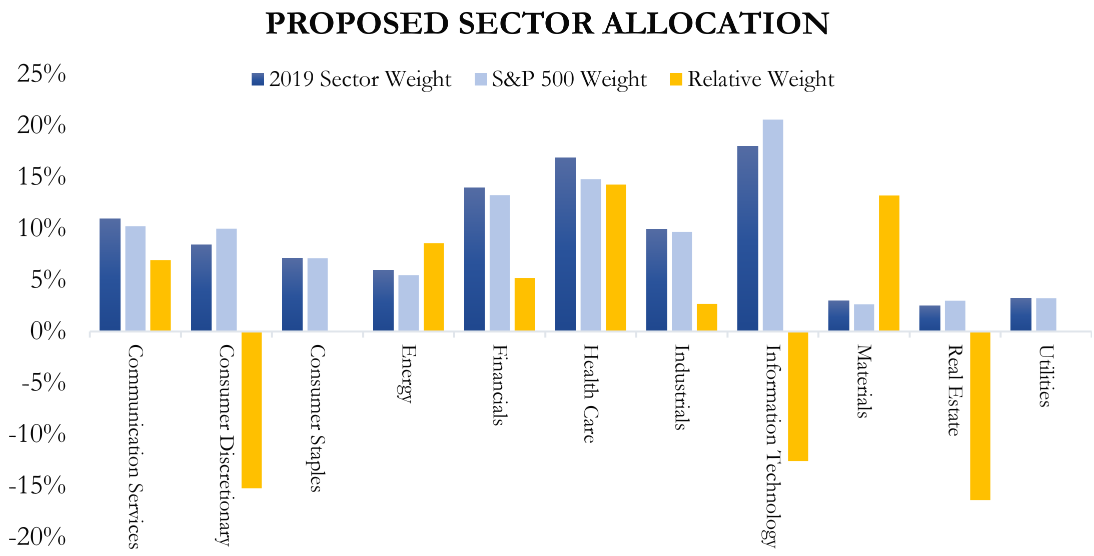
ASSET ALLOCATION



2. Sector Allocation

We predict a period of slowing economic growth, low unemployment, and no interest rate hikes in the near-term. Consequently, we have chosen to overweight sectors that we believe will experience growth and flourish in a slowing economy (communication services, energy, financials, health care, industrials, and materials). The sectors that we have chosen to underweight were those that do not typically perform well in slowing growth according to the expected economic cycle (consumer discretionary, information technology, and real estate). The sectors we decided to keep neutral were already weighted accordingly based on our economic outlook (consumer staples and utilities). The degree to which we weighted these sectors was based on our confidence in their performance. The most dramatic of which was the real estate industry as sales are expected to decline with lower spending. The management team chose to decrease allocation to real estate in efforts to maximize portfolio growth in response to the flattening of the 10-year treasury rate for the coming year. This strategy was chosen with the intent to generate reasonable overall returns.

The following charts display our sector allocations. For example, the weight of the Communication Services sector in our 2019 portfolio, which is represented by the dark blue bar, is 10.95% while its benchmark's weight – the S&P 500's – for this sector, which is displayed in the grey bar, is 10.24%. This allocation overweights the Consumer Services sector by approximately 7% above its benchmark. The sector overweight is represented by the light blue bar above the horizontal axis. For another example, the Consumer Discretionary sector is assigned an 8.45% weight while its corresponding S&P 500 weight is 9.97%, underweighting this sector. Overall, we believe our recommended sector allocations offer the most desirable portfolio design consistent with our economic outlook and positioned for growth in returns throughout the next year.



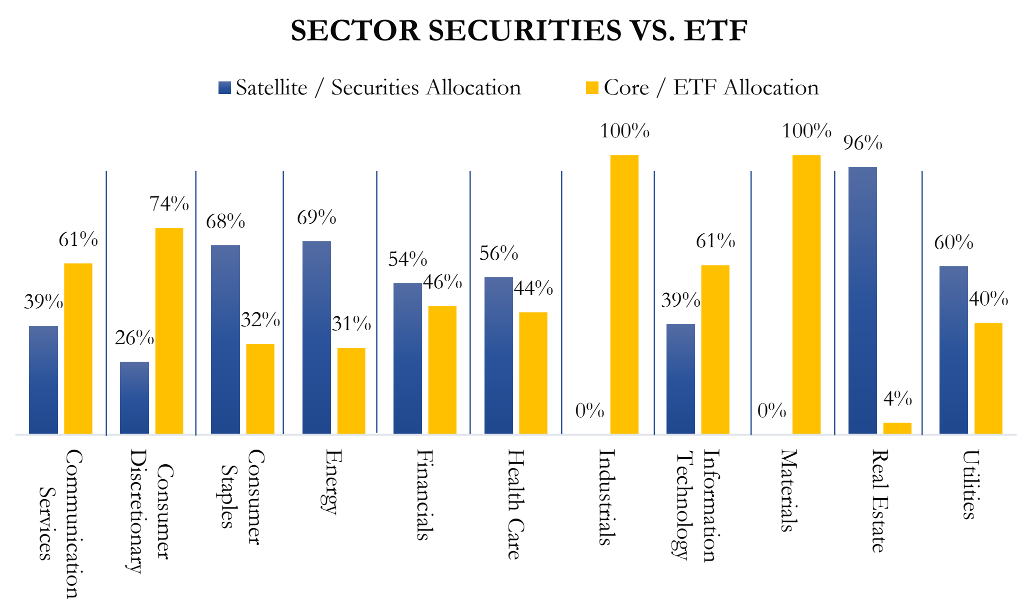
Sector	Portfolio Weight	S&P 500 Weight	Relative Weighting	Degree of Tilt vs. S&P 500
Communication Services	10.95%	10.24%	Overweight	7%
Consumer Discretionary	8.45%	9.97%	Underweight	-15%
Consumer Staples	7.11%	7.11%	Neutral	0%
Energy	5.95%	5.48%	Overweight	9%
Financials	13.95%	13.26%	Overweight	5%
Health Care	16.90%	14.79%	Overweight	14%
Industrials	9.94%	9.68%	Overweight	3%
Information Technology	18.00%	20.59%	Underweight	-13%
Materials	3.00%	2.65%	Overweight	13%
Real Estate	2.50%	2.99%	Underweight	-16%
Utilities	3.25%	3.25%	Neutral	0%

3. Sector Securities vs. Exchange Traded Fund (ETF) Allocation

The management team has decided to use risk budgeting to determine the allocation between each sector's securities (the satellite/active asset class) and sector ETF (the core/passive asset class). Risk budgeting focuses on how risk is distributed within each sector, i.e., between the sector ETF and the securities selected for that sector. The risk budget sets the percentage invested in the sector ETF as a function of the tracking error between the securities and ETF in that sector based on the tracking error tolerance. The lower the tolerance for active tracking error, the more risk averse the risk budget would be, meaning a higher allocation to the sector ETF.

The level of tracking error tolerance depends on the amount by which the management team is willing to let each sector's securities perform differently from its sector ETF. For example, a *tracking error* of zero would indicate that the sector securities matched the sector ETF – something we want to avoid if the sector securities are to add value to the portfolio. A tracking error above zero indicates the sector securities returns differ from the ETF. A *tracking error tolerance* indicates how much of the independent returns the sector securities represent should be allowed. As the tracking error tolerance increases, the higher the allocation to the sector securities.

The management team has decided to set our tracking error tolerance at 10% across sectors, which suggests that each sector will have a different split between the securities and the sector ETF. For instance, at the 10% tracking error tolerance, 39% of the Communication Services sector will be allocated to the satellite assets, while 61% of the sector will be allocated to ETFs. At the same level of tracking error tolerance, the Consumer Discretionary sector has a 26% satellite allocation and 74% ETF allocation. The graph and table below display the securities vs. ETF split for each sector:



Sector	Satellite / Securities Allocation [a]	Core / ETF Allocation [b]	Tracking Error
Communication Services	38.79%	61.21%	26%
Consumer Discretionary	26.07%	73.93%	38%
Consumer Staples	67.62%	32.38%	15%
Energy	69.06%	30.94%	15%
Financials	54.01%	45.99%	19%
Health Care	56.25%	43.75%	15%
Industrials	0.00%	100.00%	N/M
Information Technology	39.44%	60.56%	25%
Materials	0.00%	100.00%	N/M
Real Estate	95.72%	4.28%	10%
Utilities	60.05%	39.95%	17%

[a] [b]: Equity vs. ETF split is based on the tracking error tolerance of 10%
[c]: The tracking error for Industrials and Materials is not relevant as we have decided to remove individual stocks from the sector.

By adding up all security allocations and all ETF allocations, we end up with 35% of the portfolio in sector securities and 45% in sector ETFs. Although risk budgeting is not insurance against underperformance, we believe it is a rational approach to managing the allocation within each sector while assuring our portfolio remains diversified among the sectors.

4. Sector Equity Allocation – A Risk Parity Approach

We utilized the risk parity approach to allocate between the equities within each sector as risk parity is an investment strategy that focuses on the allocation of risk. This approach ultimately helped to reduce exposure by balancing exposure between the securities within each sector. We applied risk parity by assuming the securities in each sector were sources of risk and matched their allocation to their contribution to the sector's security risk. We believe risk parity is an effective approach to allocating among risky assets.

5. Security Selection

The market for security returns are competitive and narrowing down which securities to invest in was no easy task. While our academic setting limits the time and resources, we can apply to security selection, the CIM team was able to select two securities in each sector through quantitative and qualitative analysis. We were specifically looking for stocks that were undervalued with strong growth potential. We estimated a company's intrinsic value using a dividend discount model, or for those stocks that did not have dividends, a pro forma free cash flow model. Our economic outlook and sector performance also played a vital role in our calculations. In addition, we looked at qualitative aspects such as management expertise and the company's competitive advantage. An important factor incorporated into the portfolio this year was the rise of the global middle class (addressed in a separate section). As an experiment, we also considered ESG (Environmental, Social, and Governance) factors (also addressed in a separate section). Although our time was limited, we believe we have recommended promising securities that will enhance the portfolio over the next twelve months.

ESG Overview

Over the past several years, investors have been overwhelmed by opportunities to invest in companies that are improving their green presence globally. These green initiatives, generally related to pollution and energy, when paired with improved governance and inclusivity initiatives, are known as ESG, or "Environmental, Social, and Governance." There are several motivations for companies to engage in these "triple bottom line nouveau" initiatives, mainly due to investor sentiment, governmental regulations, and environmental impact. To clear up the confusion surrounding the ESG movement, several companies have attempted to come up with a way to organize and measure these initiatives. One company, MSCI, developed a ratings scale ranging from CCC to AAA by analyzing 10 topics, ranging from pollution and waste to product liability. The case can be made that if companies are engaging in these activities, then their performance should improve over the long term, as they will not only gain favor with investors, but also operate in a more sustainable manner.

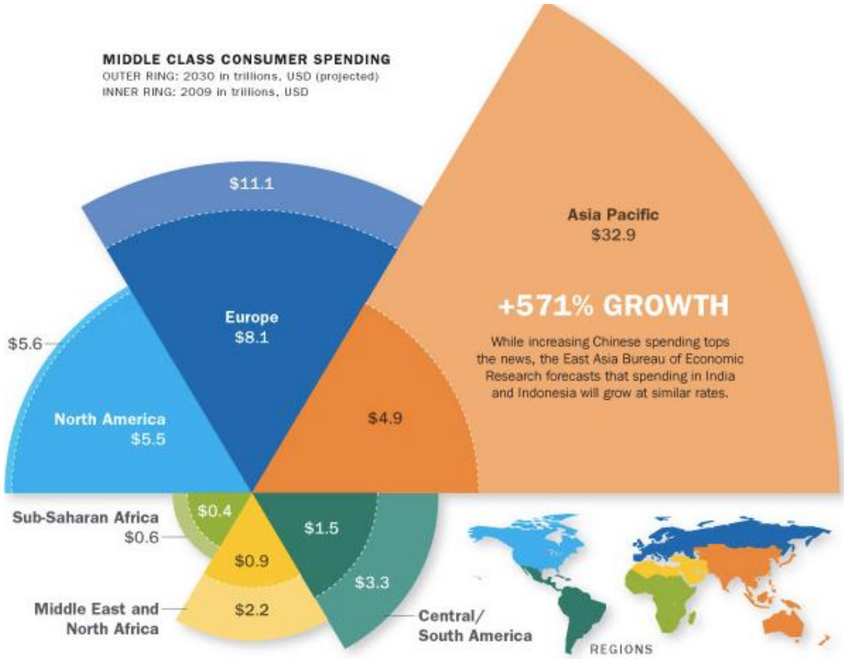
In their 2015 publication titled, "The Wages of Social Responsibility–Where Are They? A Critical Review of ESG Investing," Halbritter and Dorfleinter completed an in-depth analysis of financial data from 1991 to 2012, utilizing three scales, KDI (now MSCI), Bloomberg, and Asset4[1]. After employing several approaches, including a four-factor model and a cross-sectional Fama-McBeth regression, the authors were unable to identify any profitable opportunities where investors were able to exploit the benefits of ESG investing. Therefore, these authors concluded that there is little impact that an investor can make on their portfolio by investing in companies that are rated poorly or highly on an ESG scale.

We believe that as more companies take on ESG initiatives, it will no longer become a differentiating factor for investors, but an expectation. Therefore, we agree with the findings of Halbritter and Dorfleinter, and believe that targeting companies that are strictly ESG focused is not an opportunity that will yield significant results. However, we believe that an opportunity is available to us through companies that provide the means for companies to become more sustainable. This qualitative screen does not require that the target company help other companies reach all of their ESG goals, but merely provides a vessel for them to reach their goals. For example, we would not invest in Wal-Mart because they are installing solar panels on their store rooftops, but we would invest in the company that makes solar panels. As ESG becomes more integrated, we believe that investing in companies that either develop, fund, and/or manage this groundwork will not only help shield the portfolio from turbulence but will also see strong returns over the long-run.

This year, as an initial foray in this area, we recommend two stocks with ESG characteristics: Hannon Armstrong (Real Estate) and NextEra (Utilities).

[1] Halbritter, Gerhard and Dorfleitner, Gregor, (2015), The wages of social responsibility — where are they? A critical review of ESG investing, Review of Financial Economics, 26, issue C, p. 25-35.

Rise of The Global Middle Class



Most people have an inaccurate view of the world we live in and see the world to be much worse than it really is. For example, they consistently overestimate global poverty. However, in the last 20 years, the proportion of the world population living in extreme poverty has almost halved. Yet, only 7% of the people surveyed by the Gap Minder Foundation got that right. The majority believed that the proportion of people living in extreme poverty has remained the same or has almost doubled.

The world income distribution in 1970 divided the world into two groups - rich and poor - with a wide gap between them. However, with time the world population has increased and percent of people under the poverty line has decreased making the gap narrower. Not that poverty has been eradicated; there are still over a billion people that live in extreme poverty, but much of the world has moved to a better income level; creating a new middle class. A substantial majority of people in developed countries still believe the world is still the same with a very wide gap between rich and poor. Most of us do not see the world as it is and tend to have an exaggerated view. To get an insight into the future, we need to know the facts about the present without any biases. Owing to their ignorance, people have a skewed view of the world. Operating on wrong facts, one cannot develop sound solutions or make good investment decisions.

Millions of people in emerging economies are reshaping and resizing the global middle class. According to the Brookings Institute, the size of global middle-class is expected to grow from 3.2 billion in 2016 to 5 billion by 2030 and will become the biggest proportion of the global population by 2020. Most of this growth will come from emerging countries. By 2030, Asia will host 64% of the global middle class and account for over 40% of global middle-class consumption - with more than two-thirds coming from India and China. By 2025, Asia will become the world's leading trade region, with much of the growth coming from intra-regional commerce.

Globally, the middle-class spending is expected to increase from $35 trillion (2011 PPP) annually to more than $60 trillion by 2030. At an average rate of 4%, middle-class consumption is forecasted to grow faster than global GDP growth. The middle-class economy is projected to grow only at .05% per year in US, Eurozone, and Japan but about 6% in China and India.

The changing distribution of middle-class spending toward new entrants will have an effect on capital markets. Acknowledging the potential of the growing middle class in emerging countries, the Market Potential Index, which provides guidance to U.S. companies planning to expand their markets internationally, ranks China, Hong Kong, and India over Canada and the UK.

Factfulness, a 2018 book by Hans Rosling, documents that the world is a much better place economically and socially than most people (including investors) think. This gap between belief and reality is an investment opportunity. Successful investing takes advantage of opportunities other investors do not fully realize. Our goal is to recommend companies that stand to benefit from the growing number of global middle-class consumers. Because most investors do not realize that these changes have already happened, these companies will be undervalued with less risk and will provide us with a unique investment opportunity.

Fixed Income Assets

2019-20 Outlook

A late bond market rally spurred Treasuries with two-, five- and seven-year maturities to post gains in 2018 despite four Fed rate hikes. 10-year Treasury yields ended the year where they started, realizing a 0.5% loss for the year. US corporate debt and high-yield bonds were less resilient, declining 2.76% and 4.44%, respectively.

Thus far in 2019, bonds have benefited from the restoration of risk-on sentiments. All major bond classes have posted gains, with high-yield corporate and emerging market benchmarks delivering the strongest returns.

In March 2019, an inverted yield curve conveyed an ominous warning to markets, with yields on short-dated three-month bills surpassing those on 10-year Treasury bills. The phenomenon often precedes recessions, although the timing between inversion and its consequences unfolding varies considerably. There have also been false positives in which the expected downturn never materialized. Analysts continue to point to a strong labor market as a countervailing force. Besides, the inversion was short lived.

The primary concerns relevant to our fixed income holdings over the next year are interest rate risk and credit risk. We next assess our outlook for both risk factors and their impact on our fixed income strategy.

Interest Rate Risk:
Interest rates are determined by the supply and demand for bonds. Short term rates are primarily impacted by the actions of the Federal Reserve, whereas long-term rates are largely dictated by the market's expectations for future economic growth. Given the Fed's dual mandate to achieve both stable prices and maximum employment, a reasonable starting point for forecasting its actions at the short-end of the curve is to analyze trends for inflation and employment.

Since we last executed trades in May 2019, the unemployment rate has been historically low at a range of 3.7% to 3.9%. This falls below the non-accelerating inflation rate of unemployment (NAIRU), which according to economists would theoretically suggest an uptick in future inflation. Wage growth acceleration has predictably followed suit. In February 2019, average wages grew 3.4% year-over-year, the fastest rate in ten years. The recent rise in the labor force participation rate (63.0% in Mar. 2019 compared to 62.7% in Sep. 2018) may partially counteract cost-push inflationary pressures as previously discouraged employees return to the labor force, limiting the ability of existing employees and new hires to demand higher wages.

Despite the robust labor market, we believe the Fed will need to see higher inflation to justify tightening rates. Inflation has remained muted. Core inflation, which excludes volatile items like food and energy, has been flat at roughly 2.2% since August 2018. We project inflation to register near the 2% level through April 2020.

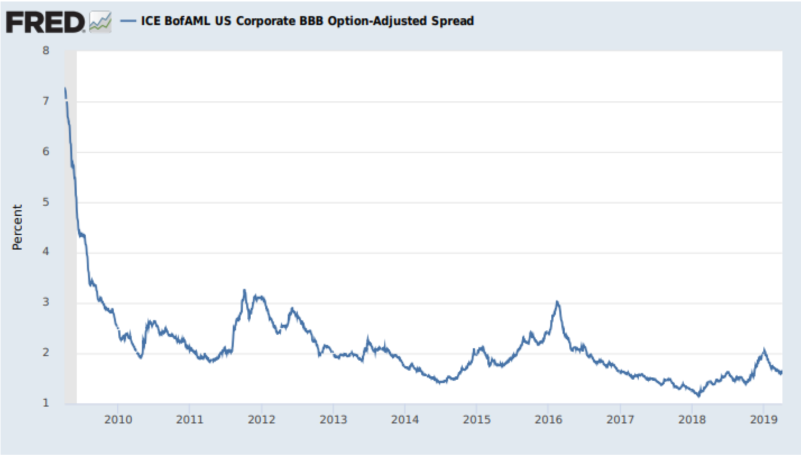
In 2019, Federal Chairman Jerome Powell backtracked from previous market-riling comments signaling that balance sheet reduction is on "autopilot." A more patient approach to raising rates has assuaged investors' fears that premature Fed intervention will stifle the current economic expansion. If inflation indeed rises above the Fed's target inflation rate, a likely culprit will be a frothy labor market boasting historically low unemployment. The interrelated nature of the global economy suggests that reduced demand culminating from slowing growth internationally will at least partially offset any wage-driven inflationary pressures.

From a fiscal policy standpoint, we expect US deficit-spending to exert upward pressure on interest rates as the government competes with private investment for loans. The US recorded a budget deficit of $310BN in the first quarter of 2019 and appears likely to meet Congressional Budget Office's forecasted $900BN deficit (4.7% of GDP) through 2019. The imbalance has been largely driven by the December 2017 tax cuts and increased federal outlays. President Trump aims to address the latter with a 2020 budget proposing 5% non-defense cuts across the board in domestic spending, although the blueprint is unlikely to gain momentum in Congress.

In the year ahead, we expect a moderately sloped yield curve and little Fed intervention given the current economic landscape. Slowing global growth threatens the viability of rate hikes. We do not foresee the economy worsening during our forecast horizon to the point where rate cuts are warranted. We also do not see inflation as a significant risk over our investment horizon. Therefore, we favor relaxing the current posture of our portfolio (short-duration funds) to receive a slight premium for entering the short-to-medium end of the curve.

Credit Risk:

Although we do not foresee an imminent recession, we believe that credit risk is currently underpriced in the market given our outlook of slowing economic growth. The chart below illustrates the spreads between BBB rated corporate bonds and US Treasuries. In December 2018, the spread approached its highest levels in almost three years. Since then, tightening credit spreads have approached the lowest levels since the Great Recession at approximately 1.60% in April 2019. If our projected slowdown materializes, we would expect credit spreads on lower rated issues to widen and reflect increased market risk.



Empirically, widening spreads during cyclical slowdowns tend to result in higher-rated bond issues outperforming those with weaker credit profiles. Therefore, we consider it prudent to preserve our portfolio's value by liquidating our credit-sensitive bond fund and reinvesting the proceeds in a fund comprised of investment-grade issues.

Our fixed income strategy can be summarized by three core objectives:

- To hedge the risk of our equity holdings. Hence, we are content to forego a few basis points of YTM if the accompanying risk profile is undesirable.
- To moderately extend the duration of holdings. Investing in low duration bond funds minimizes price risk resulting from rising rates but exposes our holdings to reinvestment risk if rates decline further. The latter risk can be partially mitigated by investing in intermediate-term funds.

- To reduce exposure to bonds with troubling credit risk, which would likely decline in value as spreads widen to reflect slowing economic growth.

We are best able to accomplish these objectives by constructing a bond portfolio offering modest returns and substantial downside protection. The two funds we selected satisfy our criteria: DoubleLine Low Duration Bond Fund (DBLSX) and Vanguard Intermediate-Term Investment Grade Fund (VFICX). We have adjusted our fixed income allocation to the middle of the 10-20% guideline specified in the investment policy statement and set the fund weightings to achieve an average effective duration of about 3.5 years. We believe that our conservative approach is justified given our outlook of decelerating economic growth.

HOLD DoubleLine Low Duration Bond (DBLSX)

DBLSX outperformed its benchmark (Barclays US Aggregate Bond Index) in 2018, validating its status as a fixture within our fixed income portfolio. Over the past five years, DBLSX has achieved above-average returns while assuming below-average risk relative to its fund category. It provides welcomed exposure to structured credit products, which offer higher yields than similarly-rated corporate bonds and employ a range of credit enhancements to protect senior noteholders if the collateral pool experiences losses.

The fund is appropriately diversified, with its top ten holdings comprising only 7% of the fund's assets. The fund's low average effective duration of 1.05 and average effective maturity of 2.80 years are compelling antidotes to the remote threat of additional Fed rate hikes over the next year. Given that the average credit quality of the fund's holdings is BBB, we are cognizant that a ratings downgrade could relegate certain holdings to non-investment grade status and widen the yield spread that investors demand. Despite these concerns, we believe DBLSX's strategy is consistent with our economic outlook and warrants inclusion in our portfolio. DBLSX yields 3.03%.

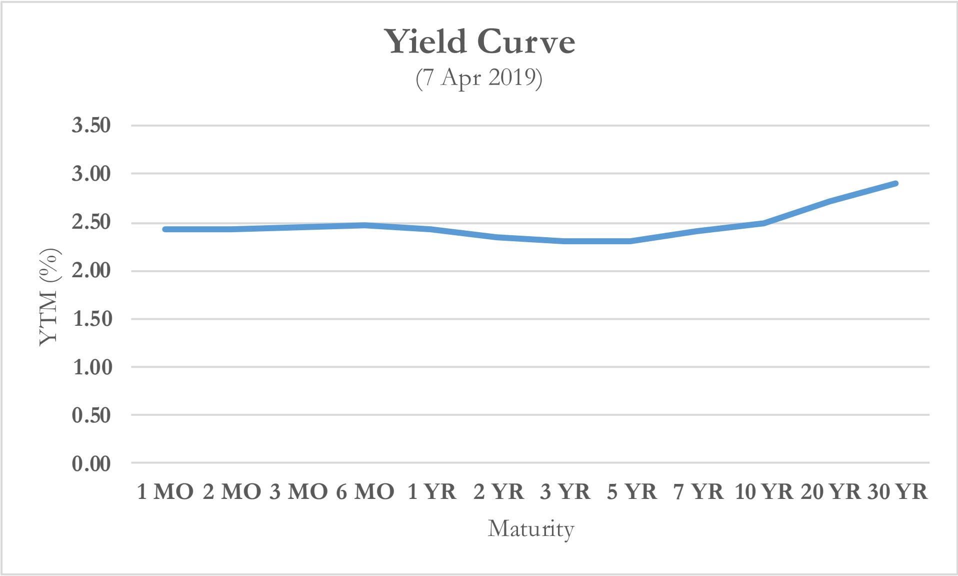
SELL Hartford Floating Rate High Income Bond (HFHIX)

With the current economic expansion likely nearing its peak, we wanted to reduce our exposure to HFHIX's substantial credit risk. HFHIX consists almost entirely of floating rate bank loans, over half of which are rated "B." With an average maturity of 5.19 years, we are concerned about borrowers' ability to repay if the US economy worsens during that timeframe. Moreover, the fund's peripheral exposure to UK and Italy incorporates geopolitical risks that could eventually spill over to those nation's corporate sectors. We believe these risks counteract HFHIX's low interest rate sensitivity and justify its elimination from our portfolio.

BUY Vanguard Intermediate-Term Investment Grade Fund (VFICX)

A suitable replacement for HFHIX, VFICX provides diversified exposure to quality investment-grade borrowers with an average maturity of 5-10 years. The fund invests in corporate bonds, pooled consumer loans, and US government bonds offering an average duration of 5.4 years. We are attracted to the fund's credit profile and ability to offset the reinvestment risk inherent in our low duration bond holdings. If interest rates eventually rise from the historically low levels post-Great Recession, the value of our portfolio will decline. However, the unexpectedly higher yields would cause the income component of our return to rise after reinvesting coupon payments assuming we hold the fund long-term. With a modestly sloped yield curve, we prefer a slight extension of duration versus the alternative of attempting to time the direction of interest-rate changes. This marks a shift of previous teams' fixed income strategy of exclusively favoring low duration funds. As an added bonus, VFICX and its holdings are highly liquid, mitigating the threat of liquidity mismatches manifesting themselves in a distressed scenario. We believe the fund's characteristics are consistent with our mandate to hedge against the threat of economic weakness. VFICX provides a YTM of 3.6%.

Fund	Weight	Duration	Maturity	YTM	Avg Credit Quality
DBLSX	46%	1.24	2.76 Yrs	3.03	BBB
VFICX	54%	5.39	5.60 Yrs	3.60	A
Total	100%	3.50	4.31 Yrs		



Logistical Constraints

This year's team is short-handed as we started the term with eight students and, due to unforeseen circumstances, finished the term with seven students. The faculty made the decision to drop the sector security holdings to two and assign most students to cover two sectors. As a result, we dropped some securities without analysis to bring the sectors to two securities each. The other securities held at the beginning of the term were eliminated with only cursory analysis because they did not meet the growing middle-class theme or because they were overvalued according to last year's valuations. We also dropped securities in the Industrial and Materials sectors when a student left the class.

Sector Analysis

Consumer Discretionary

Introduction

The consumer discretionary sector encompasses industries that manufacture products and provide services that consumers regard as non-essential. According to the laws of economics, demand for non-essential products is highly correlated with real disposable income. Demand for discretionary non-essential products and services flourishes during periods of economic boom when personal disposable income is abundant and shrinks during economic busts when personal disposable income is scarce. Industries within this sector are leisure products, automobiles and auto components, textiles and apparels, hotels and travel, restaurants, household durables and appliances, diversified consumer services, media distributors, internet and direct marketing retail, multiline retail, and specialty retail.

Macroeconomic Environment

The consensus of the Crummer Investment Management Team is that the economy is witnessing the second longest on record economic expansion (since June 2009) and that the economy will continue to expand throughout 2019 and into the first quarter of 2020, albeit with some degree of slowing down. The boosting effect of the 2017 new tax cut act on real disposable income and consumer spending, will begin to fade in 2019, thus slowing down real GDP growth and hampering the performance of the consumer discretionary sector.

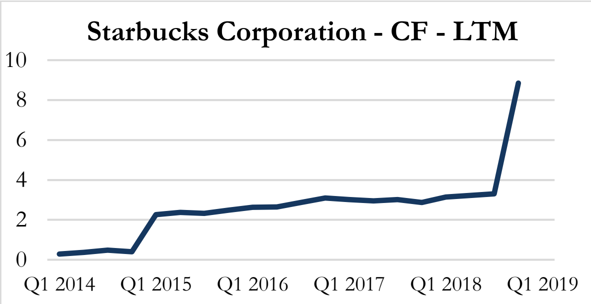
Conclusion

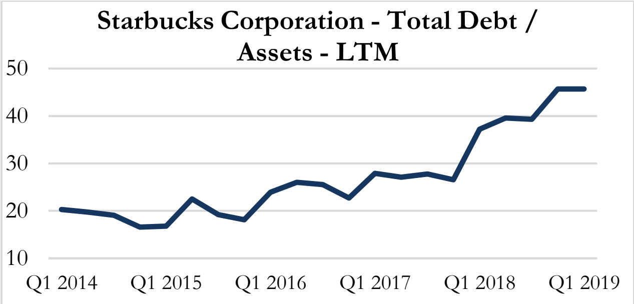
The Crummer Investment Portfolio adopts a short-term tactical sector tilt relative to the sector market weights of S&P 500 index, anticipating market movements in the short-term (one year or less). Accordingly, and because it is our group's consensus that the economy will be slowing in 2019 and into the first quarter of 2020, impeding the consumer discretionary sector, we recommend underweighting this sector relative to the S&P 500 index by 15%.

We valued individual stocks within this sector using a three-stage dividend discount model and a pro-forma financial model. Short-term growth rates were estimated based on a bottom-up approach, supplemented by our analysis of the company's short and long-term prospects. Share repurchases were incorporated in the dividend forecast as appropriate.

Starbucks Corporation (SBUX)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$119.61**	**$70.71**	**24.89x**	**Large Growth**	**1.61%**





Introduction

Starbucks Corporation was founded in 1985 and is considered the premier global roaster, marketer and, trader of specialty coffee. Starbucks operates in 78 countries around the globe and generated approximately $25 billion in revenues in September 2018.

Connection to Global Middle Class

Starbucks is focused on global expansion and on increasing the company's presence in developing countries which fits well with our growth of the global middle-class theme. By opening its world's biggest reserve roastery and coffee shop in Shanghai in December 2017, Starbucks will take advantage of the rising Chinese middle class. In 2018, Starbucks announced its plan to almost double their already existing 3300 coffee shops in China to 6000 before the end of 2022. Starbucks/Nestle announced on May 6, 2018 a $7.5 billion deal to sell Starbucks-branded coffee at grocery stores and online in Europe (Belgium-Spain-Britain-The Netherlands), Asia (China-South Korea) and Latin America (Brazil-Chile-Mexico) with more countries to follow. This deal will allow Starbucks to focus on its coffee shops and through Nestle's retail expertise, bring their coffee to the supermarket shelves around the world and benefit from the rise of the global middle class especially in developing countries like China and Mexico. Starbucks is planning on tripling its revenues and operating profits in China by 2022.

Fundamental Analysis

Starbucks reported $4.5 billion earnings in 2018 with a 56.63% increase from 2017. Sales in 2018 increased by 10.44% from 2017 and the company reported record recurring EPS of $2.70 in September 2018 exceeding analysts' forecasts of $2.42. The company's remarkable financial performance in 2018 is attributed to its China/Asia Pacific segment according to the company's most recent annual report.

Starbucks maintains stable gross margins (see chart) ranging between 21% to 25% over a period of 5 years (2014 to 2018). While we do not expect Starbucks to maintain the remarkably high 2018 increase in earnings (56.63%), which is partially attributed to the 2017 Tax Act that resulted in a lowered corporate income tax of 24.5% for the fiscal year 2018 as compared to the previous 35%, it is still anticipated that the company will maintain a steady growth in sales over the coming five years (10%-16%). Increased sales and stable gross income margins will ultimately have a positive impact on bottom line growth.

Financial Statement Analysis

<u>Balance Sheet:</u>
Starbucks has maintained a strong cash position over the past three years with a big leap in 2018 due to the Nestle $7.5 billion deal (see chart). Current assets have increased in 2018 by 136.48% compared to 2017. Fixed

assets have grown by 28% and we expect the international expansion to add significantly to that total. The company is financings its expansion with a combination of profits and borrowing. Long-term debt has grown from $3.2 billion two years ago to $9.1 billion at 2018-year end (September 30th). On a percentage basis, total debt- to- total assets (see chart) has risen from 25.57% to 39.32% over a period of 3 years (2016-2018). This leverage is considerably below the industry 2018 average of 65.74%, indicating the company should be able to finance its growth plans without taking on more leverage than is common in the industry.

Income Statement:
The company has seen sales growth of 10.44% in 2018, while it has maintained a net income margin of 18.28% and EBITA margins of 15.61%. Profitability is significantly higher than the industry average margin of 12.31% net income and close to the industry's 16.30% EBIT margin. The fact that management is growing the company without sacrificing margins makes Starbucks willing and able to meet its current financial obligations and fund its intended expansions – providing profitable growth for the next few years.

Free Cash Flows:
Free cash flow per share in 2018 was $7 which is significantly above the five-year trend. The free cash flow margin was an impressive 40.30%, compared to the industry average of 14.92%.

Valuation

Starbucks' international expansion is already in action, and the company has shown the ability to control its profit margins while going full speed ahead with its global expansion plans. With this premise, we used a three-stage dividend discount model to arrive at a plausible intrinsic value for Starbucks' stock. A bottom-up valuation model yielded an impressive 25.76% short-term internal growth rate, which can be attributed to the China expansion and Nestle's deal. However, we estimated a more conservative long-term sustainable growth rate of 3.57%, which represents the sum of the USA's long-term GDP forecast (2%) and the long-term inflation rate forecast (1.57%). GDP and Inflation rates of the USA are used to calculate the long-term sustainable growth rate, as to date, 70% of Starbucks' revenues are generated from sales within the US. By discounting the terminal value that the three-stage discount model yielded at an 8% cost of equity, we arrive at an intrinsic value of $119.61. Through our sensitivity analysis, we could estimate Starbucks stock intrinsic value between $64.16 and $147.95. All things considered, we believe that $119.61 is the most valid intrinsic value for Starbucks.

Challenges

As Starbucks sales depend largely on consumer discretionary spending, their results of operations are sensitive to changes in or uncertainty about macro-economic conditions in both the USA where 70% of the company's revenues are generated as well as globally where the company is expanding. We assess these challenges as low probability but still possible. The effects of the current US-China tensions, including rounds of tariff increases and retaliations could also impede the company's Chinese expansion plans. These challenges are manageable, and we believe management is up to the task.

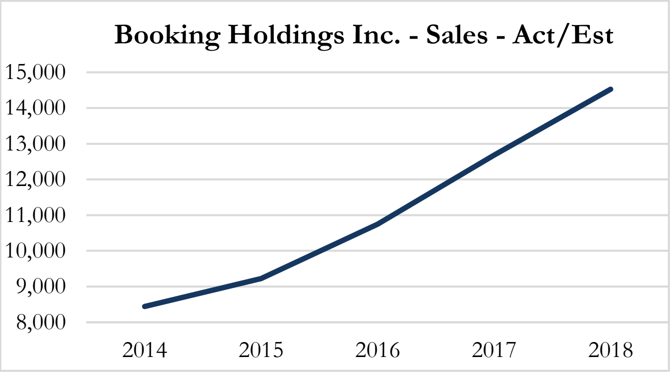
Conclusion & Recommendation

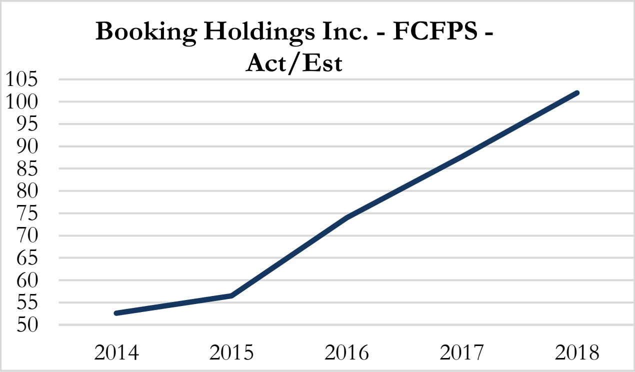
Across the board we expect Starbucks' strategy of global expansion in developing countries to help it outperform its peers in this competitive industry, leading to continued growth.

Even with these modest long- term growth forecasts, our three-stage dividend discount model estimates the company is currently undervalued by 69%. We recommend our position be BUY.

Booking Holdings, Inc. (BKNG)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
HOLD	**$1898**	**$1697**	**16.49x**	**Large Growth**	**N/A**





Introduction

Bookings Holdings, Inc was founded in 1997. The company's mission is to help people experience the world through providing integrated and diversified online travel services. BKNG provides services in the United States and 220 countries through their six primary brands: Bookings.com, Priceline.com, KAYAK, Agoda.com, CarRentals.com, and Open Table.

Connection to Global Middle Class

BKNG's financial results and prospects are totally dependent upon the sale of worldwide travel services. Sales of travel services are highly correlated with the global consumer discretionary spending. As such and through the company's primary six brands and extensive global presence, the rise of the global middle class has a substantial positive impact on the company's future financial success. The growing impact of the rising middle class from emerging market countries on travel spending is notable. According to the World Economic Forum, within the next decade, the number of households making at least $100,000 annually will increase by 30 million, with 1 out of these 3 households located in emerging markets.

Fundamental Analysis

BKNG reported $3.9 billion in earnings in December 2018 with an impressive 70.8% growth over 2017. At the same time, revenue in 2018 was $14.5 billion with 14.6% growth over 2017. These growth percentages are attributed to the strong growth in the company's accommodation and reservation services. The company believes that this growth is partially fueled by the growth of travel in higher growth emerging markets such as Asia-Pacific, South America and the Middle East. These emerging markets are witnessing an increased dependence on and widespread use of mobile devices and accordingly a broad shift from offline to online travel purchase. There is a substantial growth opportunity for BKNG in emerging markets and in the company's latest annual report they stress the importance of achieving higher market penetration in emerging markets and generating more revenues in this region (5.2% of revenues are generated from emerging markets in 2017).

We expect that, as the global consumer discretionary market will be stable for at least another year, BKNG would succeed in its endeavors to achieve higher emerging markets penetration.

Financial Statement Analysis

Balance Sheet:
BKNG has maintained a strong cash position over the past three years ($2 billion in 2016, $2.5 billion in 2017, and $2.6 billion in 2018). Our analysis of BKNG's current assets and liabilities returned a healthy current ratio of 2.36, which implies that the company can cover its short-term liabilities with its current assets. The company is financings its operations and its ambitious penetration plans of new emerging markets with a combination of profits and borrowing. Long-term debt has decreased from $8.8 billion two years ago (2017) to $8.6 billion at year end (2018). On a percentage basis, debt-to-total assets has risen from 36.12% to 38.12% over three years (2016 to 2018). This leverage is higher than the industry average of 26.84%, indicating the company is not be able to finance its growth plans without taking on more leverage than is common in the industry, which is something to pay attention to.

Income Statement:
The company has seen consistent increases in sales over the past 5 years (see chart) with 14.56% growth in 2018 and a remarkable gross income growth of 35.48%. However, the company's same year SG&A expense is a high 62.15% of the gross income. The high SG&A expense is mainly attributed to the performance marketing cost which represents 50.8% of the total SG&A ($4.4 billion). Performance marketing is the cost that is primarily related to the use of online search engines like Google, meta-search, and travel research services and affiliate marketing to generate traffic to the company's websites. However, BKNG has maintained net income margin of about 27.52% and EBIT margin of 36.77%. Profitability is significantly higher than the industry average margin of 10.30% net income and 15.53% EBIT.

Free Cash Flows:
Free cash flow per share in 2018 ($101.96) was above the five-year trend ($74.55). This can be explained by the fact that over the past 5 years (see chart) the company's free cash flow per share was consistently increasing from $52.48 in December 2014 to $101.96 in December 2018.

Valuation

Given the absence of a dividend policy, a Pro Forma financial model was used to evaluate the company's value and to arrive at an intrinsic value for its stock. We calculated the estimated revenue projections for BKNG using realistic market assumptions and the expected positive impact on revenues resulting from the increased demand of the rising global middle class in emerging markets. Using a CAGR (Years 2008 to 2017) of 23.59%, we forecasted a 9.58% sales growth over a period of 5 Years (2019 to 2023). We arrived at a free cash flow to equity terminal value that we discounted using a 9% cost of equity and a 2.2% modest long-term free cash flow to equity growth rate. This long-term growth rate reflects a weighted average of GDP and inflation rates of both, Europe which is responsible for 72% of BKNG's revenues in 2018 and of the USA which is responsible for 12% of BKNG's revenues in 2018. Through our sensitivity analysis, we could estimate Booking's Holdings intrinsic value between $1,550 and $2,000. All things considered, we believe that $1,898 is the most valid intrinsic value for BKNG stock.

Challenges

Our valuation is conservative, but the company faces some challenges. We assess these challenges as low probability but still possible. The UK Brexit deal and EU members sovereign debt default risks can adversely affect travel demand, which would have negative impact on the company's revenues. The US trade war with China could derail part of the company's emerging markets expansion plans in Asia-Pacific.

Conclusion & Recommendation

Across its six primary brands, we expect BKNG diversified travel services to help it outperform its peers in this competitive industry.
Even with these modest growth forecasts, our Pro-Forma model calculates that the company is currently undervalued by 12%. We recommend our position be HOLD for another year.

Consumer Staples

Overview

Consumer Staples stocks, typically viewed as a safe haven during periods of market volatility or economic downturn, benefited from the recent increase in volatility in the overall market that ended in 2018. The sector started the year underperforming however, while the overall market has rebounded from the Q4 market correction. Given our economic outlook of slowing inflation rates and GDP growth, we believe Consumer Staples will not contribute much to growth. However, we have increased the portfolio weight for this segment to coincide with the Consumer Staples S&P representation, to act as a hedging measure against the recent increase in market volatility.

Trends and Consumer Demands

When market volatility picks up, the consumer staples sector is often viewed as an attractive choice—but once the market calms again, the consumer staples sector can struggle. Consumer Staples companies likely have benefited in recent years from increases in domestic political and geopolitical tensions, which can cause volatility. On the other hand, more dovish central bank policies, especially in the U.S., could dampen investor enthusiasm for the sector. Additionally, with our predictions that Federal Reserve will not raise short-term interest rates aggressively in the next year, there is a modest risk that inflationary pressures could cause sentiment to rise unexpectedly, given the high correlation with rising inflation and revenues in this sector.

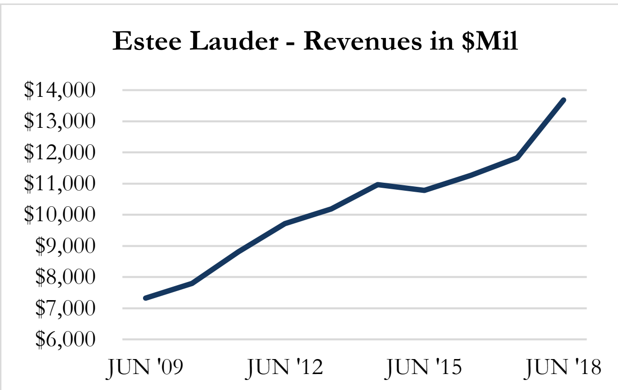
There has also been an increase in merger and acquisition activity in this sector. With fierce competition, M&A activities help firms focus on expanding into economies of scale, especially into the emerging markets. However, if international trade conflicts escalate, costs could rise for American producers and increase prices for international consumers.

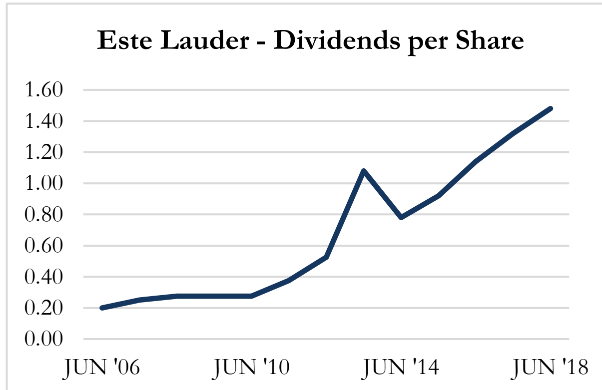
Growth through e-commerce and consumer data analytics have become two key differentiators for companies in the Consumer Staple sector. The changing nature of consumer purchasing habits has historically been a headwind for this sector. But omni-channel and digital shopping experiences can allow companies to identify consumer preferences and trends and adapt quickly. Most of the Consumer Staples sector has not prepared itself for the onslaught of price transparency that e-commerce has brought on and may hinder revenues as a new generation of consumers, who no longer exhibit the brand loyalty of their parents, choose private labels due to increasing price competition.

The stocks held in the Consumer Staples sector of the Crummer SunTrust Portfolio were evaluated using dividend discount models and free-cash-flow to equity models. Regression analysis of company sales against related macroeconomic factors was applied to estimate short- term growth rates for these models, in addition to a bottom-up valuation analysis. In some cases, a weighted average was used to incorporate both growth rate estimations. Share repurchases were also included as future cash flows to shareholders.

Estée Lauder Companies, Inc. (EL)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$180**	**$156**	**29.77x**	**Large Value**	**1.21%**





Introduction

Estée Lauder Companies, Inc. engages in the manufacturing of skin care, makeup, fragrance and hair care products. Its portfolio of brands contains iconic names like Estée Lauder, M.A.C., Tom Ford, Clinique, Origins, Aveda and Bobbi Brown. Its products are sold in more than 150 countries through retail and e-commerce channels. The company was founded by Estée Lauder and Joseph Lauder in 1946 and is headquartered in New York, NY.

Connection to Global Middle Class

Estée Lauder operates in a class of products called Prestige Beauty, which has historically gained vast popularity with global middle-class women. As their spending power increases, many women aspire to trade mass market products for higher quality, luxurious beauty products they can afford. It is estimated the middle class will grow by 600 million people, representing greater than $5 trillion in added global spending power by 2028, an increase of 50%.

Today, women in China between the age of 15 and 65 spend $23 annually on Prestige Beauty products. Compare that amount to women of the same age in Korea, which was an emerging market in Prestige Beauty just 20 years ago, who spend $276 annually.

India and Brazil are two additional emerging markets with substantial opportunity for growth; the average female in that age group spends just $2 and $21 on Prestige Beauty products, respectively.

Estée Lauder has only begun to penetrate these emerging markets, distributing a small fragment of their arsenal of prestigious brands. The rise of digital marketing has also fueled the global brand affinity for Estée Lauder products. In China, where only nine of EL's 25+ brands are available for purchase online, e-commerce has grown over 10x in the past 4 years and generated $150 million in one day in 2018.

Fundamental Analysis

Estee Lauder has four global brands that exceed $1 billion in sales annually, and a large collection of about 20+ brands that it actively manages to grow in size and brand equity. Management uses a stream of M&A activity to strengthen positions in diversifying geographic locations or sub-categories of beauty. International sales account for nearly 70% of sales, and EL is a leader in Prestige Beauty in North America and Asia, and number one in many developed and emerging markets including the U.S., UK, Hong Kong, Brazil, and India.

Estee Lauder has also been a leader in e-commerce retail, launching the first prestige beauty e-commerce site *Clinique.com* more than 20 years ago. Today, its e-commerce business is in more than 50 countries, with 300 brand.com sites, 60 brand boutiques on platforms such as China's largest e-commerce site Tmall, and 1,600 retailer.com online purchase stops. The e-commerce channel is expected to grow at consistent double-digit rates over the next 3 years.

Financial Statement Analysis

Balance Sheet

Estee Lauder has maintained a strong cash position, ending 2018 with $2.18 billion in cash and cash equivalents. In the last year, total assets have increased by 8.64%, totaling $12.6 billion. The company has healthy liquidity levels with a quick ratio of 1.39, and its total debt to equity ratio of 75.60 is significantly lower than the S&P500 sector benchmark of 108.64.

Income Statement:

2018 sales reach $13.7 billion, an increase of 15.72% from the previous year (see chart). The largest geographic growth occurred in the Asia Pacific region, followed closely by Europe, the Middle East & Africa region increasing by 29.2% and 21.2% respectively. Revenues exceeded expected levels, but a net deferred tax liability related to repatriation tax on unremitted foreign earnings resulted in slightly less net income.

Free Cash Flows

Increases in net cash provided by operating activities in 2018 primarily reflected higher earnings before income taxes and an increase in accounts payable. In 2017, levels of long-term debt increased to finance the Too Face and BECCA brands acquisitions, and we expect the company to continue growing its cash dividend (see chart) while paying off its debt obligations.

Valuation

The market has started to recognize the benefits of the growing e-commerce channel over traditional brick-and-mortar retail sales, but we believe the growth attributed to the rise of the global middle class is underestimated in the current market price. Estee Lauder has strong consumer analytics capabilities gathered through its e-commerce channel, strong brand affinity, and a healthy R&D budget, which positions the company well for double-digit growth in the next few years.

The company has a high internal reinvestment rate of 12.39% and a high correlation with US inflation rates. Using a weighted average growth estimate calculation as input for our free-cash-flow to equity valuation model, coupled with Monte-Carlo simulation trials, we calculate the intrinsic value of Estee Lauder to be $180. We believe this stock is undervalued.

Challenges

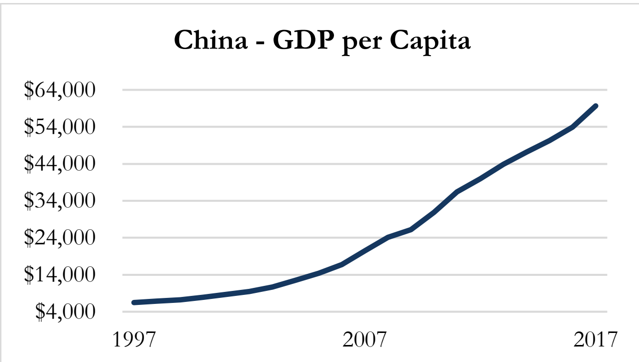
The two main challenges facing Estee Lauder relate to the global scope of its operations; the business is at high risk for fluctuations in foreign currency exchange rates and cost of operating in different parts of the world. Additionally, all e-commerce transactions are at risk for cybersecurity breaches, outages, and other information technology failures. We believe management is more than capable of handling these challenges.

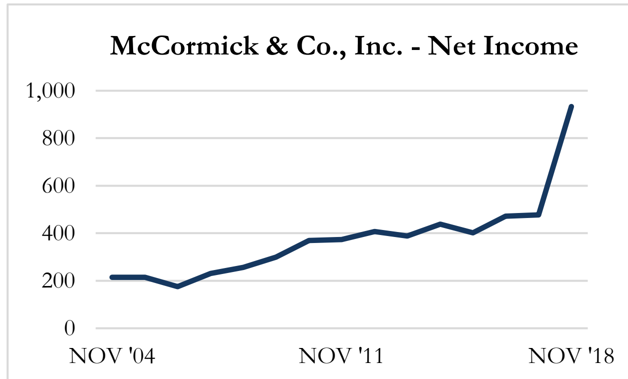
Conclusion & Recommendation

The global brands and digital presence Estee Lauder has cultivated make the company a clear leader in the growing global Prestige Beauty market, particularly in the emerging markets. We believe EL-US is undervalued by at least 15%, and our recommendation is a BUY.

McCormick & Company, Inc. (MKC)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$151**	**$140**	**19.75x**	**Large Value**	**1.39%**





Introduction

McCormick & Co., Inc. manufactures, markets, and distributes flavor enhancing products and operates in two business segments: Consumer and Flavor Solutions. Its major sales, distribution, and production facilities are located in North America, Europe, and China, with additional facilities in Australia, India, Central America, Thailand, and South Africa. McCormick brands reach consumers in 150 countries and territories worldwide.

Connection to Global Middle Class

In 1989, McCormick opened its first production facility in China through a joint venture with a local food company in Shanghai. Since then, McCormick has become one of the top 10 consumer brands in China, expanding its Shanghai facility and opened an additional plant in Guangzhou, the largest city in China with a population of over 44 million. The company is held in high esteem with consumers and the Chinese government for its emphasis on consistent quality and food safety; McCormick was named the Designated Supplier for the Beijing 2008 Olympic Games, the Guangzhou 2010 Asian Games, the 2016 Hangzhou G20 Summit, and the 2017 BRICS Summit in Xiamen. As an herbs and spices expert, the company has been successful in acknowledging and creating localized flavors that match Chinese consumer taste preferences. Strong customer affinity for the brand in China has fueled the growing Asia Pacific Consumer segment contribution to sales, increasing 10.3% in 2018.

McCormick increased capital expenditure for digital brand marketing by $48.5 million in 2018 to reach new consumers and increase market penetration. In early 2018, McCormick formally launched its brand flagship store on Tmall, China's largest e-commerce platform. As a result, e-commerce sales in China grew 61% in 2018, and is expected to continue to gain momentum as the brand penetrates the Chinese e-commerce market. In 2019, McCormick will bring the newly acquired Frank's hot sauce and French's mustard family of flavors into China with localized Chinese labels, and continue investing in digital marketing, which has generated the highest return on investment for brand marketing support strategy in China. With China's household wealth on the rise, and the significant role spices have played in China's culture and history, McCormick has a strong position to capitalize on the growth of the middle class. We are confident the company has the infrastructure and resources to continue investing into product innovation and increase distribution within China and increases in sales in this region could boost revenues by at least 1% to 2% in the next few years (see chart).

Fundamental Analysis

McCormick generated $5.4 billion in net global sales in 2018, an 11.9% growth from 2017. The Consumer segment accounted for 61% of total sales, seeing double-digit growth in both the Americas and the Asia Pacific regions. Flavor Solutions segment, accounting for 39% of sales, had 33.8% growth in operating income, adding $75.1 million in 2018. The completed acquisition of RB Foods contributed to growth in both segments, adding the iconic French's®, Frank's RedHot®, and Cattlemen's® BBQ sauces to its portfolio of brands. The company has also seen tremendous savings from its Comprehensive Continuous Improvement (CCI) program, totaling $117.9 million in cost savings, which funded its increased digital marketing expense. In 2018, McCormick also announced its partnership with IBM to pioneer the application of artificial intelligence, or AI, for flavor and product development. McCormick's continued investment into market research and digital market penetration, and continued cost savings program provide strong growth opportunities in both segments.

Financial Statement Analysis

<u>Balance Sheet</u>

McCormick saw a steep rise in its leverage in 2017, related to the largest acquisition in company history of RB Foods. Management financed the acquisition through a combination of notes and term loans and has built-in a $1.0 billion revolving credit facility to fund any necessary seasonal working capital needs, which will expire in August 2022. We are confident that internally generated funds and existing sources of liquidity are sufficient to fund operations and growth opportunities. We expect share repurchases to continue into 2019 to mitigate the effect of share issued upon the exercise of stock options.

<u>Income Statement</u>

Top line and bottom-line growth were strong in 2018 for McCormick with net sales, EBIT, and net income increasing by 11.9%, 20.2%, and 95.5% respectively. Gross profit margin rose 220 basis points to 43.8% from 41.6% in 2017. Net income included $157 million of non-recurring income tax benefit related to the enactment of the U.S. Tax Act. Adjusting for this benefit, net income increased by 63% (see chart).

Valuation

McCormick has a modest dividend, opting to use its cash flow to generate growth opportunities within its core business, through innovation and acquisitions. It has continued to grow its revenues, dividends, and share repurchase activities fairly consistently over the last 15 years, and we believe McCormick has a winning strategy with global flavor products.

With favorable correlations to steady inflation rates and a high internal reinvestment rate of 23%, bolstered by strong growth in the Asia Pacific region, we believe McCormick is undervalued. Using the three-stage dividend discount H model with projected growth rates, we calculate McCormick's intrinsic value at $151.

Challenges

McCormick faces three major challenges to its business operations. Purchases of raw materials necessary for production are subject to fluctuations in market price and availability caused by weather and harvesting conditions, market conditions, and governmental actions. The increase in debt level make McCormick more susceptible to interest rate risk, but management has entered both fixed and variable rate debt arrangements. Finally, the outcome of "Brexit" could adversely affect labor and trade in addition to creating further short-term uncertainty and currency volatility. Management has the bandwidth to be agile and adapt to these challenges, if faced with them.

Conclusion & Recommendation

With a seemly endless demand for flavorful food worldwide, especially in emerging markets like China, McCormick is positioned to leverage its expertise in all things savory. Our dividend discount model estimates the company is currently undervalued. We recommend a BUY position for this stock.

Energy

Sector Overview

The energy sector consists of various types of companies engaged in the exploration and production, refining and marketing, storage, and transportation of oil/gas, coal, and consumable fuels. This sector also includes companies that support the retrieval and transportation of those products, through equipment and services. The main drivers of this industry are global oil and gas prices, thus exposing companies to a very volatile market, creating general uncertainty around long-term investing. Historically, this sector underperforms in economic downtowns and performs well in expansions and recoveries.

Sector Outlook

There are several factors to consider when looking at the Energy sector as whole. Those factors are crude oil price, the value of the U.S. Dollar, overall global output, global economic conditions, and trade policies regionally and globally. Crude oil has seen a wide shift in price over the past several months, ranging from $76.90 in October 2018 to $42.36 in December 2018, and up again to $59 in March of 2019. The index fund for the energy sector (also held in this portfolio) saw a low in Q4 of 2018 that was not seen since late 2016, which highlights the dependence on strong oil prices for success. Aside from being the global reserve currency, the U.S. dollar is the global pricing instrument for crude oil. According to Seeking Alpha, there is a significant and long-term inverse correlation between the value of the dollar and crude oil prices. There was a 1% increase in the dollar index in Q4 2018, which was a 4.26% increase from 2017 close. Crude oil prices reflected that inverse relationship, by declining over time. Overall global output has been in the spotlight since the Trump administration has taken hold, pushing sanctions on Iran and reducing dependence on Venezuelan oil. The most pressing development is the discovery of horizontal drilling, which has helped pave the way for U.S. production capabilities. This, paired with a reduction in regulations has increased U.S. production of oil by 11.7 million barrels per day, solidifying a position in the global marketplace. The ongoing trade war between the U.S. and China, as well as other geopolitical concerns have weighed heavily on the energy sector, however, the overall consensus is that there will be a positive outcome from discussions between the two governments.

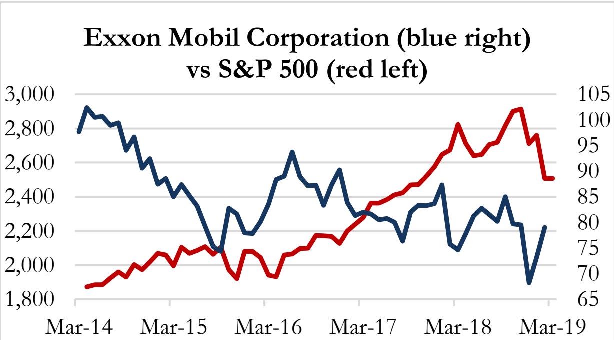
Natural gas is also a significant consideration in this sector, given that the United States has the largest access to natural stores globally. As global demand rises, demand for this U.S. based commodity will lead to further positive returns.

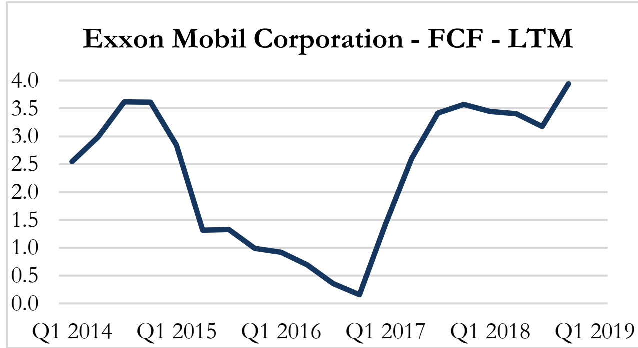
Conclusion

Taking all of this into consideration, we believe that investing in this undervalued sector will net positive results moving forward. We believe that over-weighting this sector by 5% relative to the S&P will allow for more exposure to the potential uptrend. Stocks were valued using a two-stage dividend discount model, where short-term discount rates were determined by utilizing a sales-driven macroeconomic factor regression analysis.

Exxon Mobile Corporation (XOM)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
HOLD	**$107.50**	**$79**	**16.3x**	**Large Core**	**4.1%**





Introduction

Exxon Mobile Corporation (Exxon) is the world's largest oil company. The company's three segments are upstream (crude oil), downstream (petroleum products), and chemical (petrochemicals). In 2018, Exxon had $279 billion in sales (6th in the world), $342 billion in market value (10th in the world) and operated 24,696 wells.

Connection to Global Middle Class

As the United States asserts itself as a net exporter of petroleum and petroleum products, Exxon has positioned themselves well in the oil and oil product producing market. As families and businesses abroad in countries in the Far East and Africa transition to internal combustion engines for daily and industrial use, the opportunity for continued revenue generation will be significant. For example, XOM's subsidiary, Mobile Producing Nigeria Unlimited (MPN), is one of the largest oil players in Nigeria and operates in a joint venture with the Nigerian National Petroleum Corporation (40% stake) and produces more than 20% of total national output. Additionally, Exxon has placed investments in countries such as Guyana, Indonesia, Papua New Guinea, and Qatar, which they expect will net oil and other gas products between 2020 and 2030 and will help provide a strong basis in previously underserved markets. We believe that these investments will keep Exxon at the forefront of the global market.

Fundamental Analysis

Exxon's 2018 revenue was $279 billion, up from $237 billion in 2017. A significant driver of this growth is their upstream revenue, which is credited to the success of five projects completed in Australia, Kazakhstan, and the United States. Additionally, investments in unconventional oil retrieval in the Permian Basin net the company increased revenues, as well as improved efficiencies in their refinery operations. According to a Wall Street Journal analyst, "Exxon…appears to have fully shaken off the malaise of a years-long oil price crash."

The company's margins increased by $660 million in 2018 from 2017 due to capture of North American crude differentials. As it relates to the global middle class, the annual report indicates that their European margins saw some declines, but they plan on rectifying that by taking advantage of increased demand elsewhere globally, where we believe there is significant opportunity for revenue generation. Overall, the company seems poised to take advantage of new drilling technology and can meet global demand by continuing to integrate systems such as logistics, trading, refining, and marketing. We believe that these plans are a strong and credible foundation for our current valuation.

Financial Statement Analysis

Balance Sheet:
Exxon Mobile has maintained a fairly consistent balance sheet, with cash hovering around $3 billion for the past 5 years. Total assets have grown slightly, due to increased investments in property, plant and equipment. One area that has seen large growth is total common equity, which increased from $174 billion in 2014 to $191 billion in 2018, due mostly to reinvested earnings. However, their leverage ratios show that LTD / Total Equity and LTD/ Total Capital have increased significantly over the past 5 years, indicating that the company is moving towards a more leverage-based structure. Exxon is still well below the industry average, indicating they have financial flexibility in reserve.

Income Statement
The company has experienced relatively volatile revenues over the past 5 years, ranging from $200 billion to $364 billion. Gross income has been an area of concern for XOM, as it has declined from $79 billion in 2014 to $30 billion in 2018. EPS has declined from $7.59 in 2013 to $4.88 in 2018, which is still higher than the average of their top five competitors at $3.04. However, gross margin has increased, suggesting management can adapt to industry dynamics. At the same time, Dividend Yield increased from 2.43 in 2009 to 4.74 in 2018. XOM's price is about the same as it was three years ago while the US market has surged ahead (see chart). We believe the market may have focused on earnings declines and overlooked gross margin, offering a buying opportunity.

Operations
A look to the operating cycle and efficiency ratios indicates that Exxon has done well to increase their receivables turnover and inventory turnover over the past 5 years, indicating that management can efficiently utilize their assets. Asset turnover has seen some declines, and because XOM is in a low-margin industry, this could be a point of concern. However, asset turnover increased from .60 in 2017 to .70 in 2018, indicating a potential shift in management's approach.

Free Cash Flows:
On a per-share basis, Free Cash Flow has seen steady increases, from .92 in 2015 to 2.36 in 2018, outperforming their 5-year average (see chart). Additionally, cash flow return on invested capital has increased from 11.41 in 2016 to 16.31 in 2018. Compared to the industry, Exxon is well below the average in 2018, but shows significantly less volatility in their cash flow per share over the past 5 years, indicating strong management controls.

Valuation

We estimated Exxon Mobile Corporation's short-term sales growth rate at a conservative 15.60% through a top-down macro factor analysis. Increased investments in unconventional methodologies, increased efficient drilling, as well as an increased interest in previously underserved markets should continue to drive their growth.

Over the next five years, we see Exxon Mobile gradually returning to a natural long-term growth rate of 4%. Using CIM's capital market discount rates, and our 2-stage dividend discount model, we estimate Exxon's intrinsic value at $107.50.

Challenges

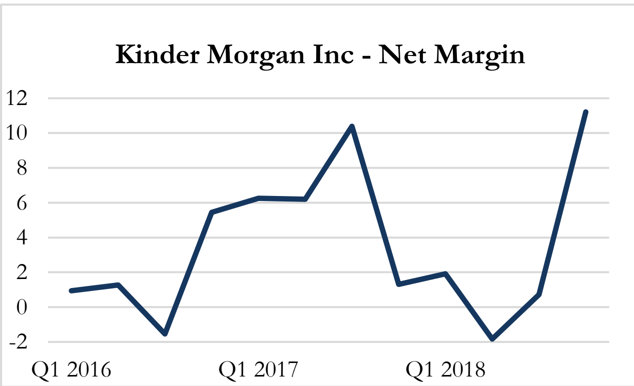
Our valuation is conservative, but the company faces some challenges that must be overcome before reaching our valuation of $107.50. These challenges include regulatory and currency risks, a trade war (U.S. and China), as well as emerging markets risk. We assess these challenges as low probability but still possible, but we believe management is up to the task. We recognize that we are doubling down on our Exxon position in the ETF. Given Exxon's strong prospects we believe we have a great company at a bargain price.

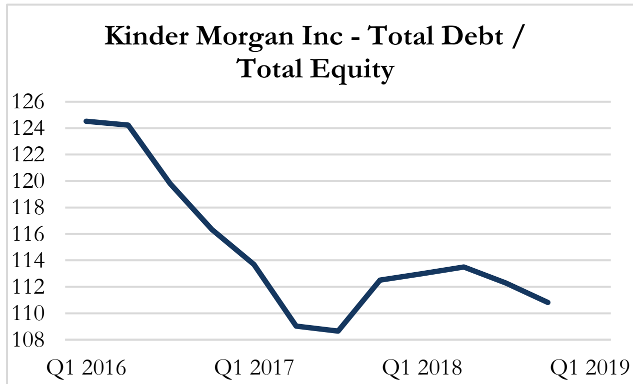
Conclusion & Recommendation

Across all its product lines, we expect Exxon Mobile's diversification strategy to help it outperform its peers in the integrated oil industry. Even with our modest growth forecasts, our discounted cash flow model estimates the company is currently undervalued by at least 35%. We recommend our position be a HOLD for at least another year

Kinder Morgan, Inc. (KMI)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$26**	**$19**	**23x**	**Large Value**	**4.2%**





Introduction

Kinder Morgan, Inc. is an energy infrastructure company that operates between the United States and Canada with pipelines and terminals that transport natural gas, gasoline, crude oil, CO_2, and other petroleum products and chemicals. KMI holds approximately 8% of the market, and operates the largest natural gas network, as well as is the largest terminal operator in the United States.

Connection to Global Middle Class

As the United States asserts itself as a net exporter of natural gas and petroleum products, KMI has positioned itself well in the natural gas industry as well as the transportation of those products. As it relates to our theme, the growth of the global middle class is where we believe KMI will find success in the future.

As Europe and Asia look to reduce their fossil fuel usage as well as reduce their dependence on Russia, KMI is positioned to perform very well in the future. The country that shows the most promise is India, where the company estimates that energy demand will more than double, followed by China, which is poised to be the largest global importer of natural gas products. We believe that KMI offers a strong U.S.-based global opportunity.

Fundamental Analysis

Due to some difficulties with the decline in the price of oil in 2015, the company's share price fell to $45 from $88 in 2014, pushing the company to shed their petroleum-based operations in 2016, focusing on liquified natural gas (LNG) and natural gas pipelines. Management also chose to cut their dividends by 75%, from $.51 per share to $.20 per share. Although not a popular decision, the company took the retained earnings and invested significantly in capital projects in the Gulf and other North American networks.

According to Seeking Alpha, demand for LNG globally was approximately 40 billion cubic feet in 2018 and will increase by 87.5% to 75 billion cubic feet by 2030. In the company's most recent annual report, they indicate that they are investing almost $4 billion into natural gas pipeline projects by 2022, which amounts to 70% of total capital project budgeting. The majority of the future revenue coming from these pipeline project investments will be in the Southeast, mainly in Louisiana and Texas.

KMI transports 40% of all the natural gas consumed in the United States. Utilizing this as a basis for future expansion, KMI is positioned well to take advantage of increased global demand. As overall energy prices improve, we expect KMI to benefit more than its competitors, primarily through the increasing demand for liquified natural gas.

Financial Statement Analysis

Balance Sheet:
Kinder Morgan has seen consistent asset growth since their restructure in 2016, rising from $3.2 billion to $5.7 billion in 2018, mostly driven by an increase in the cash account through the sale of a troublesome Canadian pipeline expansion to their Canadian partner, vastly reducing their overhead risk. Leverage is also favorable. The company has a Net Debt / EBITDA margin of 13, which is lower than the industry average of 15, indicating that the company is in a better position than most to repay debts. Additionally, their core Debt / Equity ratio has decreased from 116 to 110, (see chart) which is significantly below the industry average of 181.

Income Statement
The company has generated strong growth in net income, increasing from $240 million in 2015 to $1.6 billion in 2018. This increase comes from a decrease in Costs of Goods sold (excluding depreciation) from $8.5 million in 2014 to $7 million in 2018. When compared with the industry, KMI outperforms the industry twofold, with a net margin of 11.21, compared with 5.5, respectively. Management has continued to grow the company and recovery from the decline in ROIC over the past few years, .32 in 2015 to 2.35 in 2018. KMI has made significant strides in generating increasing net income margin (see chart) and, we believe, will continue to do so in the future.

Operations
Operating efficiency and cyclicality are important to take into consideration with a fee-based company like Kinder Morgan. Over the past several years, KMI has maintained consistent inventory on hand, days sales outstanding, and payables turnover.

Free Cash Flows:
Net operating cash flow has increased year-over-year since 2014, increasing from approximately $4.7 billion in 2014 to $5.3 billion in 2018. On a per share basis, free cash flow has remained consistent, either at par with or exceeding the industry average over the past three years.

Valuation

We estimated Kinder Morgan Inc.'s steady-state sales growth rate at a conservative 5% through a top-down macro-factor analysis. Given the growth of the natural gas market as well as the current market saturation, we believe this growth rate is justified. Management has shown its ability to bounce back from adversity and make strong decisions.

Using our growth forecast for at least the next five years, KMI's capital market discount rates, and our 2-stage dividend discount model, we estimate KMI's intrinsic value at approximately $26.

Challenges

Our valuation is conservative, but the company faces several challenges that conditions our valuation of $26. We assess these challenges as low probability but still possible. The US trade war with China could impact the regional need for natural gas, as the Chinese government may choose a more expensive regional option to avoid potential tariffs. Additionally, the estimates regarding future demand of liquified natural gas in markets in Africa and India may be inaccurate. Although challenging, we believe that management can overcome these concerns.

Conclusion & Recommendation

Across all of its revenue streams, we expect Kinder Morgan, Inc.'s investment and production strategy to help it outperform its peers in the oil/gas storage and transportation industry, leading to continued growth.

Even with our modest growth forecasts, our discounted cash flow model estimates the company is currently undervalued by at least 35%. We recommend a BUY for KMI.

Financials

Introduction

The Financials sector encompasses businesses involved in managing money including banks, investment companies, insurance companies, and more, providing financial services to commercial and retail customers. Much of its income comes from mortgages and loans which is highly correlated with interest rates. When rates are low, as they have been recently, more capital projects are attractive. Rising rates at a moderate pace provide higher revenue; however, rapidly rising rates could have a negative impact by reducing credit demand and enhancing default risk. Furthermore, if the spread between long- and short-term rates drops too far, the financial sector usually struggles. The stronger this sector is, the healthier is the economy and vice-versa. At 13%, this sector is one of the largest portions of the S&P 500, behind Information Technology and Health Care.

Economic Outlook

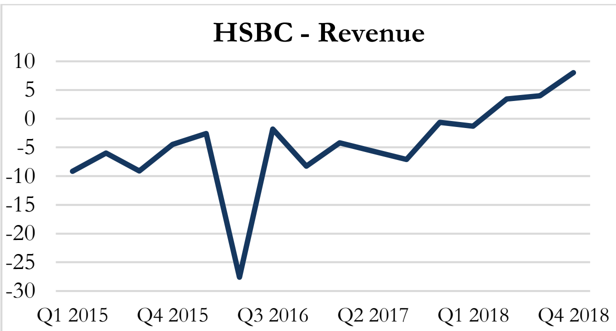
Crummer Investment Management believes the US economy will continue to grow through 2019. However, we think that by the first quarter of 2020 the economic growth rate will be slightly lower than that of 2019. The effect of the new tax cut will also fade, bringing the outlier of 2018 closer to normal. Further, we expect the Federal Fund rate to stay the same within this time frame.

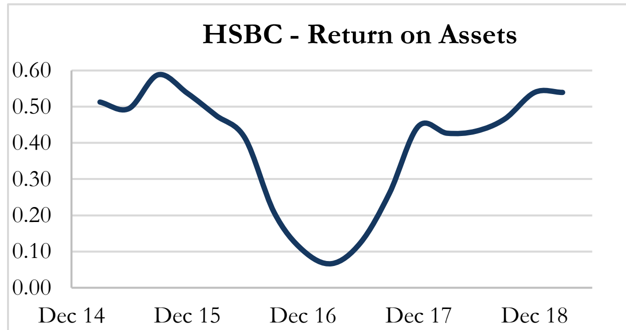
Financial Sector Outlook

Regulatory uncertainties, trade wars, Brexit, changing consumer trends, and growth in financial technology are few areas which are challenging the financial sector. Despite trade uncertainty, according to a 2018 study by HSBC, 77% of global firms still expect to increase the volume of cross-border trade over the next year, rising to 86% in ASEAN countries and 82% in the EU. International trade requires cross-border settlement, exchange rate risk control and fintech capabilities. Many financial companies have already shown remarkable agility in navigating these challenges. Their strategies include increasing enhanced footprint in emerging markets, establishing joint ventures or local subsidiaries, and capitalizing on trends in consumer demands and digital technologies. The Crummer Investment Portfolio has recommended that financial sector will constitute 13.95% of the portfolio — a slight overweight tilt relative to the sector's market weight in the S&P 500 index. The stocks we have recommended have been subjected to an in-depth quantitative and qualitative analyses. These stocks are leaders in taking advantage of unrecognized global investment opportunities by seeking benefit from fintech and the growing number of global middle-class consumers.

HSBC Holdings, Plc. (HSBC)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$69**	**$41**	**19x**	**Large Value**	**6.3%**





Introduction

HSBC is a multinational banking and financial services holding company that operates mainly through four segments: Retail Banking and Wealth Management (RBWM), Commercial Banking (CB), Global Banking and Markets (GBM) and Global Private Banking (GPB). HSBC is based in Europe and operates across the globe. The company has 3,800 offices in 66 countries serving over 39 Million (M) customers ranging from individuals to major multinational corporations.

Connection to Global Middle Class

Asia is by far HSBC's biggest market, accounting for over 48% of revenue in 2018. HSBC plans to invest $17 Billion (B) in next the 3 years in overall technology and growth in Asia. The focus is on China's southern region, which is a $1 Trillion economic powerhouse. Its GDP, according to local authorities, is expected to double by 2030. China's middle class will be 1 B by 2025 (EIU). HSBC has proven it is well positioned to capitalize on this opportunity. HSBC's profits in Asia grew by 16%. In just six months after it launched a credit card, they achieved 5% of the 5-year target of 3 M cards. HSBC in 2018 has spent $2.3B enhancing digitization capabilities through innovation as well as various fintech partnerships globally. In China, HSBC is the first foreign bank to launch mobile banking payment service. In five years, it has seen 333% increase in mobile banking customers. HSBC has well established products and services to take advantage of global consumers' increasing spending capacity and meet the changing needs of technology. The overall investment in technology and expansion is alone sufficient to increase its earnings by 5% to 6% in coming years.

Fundamental Analysis

HSBC has made sweeping changes in leadership and management. HSBC's new leadership's strategy is to focus on digital transformation and expansion in Asia. HSBC in the last couple of years has embarked on restructuring through a program of cost cutting and closures. It now appears to be much more focused on profitable markets with better long-term growth prospects. Compared to 2015 when it had offices in 85 countries, it is currently focusing in 66 countries. HSBC has a substantial retail-banking presence worldwide, but its main distinctive factor is its leading trade finance business. In 2018 they performed well with a revenue of $53.8 B; a 5% increase from 2017 (see chart). RBWM contributed 40% of revenues, GBM 29%, while CB 28%. Asia contributed a substantial portion, particularly in RBWM and CB. This was mainly due to higher interest rates, rising customer numbers, and growth in mortgages. Reported loans to customers increased by 6% and retail customers by 17%. In RBWM more than 30% sales were through digital channels. HSBC is heralded as a frontrunner in blockchain technology, partnering with ING and IBM to push fintech into trade flows. This further reinforces our confidence in HSBC's strategy of digitization and growth in Asia.

Financial Statement Analysis

Balance Sheet:
HSBC has maintained a strong cash position. 2018 ended with $204 B cash in hand. With expansion, total assets have increased by 1.44%. Return on equity increased by 1.8% to 8.6%, which is slightly lower than Industry median of 9.8%. Return on assets has increased by 24% (see chart). Total debt has increased by 2%. Attributed to HSBC's future strategy, we expect this to grow faster.

Income Statement:
HSBC has seen a revenue growth of over 5% (see chart). The major contributors were RB, increased by 13%, and CB, increased by 12%. The company has maintained a net income margin of about 16%. While revenues were largely around expected levels, higher operating costs coupled with a one-time legal provision resulted in slightly less earnings. Meanwhile, the bank's net interest margin improved by 4 basis points from end of 2017, to 1.67%, as higher interest rates contributed to higher lending yields. HSBC's net interest margin, a measure of loan profitability, rose 3%.

Ratio Analysis:
HSBC's common equity tier 1 ratio of 14% was lower than that of 2017, mainly due to adverse foreign exchange movements and the impact of higher lending. The loan growth was 8%; however, the risk weighted assets grew by only 2%. Capital Requirements Directive IV or leverage ratio was 5.5% - a 2% decrease from 2017 due to growth in customer lending and financial investments. This ensures the bank's leverage and capital adequacy, especially in case of future uncertainness. The loan losses provision to total assets was 18% and loan losses reserve to total asset was 81%, signifying that HSBC is well protected from most unforeseen instabilities.

Valuation

HSBC has a high-dividend yield that is supported by the bank's current earnings stream and strong capitalization, making its dividend sustainable over the long-term. It has maintained a dividend of $2.55 for last 5 years, with a dividend yield of 5%.
With our positive assessment of its strategy, focusing on growth in Asia and digitization, buttressed by growing disposable income of the Chinese middle class and technological leadership, we estimate that earnings will increase faster than the historical trend. Moving forward we believe the company's strategy will lead to higher returns with lower investment cost and better profit margins. However, the last quarter, though profitable, was slightly weaker than the first three quarters. We see this as a blip, not a trend.

We project a conservative estimated dividend growth of 4%. Using a dividend discount model, we calculated HSBC's intrinsic value at $69. Sensitivity analysis suggests that HSBC's value is higher than the market, even under the most conservative scenarios. We believe HSBC is, in fact, undervalued as a stock.

Challenges

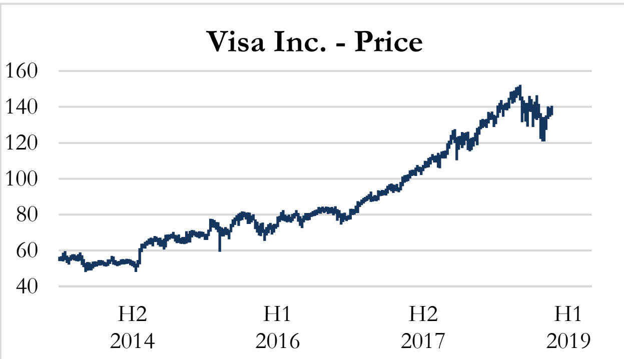
HSBC deals with two major uncertainties around Brexit and trade tensions between China and the US. The bank in its annual report also forecast that Asian economies would remain robust despite growing vulnerabilities this year. HSBC is anticipating this challenge and has prepared contingency plans for them. These challenges are manageable, and we believe management is up to the task.

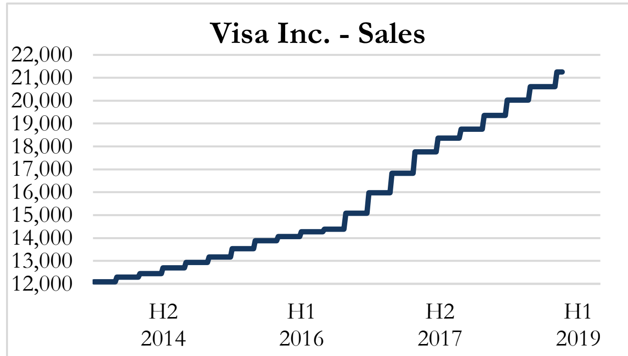
Conclusion & Recommendation

With its global reach, diversification, focus on fintech, and growth in emerging markets, HSBC is at a unique place to leverage their opportunities. Even with our modest growth forecasts, our discounted cash flow model estimates the company is currently undervalued by at least 65%. We recommend our position to be BUY.

Visa Inc. (V)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$180**	**$146**	**35x**	**Large Value**	**0.55%**





Introduction

Visa, Inc. is a global payments technology company that connects consumers, businesses, banks, and governments by enabling them to use digital currency. It offers debit cards, credit cards, prepaid products, commercial payment solutions, and ATMs in more than 200 countries. It is the world's most valuable credit card network with a global market share of 17% and USA market share of 53%. Technological innovations and fintech partnerships have also strengthened its position as a secure digital payment leader.

Connection to Global Middle Class

Visa's focus on global expansion, fintech and travel product innovations fit well with the growth of the global middle class. In 2018, emerging markets contributed to 24% of Visa's revenue. 'VisaNet' (digital transaction backbone), 'Travel', and various other partnerships and technological innovations alone should add 2% to 3% to its annual sales. The growing global middle-class' preference for a cashless world strengthens the company's prospects. In 2018 Visa reported an increase of 11% in its non-cash transaction and 3% in total cardholders.

As developing countries leapfrog over legacy technology, Visa's fintech enables it to capture more market share. Mobile phones are emerging as a means of extending financial services to "underbanked" customers in developing world. Visa's mobile payment technology — mVisa — is active in India, Kenya, and Rwanda, and will soon be extended to other countries. Finally, growing income levels around the world are creating a new global traveling class. By 2025 the company expects that traveling from emerging markets will increase by 106%, creating more business. One example is China where Visa has been issuing Visa-branded cards for international travel.

Fundamental Analysis

Visa currently has more than 3.3 billion cards worldwide with a capacity of handling more than 65,000 transactions a second. As of January 2018, there were 20.48 billion cards in circulation worldwide, of which Visa had 15% cards compared to Master Card (8%), which is its biggest competitor. Cards issued in the U.S. generated $6.616 trillion in purchase volume in 2017, which is expected to rise to $9.313 trillion by 2022. Visa has a 50% share in this purchase volume, a growth of 276% since 2004, according to a recent Nielson report.

The company has been growing its ecosystem to include merchants, acquirers, gateways, issuers, and digital platforms. The company's partnerships with large clients such as PayPal, Samsung, Netflix, and various international clients like AirAsia and ICICI Bank (India) should enable it to expand its customer base and drive its top-line growth. There is a substantial growth opportunity for Visa in emerging markets and they will benefit from their strong global presence in cashless transactions.

Financial Statement Analysis

Balance Sheet:

Visa has held a strong cash position over the last five years, maintaining a rate of 30% increase; except for 2018 where they had a decrease of 8%. Visa's working capital ratio at 1.11 is adequate with its current assets exceeding its current liabilities. The company is financings its expansion with a combination of profits and borrowing. Long-term debt has grown from $0 in 2015 to $16,630M. While Visa's debt-to-total assets is 24% and debt-to-total equity is 48%, their leverage net of cash is negligible. Recently, S&P Global Ratings upgraded Visa Inc.'s long-term rating to AA-minus from A-plus. The company has the financial capacity to continue its aggressive investment plans.

Income Statement:

The company has seen sales growth of over 12.26% (see chart) and has maintained EBITDA margins of 11.44%. The sales growth is faster than the industry average of 2.87% while Visa's ROE at 30% was almost twice than that of the industry average. The fact that management is growing the company without sacrificing margins suggests Visa is willing and able to meet its current financial obligations and fund its intended expansions – providing profitable growth for the next few years. The key driver for Visa is growth in its processed transaction volume which was 12% higher in 2018 at 124 billion, lifting its global processing penetration by 1 point.

Valuation

There are many growth opportunities for Visa as the developing countries throughout the world are transitioning to cashless payment systems. Visa has shown remarkable ability to ensure a progressive profit margin in both its current markets as well as new international expansions. A bottom-up valuation model yielded a 17% short-term growth rate, which can be attributed in part to its international success. Its future growth strategy in the emerging market, especially with VisaNet, travel cards, and mobile payment, puts Visa in a position to add another 1-point base to this growth rate.

Based on Visa's ability to benefit from the rise of the global middle class, global network backbone and fintech capabilities, we estimate that the earnings will increase by 18% in the near term. Success breeds competition, so we expect growth to slow down to a more normal 5% in the long term. We used a three-stage dividend discount model to estimate Visa's intrinsic value at $180. Sensitivity analysis suggests that Visa's value is higher than the market price, in most scenarios. We believe Visa is, in fact, undervalued.

Challenges

The company faces two key challenges. Government regulations, especially in overseas countries, on interchange fees and alternative payments systems. Cross-border growth would also be influenced by exchange rates, geopolitical factors, and macroeconomic shifts in fiscal 2019. We assess these challenges as low probability and company is already taking the initiative to overcome them. Overall, we believe Visa has high growth prospects.

Conclusion & Recommendation

We expect Visa with its various product lines, fintech partnerships, and global expansion to outperform its peers in this competitive industry, leading to continued growth. Even with our modest growth forecasts, our dividend discount model estimates the company is currently undervalued by at least 23%. We recommend our position be a BUY.

Healthcare

Introduction

Despite the economic outlook of lagging growth in the U.S. economy, the healthcare sector shows no signs of slowing down, so we anticipate a year of profitable returns. The growing aging population and increase in healthcare spending across the industry provides a positive outlook for this sector. Given the potentially higher returns due to increasing demand, we recommend overweighting the healthcare sector.

Macro Overview

Global health care spending is expected to increase at an annual rate of 5.4% through 2022, which is a significant rise from 2.9% in 2017 per The Economist. This increase reflects the expansion of health care coverage in developing markets, the growing care needs of the elderly population, and advancements in treatments and health technologies. Life expectancy is projected to increase from 73.5 years in 2018 to 74.4 years in 2022, bringing the number of people aged over 65 to represent 11.6% of the total global population. U.S. health spending alone is projected to be growing at an average rate of 5.5% per year through 2027. This growth is primarily attributed to the demographic landscape that is driving demand for the industry as the U.S. baby boomers started turning age 65 in 2011 and will continue to do so over the next few years. With this swelling number of older adults, the country expects to see greater demand for healthcare.

According to the World Health Organization, we also expect to see a demand for health care due to an increase in chronic diseases such as obesity, diabetes, and cardiovascular diseases. This increase is fueled by the urbanization of the rising global middle class that leads to a more sedentary lifestyle which contributes to these health issues. With this, new households are seeking to purchase health care services which are an important contribution to the economy as health care is essential for sustainable growth and development. Given the sheer size of the global middle class, there are vast opportunities for the corporate world to tap into, especially for Johnson & Johnson and Amgen.

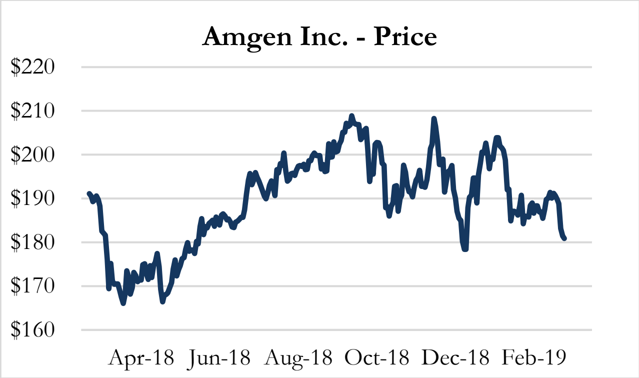
The two companies selected for this sector will benefit greatly from the growing global middle class and increasing demand for healthcare due to their international presence. Although Johnson & Johnson is headquartered in New Jersey, the corporation operates in 60 countries and its products are sold in over 175 countries. Amgen is headquartered in California and is present in approximately 100 countries, reaching millions of people with its products. The pharmaceutical segment of these companies will continue to penetrate international markets as they focus on treatment for chronic diseases that aid the health problems of the rising global middle class.

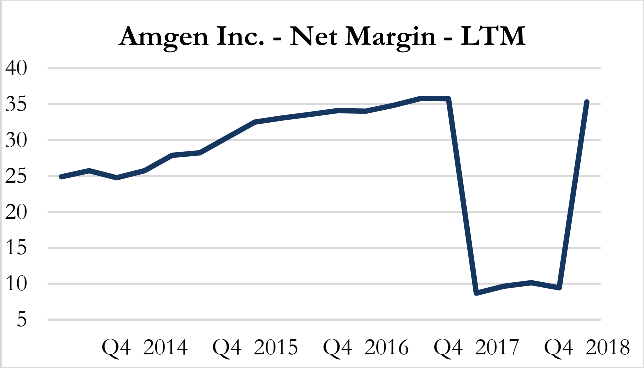
Summary

The health care industry does not show any signs of slowing down in 2019. Projected global health care spending, a growing aging population, an increase of chronic diseases, and advances in technologies continue to increase health care demand. Even though we anticipate a slowdown in economic growth, these factors will result in a thriving environment for healthcare companies over the next year. Given our optimistic outlook for health care, we recommend overweighting this sector in our portfolio as it serves our primary objective of capitalizing on potential future returns.

Amgen, Inc. (AMGN)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
HOLD	**$206**	**$180**	**14x**	**Large Value**	**3.1%**





Introduction

Amgen Inc. is a biotechnology medicines company, which focuses on human therapeutics and on innovating novel medicines based on advances in cellular and molecular biology. Amgen is one of the first companies to recognize the potential of modern biotechnology in developing valuable medicines for patients suffering from serious illnesses, dramatically improving people's lives worldwide. The company's appeal to investors lies in its increasing geographic reach to meet medical needs of the growing global middle class, expansion of their manufacturing capabilities, and their strong financial performance with the ability to return capital to shareholders.

Connection to Global Middle Class

As the world is growing older, approximately 160 million additional people join the global middle class every year according to the Brookings Institution. With this trend we can unfortunately expect to see growth in diseases such as diabetes and obesity, with cardiovascular disease attributing to 31% of all global deaths, according to the World Health Organization. Amgen's Repatha product, a drug used to reduce the risk of heart attacks and strokes in adults, increased 72% in sales during 2018. Amgen is tapping into the global potential for their medicines, bringing treatments to patients in approximately 100 countries worldwide. They are continuing to expand their geographic presence by commercializing and marketing their products in parts of Latin America, the Middle East and Asia. Their latest marketing authorization was granted in January 2019 for their drug EVENITY in Japan, proving that Amgen is aligned with their strategy to reach new patients by strengthening their global footprint.

Fundamental Analysis

With new footholds in key expansion markets, international sales grew 10% in 2018. This trend is expected to continue with the recent Repatha approval in China, as cardiovascular disease is a health challenge in that country with a dramatic increase in the number of people having high cholesterol according to the National Center for Biotechnology Information.

As the company invests in innovation and expands their products to more markets, they must also increase operational efficiencies to continue generating satisfactory investor returns. To address this, management has decided to build a new next-generation biomanufacturing plant that will expand their capacity to manufacture certain products for U.S. and global markets while substantially reducing costs. Chairman and CEO Robert A. Bradway stated that the new plant will give Amgen a competitive advantage, as it provides greater flexibility and speed for manufacturing different medicines simultaneously, incurring a third of the operating expense from their traditional facilities, while reducing their facility footprint by 23%. Management has stated that they remain confident in its ability to compete with their differentiated product profile. The company experienced its largest net margin of the past ten years due to the decrease in operating expenses, savings from process improvement efforts, and corporate restructuring. The activities associated with the restructuring plan were completed in 2018, therefore, no restructuring costs will be incurred going forward.

Financial Statement Analysis

Balance Sheet:
Amgen has a strong balance sheet with $29.3 billion in cash & short-term investments for 2018 and total debt outstanding at $33.9 billion. The current ratio of 2.79 significantly indicates how liquid the company is while the quick ratio of 2.57 positively represents its ability to pay off debts. The company has financial flexibility to continue to invest heavily in R&D and expand its portfolio of differentiated products in the market.

Income Statement:
Total revenues increased by 4% to $23.7 billion in 2018 showing steady sales growth. Amgen had net income of $8.4 billion and reported their highest net margin to date of 35.32% in 2018. This has been a consistent increase over the past 5 years minus the one off they had in 2017 due to tax implications (see chart). Impressively, their gross income has consistently increased over the past 10 years, proving the company can adeptly manage its gross margin and increase profitability over time. EPS increased from $10.68 to $12.62 driven by higher total revenues and a lower weighted-average of shares outstanding.

Free Cash Flows:
Amgen generated $10.6 billion in free cash flows due primarily to improvements in working capital. Free cash flow per share was $16 and free cash flow margin was 44.42% in 2018, significantly higher than the industry average of 18.66% for the year. The company had a one-year total shareholder return of 22%, outperforming total shareholder return of their peer group of 10%. With a strong balance sheet, sales momentum, and sustained cash flows, the company is in a strong position to provide attractive returns to shareholders.

Valuation

The cash inflows of $11.3 billion from operating activities enabled Amgen to repurchase 94.5 million shares of common stock throughout 2018 and declare a $1.45 per share dividend for the second quarter of 2019, representing a 10% increase from $1.32 last quarter. By implementing a two-stage DDM model we project Amgen's short-term growth at 16.35% for at least the next five years based on management's ability to control costs and their international expansion of drugs targeted to aid the health problems of the rising global middle class. With increasing competition, we expect growth to slow to a more sustainable long-term rate of 4% thereafter. Using CIM's capital market discount rates, we estimate Amgen's intrinsic value between $192 and $214. With the stock currently trading at $180, now would be the perfect opportunity to purchase shares.

Challenges

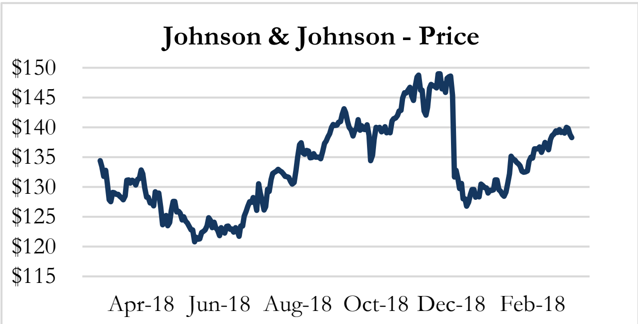
Amgen could potentially face a slowdown in approval for the multiple products in its pipeline due to the recent resignation of the FDA chief. The loss of exclusivity for their medicines as patent protections expire could increase the competition Amgen faces on biosimilar versions of existing drugs, causing sales erosion and pressure on pricing. However, we believe management's focus on lowering costs will continue to provide a favorable net margin if Amgen needs to cut prices to compete against generics.

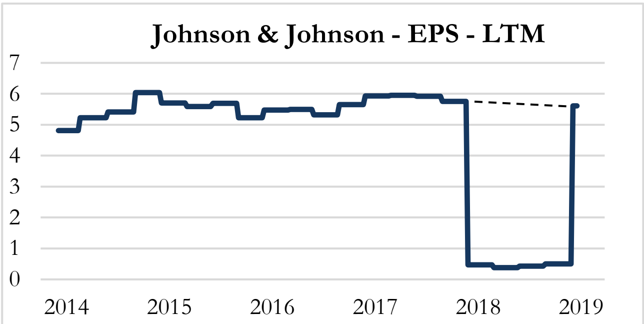
Conclusion & Recommendation

In 2018, Amgen delivered strong financial performance, returned capital to shareholders, increased their global geographic reach and expanded their next-generation manufacturing capabilities. Per our discounted cash flow model, Amgen is currently undervalued by at least 14%. Through our analysis and rising global middle-class theme consideration, we are recommending a HOLD for at least another year.

Johnson & Johnson (JNJ)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
HOLD	**$191.00**	**$136**	**15x**	**Large Growth**	**2.7%**





Introduction

JNJ is a leading healthcare holding company, focused on three segments: pharmaceuticals, medical devices, and consumer health care products. The company's largest segment is pharmaceuticals, contributing 50% to $81.6 billion 2018 revenues, with almost half being generated overseas. Our valuation highlights three attractive aspects of the company: its connection to the rise of the global middle class, its pharmaceutical industry leadership and pipeline and its financial flexibility. First, a necessary caveat.

JNJ has been in the headlines recently due to alleged knowledge of asbestos in its talcum baby powder. The stock price took a 10% hit after the news broke in December and has not yet recovered (see chart). JNJ has prevailed in some cases and appealed others, including a recent $4.69 billion verdict which is working its way through the appellate courts. However, they are not out of the woods yet as the New York Times reported on internal documents that revealed decades of internal communications about the risk of asbestos in talc, and the Justice Department and the SEC have announced an investigation about possible contamination of talc-based products. Our research supports the company's assertion that the science simply does not support the correlations being drawn by patients in these suits. The company has been strongly defending their image with safety ads and a FACTS ABOUT TALC webpage. Perhaps not coincidently, the company announced a $5 billion buyback program on December 17, 2018, indicating management's confidence in future earnings and dividends. The company also relaunched their baby brand with complete ingredient transparency disclosure, making consumers more confident about their baby products. We believe the market has overreacted to the verdicts so far, creating a buying opportunity.

Connection to Global Middle Class

The rise of the global middle class means more disposable income and more demand for health care. According to the World Health Organization, the rise of the global middle class is leading to urbanization, creating more sedentary lifestyles that will cause chronic diseases like obesity, diabetes and heart disease to rise.

JNJ's international presence fits in well with the growth of the global middle class, as their international sales have increased over the last three years in almost all markets outside the US. This increase can be attributed to consumer products and pharmaceuticals growth in LATAM and the EU, while Asia-Pacific has seen an increase in demand for medical devices. We believe the pharmaceutical segment will drive bottom line growth for the company by continuing to penetrate international markets.

Fundamental Analysis

Of the three segments JNJ operates in, pharmaceuticals contributed to 50% ($40.7B) of the total revenue in 2018, while the medical device division comprised 33% ($27.0B), and the consumer segment represented 17% ($13.9B). No pharmaceutical company can succeed without a strong pipeline. JNJ has a solid record of drug approvals and a substantial number of drugs in the final approval stages in both the US and EU. Their leadership in the pharmaceutical industry coupled with a strong pipeline should mean continued growth in sales, earnings and dividends.

Financial Statement Analysis

Balance Sheet:
This company is a behemoth with more than $81 billion in 2018 sales, ranking it eightieth among the world's largest companies. The company has used its strong cash position over the years to acquire companies. Since 2015, JNJ made ten acquisitions, the latest being Auris Health for $3.4 billion in cash in February 2019. They also closed on Ci:Z Holdings, a Japanese cosmetic company ($2.1 billion), and Zarbee's, a US manufacturer of naturally-based consumer healthcare products (terms not announced). Despite using cash for most acquisitions, JNJ ended 2018 with $19.69 billion in cash and cash equivalents, an increase of $283 million over 2017. Financial leverage is 46%, just below the comparable company average of 50%. The company is in a healthy financial condition and has established an accrual for defense costs in connection with product liability litigation associated with body powders containing talc. We believe their strong cash position and steady cash flow will allow JNJ to continue to acquire strategic business and cover any costs associated with the talc lawsuits.

Income Statement:
Worldwide annual sales increased 6.7% and net margin was 18.76%, slightly above the industry average. In 2018 EPS picked up where it left off before the 2017 tax bite (see chart). The company has maintained a dividend payout ratio around 60% and has had a substantial commitment to share repurchases. We believe their profitability and strong cash flow will continue to support a growing dividend.

Valuation

The pharmaceutical segment focuses on cardiovascular and pulmonary hypertension while the medical devices segment offers products used in the cardiovascular and diabetes health care fields. These drugs are in worldwide demand that will aid in the company's growth as they will be able to capitalize on the expansion of the global middle class and the growing health concerns as a direct result. We project JNJ can growth organically by at least 10% for the next five years. Add to that their strategic position to benefit from the global middle class, their industry leadership and their financial flexibility allowing strategic acquisitions, we believe their near-term CAGR could be as high as 15%. Pricing competition may slow growth to 4% thereafter. By using CIM's capital market discount rates and our two-stage dividend discount model, we estimate the stock to be undervalued with an estimated intrinsic value between $183 and $205.

Challenges

JNJ faces several lawsuits regarding its baby powder that could result in significant expenses, fines, and reputational damage having a negative impact on sales. In addition to legal proceedings, pricing pressures from competitors and trade wars could be impactful, derailing growth expectations. Even so, we believe these challenges will not significantly impact the company.

Conclusion & Recommendation

The company stands to benefit from the rise of the global middle class and their increasing demand for the company's cardiovascular and diabetes medicines. JNJ has demonstrated their leadership in the pharmaceutical industry and has a strong pipeline. We believe the market reacted too harshly to the lawsuits facing JNJ and that the price will surpass where it was trading before the December crash (see chart).

Across all product lines, we expect that JNJ's diversified global strategy will help it continue to outperform its peers. Our discounted cash flow model estimates that the company is currently undervalued by at least 40%. Through our valuation and theme consideration, we believe in a strong, profitable year for JNJ and recommend a HOLD for at least another year.

Industrials

Overview

The S&P 500 Industrial Sector Index was the fourth-worst performing sector of 2018, declining approximately 16%. This year, we will liquidate our individual security positions within industrials and invest in the sector ETF. In the long-run, we are optimistic about the potential for innovative technologies like AI, drone deliveries, automation, and virtual reality to harness labor productivity gains. The capital-intensive industrials sector should be well positioned to reap these benefits. Furthermore, we expect continued increases in government defense spending to deliver top-line growth for the large defense companies. In the short run, slow but positive economic growth leaves room for the industrial sector to provide reasonable returns. For these reasons, we recommend a modest 3% overweighting of 9.94%, compared to the 9.68% benchmark.

Information Technology

Introduction

The information technology sector encompasses a wide range of companies that offer software and IT services, manufacturers of consumer technology hardware such as PCs and cellphones, and manufacturers of semiconductor components such as memory and microprocessor chips. The information technology sector currently has the largest weighting in the S&P 500 at 21%. The recent popularity of cloud computing, software-as-a-service (SaaS), and artificial intelligence (AI) has led to an increase in spending by corporations on IT services and software which makes the sector heavily reliant on corporate profits.

Macroeconomic Environment

The CIM group believes that the economy will continue to expand throughout 2019 and into Q1 of 2020. However, we think that growth will begin to slow to 2% for 2019 and to 1.5% in Q1 of 2020. As the economy starts to slow, companies' profits are expected to increase, but at a slower rate, impacting the amount of capital companies will be able to spend on IT software and services. Therefore, we expect slower growth for manufacturing companies in the hardware and semiconductor space. However, the lower corporate tax rates from the Tax Cut and Jobs Act should continue to help boost corporate profits and offset some of the pain from a slowing economy.

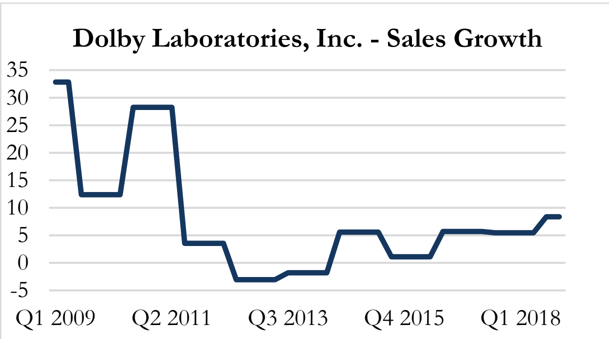
The CIM group believes that consumer discretionary spending will decrease due to a slowing economy and potential Fed interest rate hikes late in 2020. These factors will likely lower demand for consumer electronics and software which will negatively impact the performance of the sector.

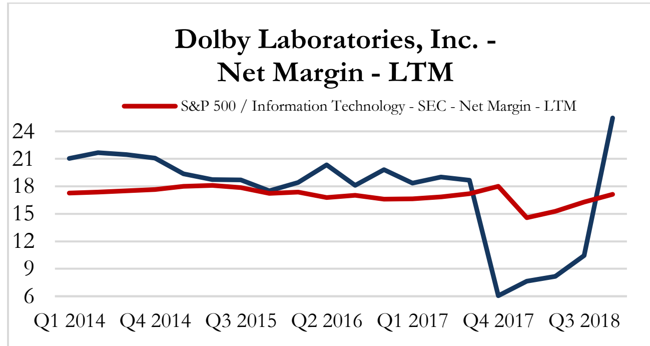
Conclusion and Recommendation

The economy is in the second longest economic expansion on record. We believe the economy will continue to grow between now and April 2020 but at a slower pace. Corporate spending on cloud and AI should continue to grow but also at a slower pace. We expect consumer discretionary spending to decrease translating to weaker demand for consumer electronics and software. Due to the reasons mentioned above and the sector's already large weight in the S&P 500 index, we recommend underweighting the information services sector by 13% to a weight of 18%.

Dolby Laboratories, Inc. (DLB)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$75**	**$65.25**	**61x**	**Steady Growth**	**0.91%**





Introduction

Dolby Laboratories creates audio and imaging technologies to be used for cinema and other entertainment devices. The company is primarily known for its audio technologies (also known as audio codecs) like Advanced Audio Coding (AAC) and Dolby Digital®(DD).

Dolby holds over 9,000 patents and generates 90% of their revenue by licensing their technologies and various trademarks to companies that distribute products that incorporate Dolby technologies. The company's licensee's range from semiconductor manufacturers to consumer electronic designers like Apple and Samsung.

Connection to Global Middle Class

Dolby's technologies have been adopted as the de facto (or sometimes explicit) standard for broadcast, discrete media, and online delivery by various markets worldwide. Dolby Digital Plus™ (DD+) and HE-AAC are included in the digital terrestrial television specifications of emerging digital TV markets for Africa, South-East Asia, and India.

As the global middle class expands, consumer discretionary income across the world will increase. This will translate to increased demand for audio and video entertainment, and related equipment like televisions and soundbars. We believe the rise of the global middle class will translate to increased revenue growth for Dolby.

Fundamental Analysis

The company is seeing a higher adoption of its technologies and patent licensing in the mobile market while at the same time revenue from the PC and Standard Broadcast (STB) market is decreasing. The industry is adopting Dolby Atmos which, according to the company, is "An object-oriented audio technology for home theaters, cinema, device speakers, mobile devices, and headphones that allows sound to be precisely placed and moved anywhere in the listening environment including the overhead dimension. Dolby Atmos is an immersive experience that can be provided via multiple Dolby audio coding technologies." Companies like Apple, Netflix, Tencent, and DirecTV all licensed this technology in 2018. DirecTV and Comcast broadcasted portions of 2018 Winter Olympics in Dolby Atmos. Therefore, we expect solid sales growth for the next few years.

Financial Statement Analysis

<u>Balance Sheet:</u>
Dolby Laboratories has maintained a strong cash position for over ten years. The company has $1.1 Billion in cash and short-term investments and has carried no long-term and short-term debt since 2010. Reserve

borrowing capacity is an attractive feature of this company.

Income Statement:
The company reported revenue growth of 8% in 2018 which is slightly above their five-year average of 5%. This is significantly below pre-recession levels but above the industry average for 2018 at 6% (see chart). EBIT was $299.6 million in 2018 which was an increase of 14.5% from 2017.

Dolby reported gross margins of 89% and net margins of 25% which is well above the industry average of 17% for 2018 (see chart). The company generates healthy margins and started to return cash to shareholders in the form of dividends with $0.40 per share per year in 2015. They just announced that they will increase their dividend to $0.76 per share in fiscal year 2019 (the fourth increase in the last five years). Despite a market-induced stock price drop in December 2018 coincident with the new dividend, the dividend appears to have increased the company's intrinsic value and should drive demand for the company's stock.

Operations:
R&D expense and Sales and Marketing expenses make up most of the company's operating expenses. Increases in headcount and increased IP related activities aimed at generating revenue lead to a slight increase in cost. As the company expands into markets in China, IP related costs could continue to increase. This makes the company riskier, which caused us to increase the company's beta in our valuation.

Free Cash Flows:
Free cash flow per share in 2018 was $2.60 which is in line with the ten-year average of $2.41 and better than its peers like Technicolor ($0.37 per share), Pixelworks ($-0.01 per share), and Xperi ($2.59 per share). We expect free cash flow to continue to be strong.

Valuation

We estimated Dolby's short-term growth rate to be 7.5% over the next five years, based primarily on Dolby's audio technologies and strong brand popularity world-wide. Management has shown that it can convince the many worldwide government entities, industry standards-setting bodies, trade associations, and others entertainment standards organizations to adopt their technologies. Increasing disposable income in the global middle class and their demand for entertainment matched with Dolby's dominant technologies will help ensure that OEMs will need to continue licensing their technologies.

We expect Dolby's long-term growth to match global economic growth at 6.9%. Using a five-year adjusted beta of 0.9, and a 2-stage dividend discount model, we estimate the intrinsic value of Dolby to be $75.

Challenges

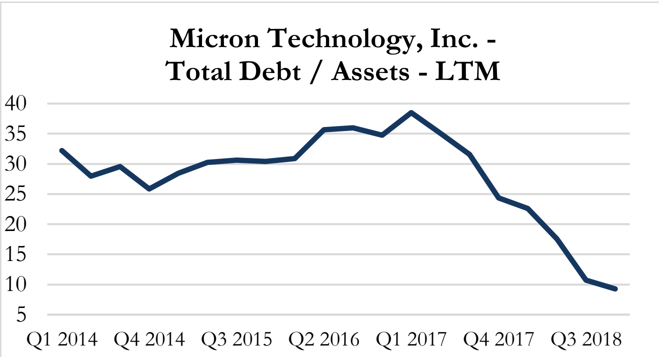
The company is seeing a decrease in PC-related sales due to many companies no longer providing optical discs, but this is likely to be offset by the increased adoption of Dolby technology by mobile and streaming services. The rise of the global middle class will continue, although not at a constant rate, and there will be competing demands on their disposable income but, if the developed world is a reasonable guide, demand for entertainment will be strong. Content providers and device manufacturers will be licensing Dolby's technologies for the foreseeable future.

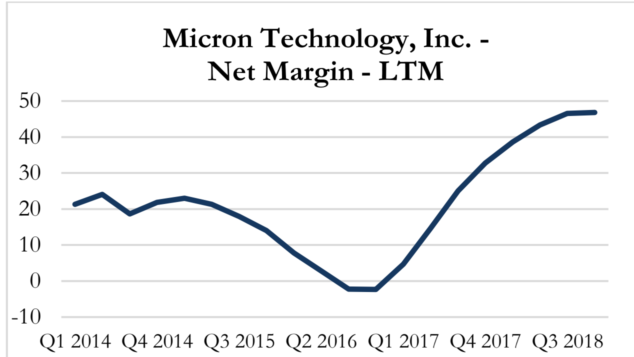
Conclusion & Recommendation

Dolby Technology is a leader in audio and imaging technologies with strong brand recognition. Their licensing business model protects them from the competition. With the rise of the global middle class, we expect sales of consumer discretionary products like TVs and soundbars to grow which will translate to revenue growth for Dolby. We recommend that we BUY shares of Dolby Laboratories, Inc.

Micron Technology (MU)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
HOLD	**$64.76**	**$42.96**	**5x**	**Large Growth**	**N/A**





Introduction

Micron Technology designs, manufactures, and sells memory and storage solutions for a broad range of markets ranging from cloud computing to mobile devices to automotive. It operates through four segments:

- Compute and Networking Business Unit (CNBU)
- Mobile Business Unit (MBU)
- Storage Business Unit (SBU)
- Embedded Business Unit (EBU)

The semiconductor industry is a commodity-like business. According to IBISWorld, excess manufacturing drove prices down prior to 2015. However, the industry experienced a soar in prices from 2015 until the end of 2018 due primarily to lower supply and increased demand. The increased demand is due to the popularity of AI and the Internet of Things (IoT). As devices get smarter, the need for more memory storage will continue to increase.

Connection to Global Middle Class

Micron's portfolio of memory products fits well with the rise of the middle class. Their DRAM and NAND memory chips are used in all aspects of modern technology. Industries like cloud computing, mobile phones, and automotive are increasing their use of technology and will continue to need more memory storage for their applications. As the global middle class expands, we expect demand for technology and software services to rise which will translate to increased sales growth for both DRAM and NAND chips.

Fundamental Analysis

The company has been focusing on increasing and stabilizing its gross margins, deleveraging its balance sheet, and creating high value solutions for its customers.

Fiscal year 2018 was a record year for Micron. The company reported $14 billion in net income and a gross margin of approximately 60%. The company benefited from increased prices and demand for memory storage in the cloud. Revenues from their Compute and Networking Business Unit and their Mobile Business Unit increased significantly. CNBU was up 160% and MBU was up 227%, which demonstrates the increased demand for memory storage in mobile and cloud computing.

Financial Statement Analysis

Balance Sheet:

Micron Technology has been steadily increasing its cash position over the last three years, increasing its cash and cash equivalents from $3.5 billion in 2013 to $6.8 billion in 2018. The company used their record-setting year in

2018 as an opportunity to deleverage the balance sheet and paid down a significant amount of its long-term debt. In 2018, the company decreased its long-term debt by 62% from $9,893 billion in 2017 to $3.7 billion in 2018. We believe this makes the company less risky, which we accounted for in our valuation model by adjusting their historical beta.

Income Statement:
The company has had above average sales growth for the last two years, 64% for 2017 and 50% for 2018, while the semiconductor industry saw only 17% and 14% respectively. The company has increased its net income margins by 21% in 2018 to approximately 47%, which is above the industry average of 31%. The boost in sales for 2018 was due primarily to an increase in DRAM prices caused by increased demand compounded by a supply shortage. The company's CNBU segment increased the most, generating $9.8 billion in 2018 compared to $3.8 billion in 2017.

Operations:
The company has adjusted its demand growth projections for DRAM and NAND for 2019. Micron now predicts that demand for DRAM will decrease from 20% to 16% and that NAND demand growth will decrease from 40% to 35%. To stabilize margins, the company announced that it plans to decrease its manufacturing output growth to 15% for DRAM and 35% for NAND to be more in line with expected demand.

Free Cash Flows:
Free cash flow is very volatile for the company due largely to extreme changes in semiconductor prices. If supply grows too much, then prices would drop significantly. The company saw a significant increase in free cash flow in 2018, to $8.5 billion from $3.4 billion the year before.

Valuation

We ran a regression analysis against Micron's sales growth and semiconductor sales and were able to use IBISWorld's forecast for semiconductor sales growth to calculate a short-term sales growth of 16% for the next five years.
We used a beta of 1.46, which was adjusted lower because we believe the company is less risky after deleveraging its balance sheet.
Using a pro forma free cash flow model, we estimate the company's intrinsic value to be $64.76 and is, therefore, currently undervalued.

Challenges

The biggest challenge for Micron is managing their supply of DRAM and NAND chips. Oversupply drastically reduces the selling price which translates into substantially lower margins. However, we believe the company has developed the ability to better control its supply output which they demonstrated in Q1 of 2019.

Conclusion & Recommendation

Micron Technology is in a great financial position and will benefit from the increased demand for memory storage due to the popularity of AI and the internet of things (IoT). We recommend that we HOLD our position of Micron for at least another year.

Communication Services

Introduction

The Communication Services sector was created in September of 2018. S&P Dow Jones Indices and MSCI expanded the Telecommunication Services sector to include Media companies like Comcast and Walt Disney, as well as Internet Software and Services companies like Facebook, Alphabet, and Netflix. The new sector will represent roughly 10% of the S&P 500 compared to the 2% weight of the previous Telecommunication Services sector.

Digital Advertising Trend

Companies have been shifting away from traditional advertising methods like print, TV, and radio in favor of digital advertising on the internet. According to eMarketer, companies are expected to decrease spending on traditional advertising methods and increase spending on digital advertising. Digital ad spending is projected to grow by 19% to $129 billion in 2019. Facebook and Alphabet (Google) stand to benefit the most from this trend, as they currently hold over 50% of the US digital advertising market.

Macroeconomic Environment

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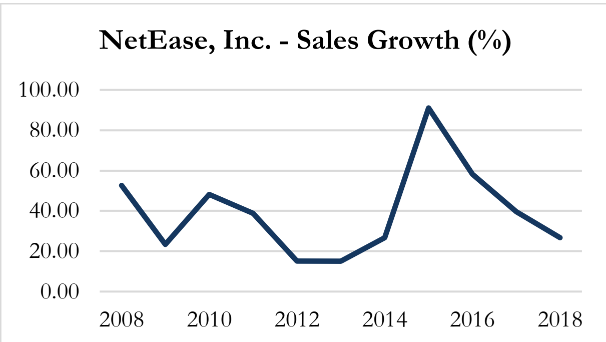
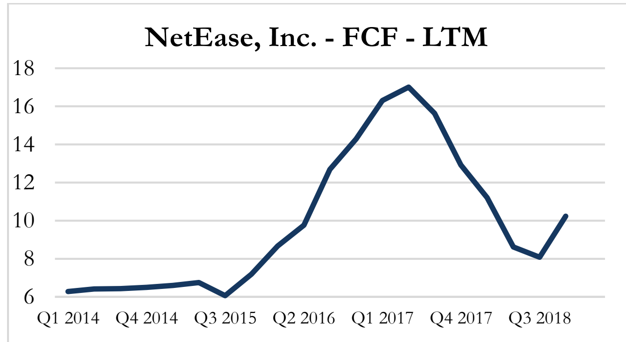
Conclusion and Recommendation

The shift by corporations towards digital advertising makes us optimistic about this sector because of its heavy exposure to Internet Software and Services companies. We believe that companies like Facebook (23% of the ETF) and Alphabet (18% of the ETF) will continue to see strong growth in 2019. We recommend overweighting the sector by 7%, bringing the portfolio weight to 10.95% compared to 10.24% for the benchmark.

NetEase, Inc. (NTES - ADR)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$289**	**$242**	**33x**	**Large Growth**	**0.73%**





Introduction

NetEase, Inc. is a Chinese company that provides online internet services. The company is segmented into the following business units:

- PC and Mobile Games (67% of sales)
- E-commerce (22% of sales)
- Internet Media (7% of sales)
- Innovative businesses and others (4% of sales)

NetEase offers over 100 mobile games and several online services and platforms. The company also develops its own online PC games and licenses popular titles like World of Warcraft and Overwatch through an 11-year partnership with Activision Blizzard.

NetEase earns most of its revenue from their PC and Mobile Games business unit, but they are investing heavily in e-commerce, online education, and online music services.

Connection to Global Middle Class

NetEase's services stand to benefit from the rise of the global middle class. As more users gain access to the internet, demand for the company's games, products, and services should increase.

The company primarily does business in Mainland China, but they are starting to grow internationally. In 2018 they expanded some of their video game titles into Japan, Hong Kong, Macau, and Taiwan.

The company has been investing in its e-commerce platform and private-label brand to diversify its product and service offerings. In 2016 the company officially launched NetEase Kaola (platform), and a NetEase Yanxuan (brand). According to the company's recent annual report, "Both sites cater towards the rising middle class in China who are increasingly concerned with the quality and authenticity of products." We expect the company to continue to invest heavily in this segment which should translate into increased revenue growth in the future.

Fundamental Analysis

NetEase has been seeing a decline in revenue growth for the past four years, primarily due to a decrease in sales growth of their Online Game Services and Advertising Services segments. The company is seeing robust sales growth in its new e-commerce business which is offsetting some of the slowdowns of the other business segments. According to a press release from the company on Aug 31, 2018, NetEase Kaola was "ranked as the No. 1 cross-border import retail e-commerce platform in China." We expect sales growth in this segment to continue to grow for the foreseeable future because of the increasing demand for foreign brands from Chinese consumers and the company's focus on developing strong partnerships with international brands like Under Armour and Meade Johnson.

Financial Statement Analysis

Balance Sheet:

NetEase has no long-term debt and reported an increase in short-term debt from $1.02 billion in 2017 to $1.99 billion in 2018. The company reports total assets of $12.67 billion and total liabilities of $5.18 billion. Their lack of leverage suggests they have financial flexibility for future acquisitions.

In their Q4 2018 earnings call, CFO Zhaoxuan Yang cited the company's improvement in lowering their inventory levels. Due to the growth of its e-commerce business, the company's inventory has fluctuated from $252 million in 2016 to $893 million in 2017 and to $731 million in 2018.

Income Statement:

NetEase saw explosive sales growth in 2015 (91%), primarily due to their investments in mobile games. The company released over 68 new titles, two of which were listed as the top two grossing games in China's iOS App Store. Sales growth since 2015 has been slowing year-over-year (see chart). The company reported sales revenue of $10.15 billion in 2018 which was an increase of 26.8% compared to 2017. The online game services segment sales increased by 11% to $3.7 billion while their e-commerce segment sales increased by 65% to $293 million. The company is seeing increased competition in the mobile gaming space and will rely more on its e-commerce segment to boost sales growth in the future.

Operations:

As the company grows its e-commerce business, inventory turnover is going to be a key metric for the company. The company has improved its inventory turnover from 12.23 days in 2016 to 7.21 days in 2018, better than Alibaba at 47.46 days and Amazon at 8.38 days.

Free Cash Flows:

Free cash flows have been more volatile over the last two years, which is primarily due to substantial changes in inventory levels (see chart). Free cash flow per share was $12.60 for 2018 which is a decrease from $16.30 in 2016, but still higher than the five-year average before 2016 of $6.15. As the company continues to improve its inventory turnover, we expect free cash flows to stabilize.

Valuation

The company states that they do not return more than 25% of net income to shareholders in the form a dividend. Therefore, we chose to use a bottom-up approach in our valuation. We used the company's retention rate of 75% and their average ROIC for the last five years to calculate a sustainable short-term growth rate of 20%. Accounting for the rise of the global middle class, we decided to increase their sustainable growth rate by 5% making it 25%.

We project that the company will grow at their sustainable growth rate for the next two years and that growth will gradually drop down to China's economic growth rate of 7.3% in the long-term.

Using a three-stage dividend discount H model, we estimate the intrinsic value to be $289.

Challenges

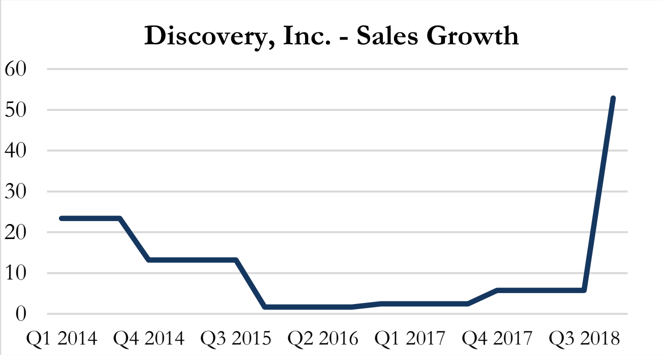
Increased competition in the PC and mobile gaming industry could continue to impact sales growth for their primary business unit. However, we believe that management has made the right decision to invest in e-commerce to diversify their products and services. This investment should allow the company to offset the decline in sales growth in the near-term.

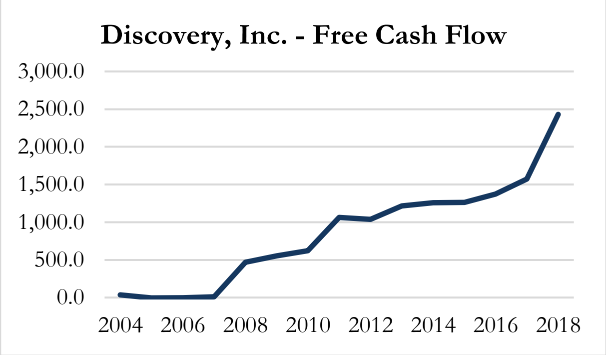
Conclusion & Recommendation

We believe that NetEase will be able to continue to drive robust sales growth for many years. The rising middle class will increase demand for their games, services, and products. We believe that NetEase, Inc. is currently undervalued, and we recommend that we BUY shares of the company

Discovery Communication, Inc. (DISCA)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$52.63**	**$27.43**	**29x**	**Steady Growth**	**N/A**





Introduction

Discovery Inc. is a global media content provider that provides original programming with brands that include:

- Discovery Channel
- HGTV
- Food Network
- Animal Planet
- Travel Channel
- Investigation Discovery
- TLC
- Motor Trend
- Science
- OWN
- Eurosport

The company focuses on real-life (nonfictional) programming that includes food, home, and sports. Nonfictional programming is cheaper to produce and easier to adapt to international markets. We believe investors are overly concerned about the company's current product diversification strategy and distribution model.

Connection to Global Middle Class

We believe the company stands to benefit from the rise of the global middle class because as disposable income increases, the demand for better TV subscriptions and streaming services will likely increase. The company provides programming in nearly 50 languages and reached over 2 billion international subscribers in 2018, with their traditional brands, which was an increase of 8.6% from 2017. We believe their continued focus on nonfiction programming will continue to be popular and generate revenue growth for the foreseeable future.

Fundamental Analysis

The company owns most of the content that it provides and primarily generates its revenue through advertising or distribution fees. Distribution fees are charged to cable and direct to home (DTH) satellite providers who license the company's content. Advertising revenue is based on the price received for available advertising spots and is dependent on the number of subscribers the company has for its content.

In 2018, the company completed the acquisition of Scripps Networks for $14.6 billion, which expanded its offerings by adding popular channels like HGTV and the Food Network to their portfolio. The company also announced a unique partnership with Tiger Woods and the PGA Tour to become the new international home for golf. The new partnership has brought rise to a new streaming platform called GOLFTV that will provide exclusive content for golf fans internationally. Discovery also entered into an agreement with Hulu and Sling TV for the U.S. market, which should capitalize on the cord-cutting trend that will continue to increase in the future.

The company also provides content direct-to-consumer with network related apps and websites like Eurosport Player and Food Network's In The Kitchen which allows the company to generate additional advertising revenue and interact with their consumers, unlike traditional scripted content providers. We believe these investments and partnerships will help stimulate sales growth for the future because the company is positioned to provide content that will resonate with a global audience (food, sports, home, and science).

Financial Statement Analysis

Balance Sheet:
Discovery increased its long-term debt from $7.8 billion in 2016 to $14.8 billion in 2017 to purchase Scripps Networks. Their long-term debt at the end of 2018 was $15.2 billion. We believe this makes the company riskier, which we accounted for in our valuation by adjusting the company's historical beta.

Income Statement:
The company generated $10.5 billion in revenue for the fiscal year 2018 which was a 52% increase compared to 2017 (see chart). The significant increase in revenue was due primarily to the additional revenue provided by Scripps Networks. Discovery reported that Scripps Networks generated 29% of total revenue. U.S. networks accounted for 60% of total revenue and International networks 39%. Gross margins in 2018 were 49% which is higher than the industry average of 35%.

Operations:
The company has steadily increased its cumulative viewership from 2.8 billion in 2016 to 4 billion in 2018. With the rise of the global middle class, we believe that Discovery will continue to see increased viewership which will translate to substantial growth to the bottom line.

Free Cash Flow:
The company increased free cash flows by 55% to $2.4 billion in 2018 from $1.57 billion in 2017 (see chart) indicating that the company is in a better position to pay down its debt or return cash to shareholders. In a conference call on March 12th, 2019, the company announced that it would focus on deleveraging the balance sheet in the short term, but it plans to return capital that it does not invest in the company to shareholders through share buybacks.

Valuation

With over 2 billion subscribers internationally, the company has demonstrated success at delivering content to different regions around the globe. We believe that Discovery's offerings differentiate them from other U.S. content providers and that they are in a strong position to benefit from the rise of the global middle class, which we considered in our valuation. Therefore, we increased the company's historical short-term sales growth rate by 2% to 3.6%.

Using a long-term growth rate of 3.3% and pro forma free cash flow model, we estimate Discovery's intrinsic value to be $52.63. The company does not currently pay a dividend.

Challenges

We believe the company will continue to see challenges with the growing trend of consumers switching to streaming services. In March of 2019, DirecTV announced that it created two new lower-priced packages for its DirecTV Now streaming service. The two new packages dropped channels from A&E and Discovery. This caused the stock price to fall by 5%. We believe investors are overly concerned about the company's distribution model and that there is still strong global demand for its content. DirecTV Now is still offering Discovery's content on its more expensive packages, and Discovery still has strong relationships with SlingTV and Hulu.

Conclusion & Recommendation

Discovery Inc is a media content provider that has positioned itself well for the future with its broad portfolio of real-life, unscripted, content which can be transformed to meet the tastes and preferences of different countries worldwide. We believe that investors are overly concerned about the company's distribution model and that the stock is currently undervalued. Therefore, we recommend that we BUY shares of Discovery, Inc.

Materials

Overview

Materials comprises the lowest sector weighting within the S&P 500 benchmark at 2.65%. We recommend a 13% overweighting within our portfolio of 3%. As with the industrials sector, we propose selling our individual security holdings in favor of diversified sector ETFs. We believe this interest-rate sensitive sector is positioned to benefit from accommodative monetary policy with the Fed likely to hold rates steady through 2019. While there will be cyclical fluctuations, infrastructure building in developing countries should positively impact the demand side of the equation. CMI has considered warning signals from PMI data, housing development, global growth, and trade disputes. Despite these concerns, our overweighting is consistent with our thesis of a rising global middle class and continued GDP growth from now until April 2020.

Real Estate

Sector Overview

Prior to August 31, 2016 the equities listed under this sector were classified under the Financials Sector. After noting significant performance deviation from the parent sector during and post-recession, GICS determined that a new sector, based mostly on Equity Real Estate Investment Trusts (REITS) should be created. REITS develop, own, and operate real estate, generating income through rent, fees, and price appreciation This was monumental move for the way equities are separated, as it was the first time a new sector was created since 1999. Since then, this sector has seen significant positive performance, highlighting at +11.46% over the past year, significantly outperforming the S&P. However, as our economic overview indicates, we believe that there will be a slowdown in economic growth, so this significant growth rate will not be expected moving forward

Sector Outlook

Because most of this sector is based on REITS, several factors must be considered when looking at the overall performance in the next several months. In terms of market sentiment, Seeking Alpha reports that over 97% of institutional investors plan on increasing their capital allocation to this sector over the next several months. This is due to several factors, mostly interest rates, consistent dividends, and more recently, global expansion.

Interest rates have been at a historic low over the past several years, with the Federal reserve increasing rates three times in 2018. Due to this action, investors have been flooding to real estate investments, where the most benefit can be seen from a return standpoint. According to NAREIT, REITS have outperformed other asset classes in times of growth and inflation, which is what our economic outlook calls for.

To qualify as a REIT, companies must pay out 90% of their Net Income as cash dividends to their shareholders. Due to this requirement, traditional equity valuation methods cannot be used. Instead of a Dividend Discount model, REITs are valued through FFO (Funds from Operation), which is a better indicator of profitability. NAREIT's Total REIT Industry Tracker, which measures all U.S. REITS on quarterly composite through FFO indicated that from Q3 2017 to Q3 2018, REITS saw a value increase of over 11%. As occupancy rates are on the rise, it is expected that this number will increase moving forward.

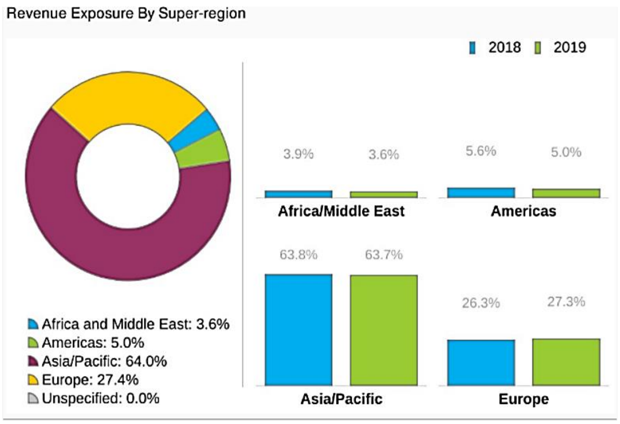
Globally, there has been an increased interest in investing in real estate, as the global middle class shifts from rural to urban living, requiring multi-family homes and massive investments in infrastructure. In a 2018 PwC real estate analysis, the Global Asset Manager, indicates that the Asia-Pacific Market is one of the most profitable over the next several months by saying, "…Asia is an area of expansion. It has superior overall growth to the rest of the world…you want to be positioned in Asia."

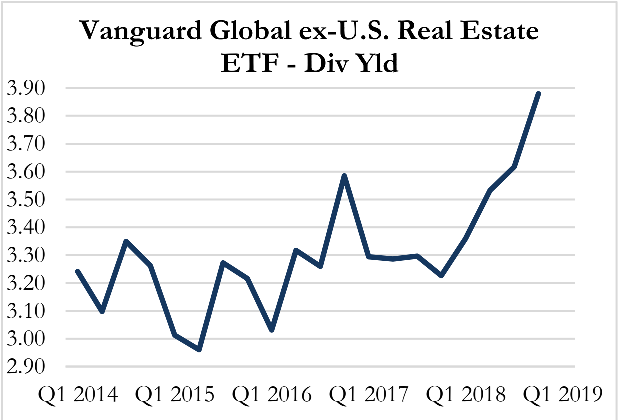
Conclusion

After considering all the factors, including a potential economic slowdown, we are underweighting this sector relative to the S&P by 16%. However, we will be increasing exposure to Asia-Pacific through an investment in VNQI, which aligns with overall market sentiment. VNQI was valued through a two-stage Dividend Discount Model. The investment in HASI is based on our overall belief in investing in the global middle class. HASI was valued utilizing a two-stage model, utilizing FFO growth as a proxy for the dividend growth rate, as that is the standard for REITS.

Vanguard Global ex-US Real Estate ETF (VNQI)

Recommendation	Valuation	Last Price	NAV	Style	Dividend Yield
BUY	**$68**	**$57.51**	**57.40**	**Global Real Estate ETF**	**4.13%**





Introduction

The Vanguard Global Ex-U. S. Real Estate ETF (VNQI) is a cap-weighted, committee selected index of non-U.S. REITs. The ETF is exposed to over 30 countries, with exposures in Japan, Hong Kong, Australia, Germany, Singapore, and South Africa, to name a few (see chart). Since its inception in late 2010, the fund has amassed an average daily volume of over $26 million and assets under management of over $5.5 billion.

Connection to Global Middle Class

When looking for the most reasonable way to approach the real estate market on a global level, we believe that this ETF fits the bill. In this case, increasing levels of construction and real estate services in the Asian Pacific market (68% of the ETF) are very indicative of the rate of growth in the middle class globally. China is an excellent example of this, with almost 50% of their population urbanizing over the past 10 years, requiring massive apartment blocks and homes to be built. We believe that as the global middle class continues to grow and thrive, VNQI will benefit from exposure to underlying REITS that fund this growth.

Fundamental Analysis

VNQI is a popular, liquid ETF that contains over 750 holdings spanning 30 countries, with 80% of its holdings matching the benchmark (Reuters Global Ex-US Real Estate). The fund also does not invest more than 2.5% in any individual holding, minimizing position exposure risk. A committee meets bi-annually to determine the correct mix should the need arise, which we believe increases the desirability of this fund.

When looking at earnings, EBIT and EBITDA margin have grown steadily over the past 5 years, from 21.05 to 25.49, and from 24.28 to 26.97, respectively. Free cash flow margin has also improved significantly, from -10.09 in 2014 to 2.45 in 2018. Dividend yield has increased slightly, moving from 3.24 in 2014 to 3.88 in 2018 (see chart). Peer comparison for VNQI indicates that they track very well, matching the benchmark in both price to earnings (9.28 compared to 9.27) and Price/Book (1.02 compared to 1.00).

As an ETF, fees should also be considered. Compared to its peers, VNQI has a significantly lower cost of ownership, carrying a 0.12% expense ratio, compared to an 1.11% ratio in the category average. We believe that given these strong fundamentals and low fees, VNQI is a strong investment.

Valuation

We estimated VNQI's steady-state dividend growth rate (as a proxy for overall short-term growth) at a conservative 3.5%. Global real estate is growing, and the Asia Pacific market is growing rapidly. We believe that the exposures the ETF carries will continue to perform well.

We project VNQI's long-term growth at 4% going forward beyond the next five years. Using CIM's capital market discount rates, and our 2-Stage model, we estimate VNQI's intrinsic value at approximately $68.

Challenges

Our valuation is conservative, but the fund may encounter some adverse market conditions before reaching our valuation of $68. We assess these challenges as low probability but still possible. The looming trade war with China is of high concern, given the segment exposure. We believe that this tariff standoff will resolve in a manner that is beneficial to both parties, but is a risk, nonetheless. Additionally, strong overlap with the industry benchmark only provides approximately 20% fund variation potential.

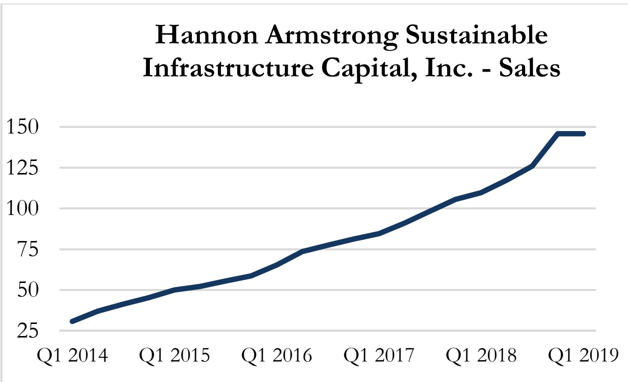
Conclusion & Recommendation

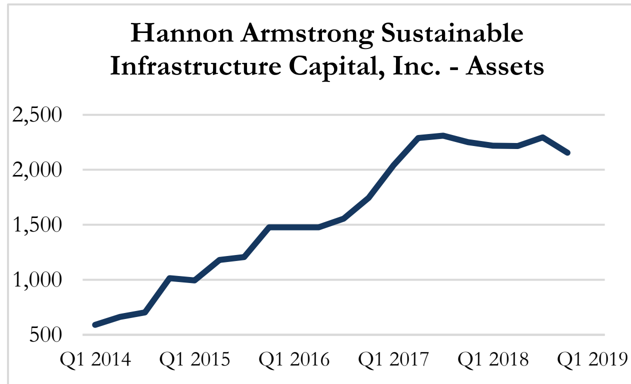
As a global real estate ETF that focuses various types of REITs and other real estate services outside of the United States, we believe that this fund is positioned well to take advantage of the growth of the global middle class.

Even with our modest growth forecasts, our discounted cash flow model estimates the company is currently undervalued by at least 17.5%. We recommend a BUY.

Hannon Armstrong Sustainable Infrastructure Capital, Inc. (HASI)

Recommendation	Valuation	Last Price	Adj. P/E	Style	Dividend Yield
BUY	**$44.13**	**$24.92**	**25.28x**	**Small Value**	**5.46%**





Introduction

Hannon Armstrong Sustainable Infrastructure Capital, Inc. (HASI) operates as a capital and services provider in the sustainable infrastructure market. The company focuses on investing in the assets of and providing services to firms that reduce carbon emissions or work to mitigate the impact of climate change. Over the past 30 years, HASI has amassed approximately $5bil in assets under management.

Connection to Socially Responsible Investing

This company provides a foundation by which other companies can improve their ESG rating. Since their IPO in 2013, HASI has helped other companies reduce the emission of over 3 million metric tons of Co2, as well as conserve over 4 billion gallons of water.

The company indicated in their February 21, 2019 earnings call that they will continue to explore more opportunities for revenue generation through investment in residential, commercial, and solar infrastructure, as well as environmental restoration projects.

Fundamental Analysis

Since its IPO, HASI has improved their revenues significantly. The company also chose to be taxed as a REIT in the United States, which has led to a unique investment approach. The company focuses on financing real estate and development projects in three areas, behind-the-meter, grid connected, and other sustainable infrastructure. From those investments, the company reported revenues of $145.85 million, which consists of interest income mostly from fees, but some from rental and hedging as well.

As of their most recent annual report, the company's portfolio consisted of over 175 investments, broken down into several categories, as follows: 22% energy efficiency, 27% wind, 46% solar, 5% other. Some of their major customers include SunPower, Honeywell, Johnson Controls, J.P. Morgan, Morgan Stanley, and Siemens. Due to their successful initiatives and investments in these and similar companies, they have seen a 32% increase in GAAP EPS year over year.

A unique player in the environmental energy market, HASI has positioned itself to take advantage of what they believe the future of energy is. The 3 D's, digitized, decentralized, and decarbonized, is the way the company envisions the future. These are essentially "behind the meter" progress, which is comprised of energy efficiency, distributed solar, and energy storage, which are the majority of the company's investments.

Given that renewable energy now represents over 20% of total U.S. generating capacity, and that global warming is a developing concern, we believe that HASI will continue to benefit from future ESG initiatives by large corporations and individuals in the residential industry.

Financial Statement Analysis

Balance Sheet:

As a REIT, HASI has a balance sheet that must be approached differently than typical companies. The company has grown their total assets from $571.4 thousand in 2013 to $2.15 million in 2018, due to substantial investment in real estate and building receivables accounts (see chart). A majority of their long-term debt comes from asset-backed nonrecourse debt securities, which is what they are utilizing to finance their growth, increasing from $100 thousand to 834.8 thousand over the past 5 years. When comparing HASI to their peers, leverage ratios are higher across the board. This is likely due to their growth strategy.

Income Statement:

An area where HASI shines is their sales, where they have seen growth of between 25% and 85% YoY since 2013 (see chart). Profitability margins are strong, with operating margin at approximately 15% and net margin at 30%. Important to the investors of a REIT, return to common equity has increased from 1.88 in 2015 to 5.52 in 2018. The company has performed well when compared with their peers, beating net margin by over 15%, and meeting the average on operating margin. Given current estimates provided by the company, continued strong performance is to be expected.

Free Cash Flows:

Unlike a traditional equity, REITs must be valued through Funds from Operations, or FFO, as the majority of their revenues come from real estate. HASI has seen incredible growth to their FFO, moving from $6 million in 2013 to over $130 million in 2018. This significant growth is due to increases in fees, interest income, and rental income. Additionally, the company continues to deploy capital to areas where they see high growth opportunity, seeing significant returns over the past several years.

Valuation

We estimated HASI's short-term growth rate by finding a 5-year FFO/Assets growth calculation, which came up to 43%. Although unsustainable over the long run, given the company's current growth plan, we believe this is a reasonable number. In the most recent investor meeting, the company outlined their plan for the next several years. Mainly, we find that their focus on targeting companies such as FedEx and Target, when combined with investments in leading residential solar companies, HASI is positioned well on both sides of energy generation, shielding it from potential volatility.

Given the long horizons of the types of investments this company makes, we find that a 4% long-term growth rate after 5 years is reasonable for a valuation base. From these assumptions, an intrinsic value was calculated at approximately $44.

Challenges

Our valuation is conservative, but the company faces some challenges to reach our valuation of $44. We assess these challenges as low probability but still possible. One of the major risk factors in the alternative energy sector is regulation. The current administration has made it clear that they do not believe in climate change and have even gone as far as to recuse the United States from the Paris climate change agreement. Additionally, the company is heavily reliant on new construction and retrofitting of existing structures, so a significant shock to the real estate industry is a concern to watch.

Conclusion & Recommendation

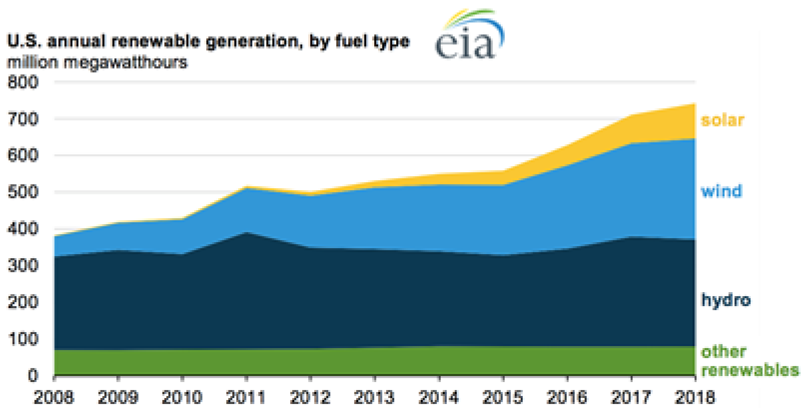
Across all its revenue streams, we expect Hannon Armstrong Sustainable Infrastructure Capital's diversification strategy to help it outperform its peers in this competitive industry, leading to continued growth.

Even with these modest growth forecasts, our discounted cash flow model estimates the company is currently undervalued by at least 80%. We recommend a BUY.

Utilities

Overview

Utility stocks performed well as a portfolio diversifier and reliable hedge on broad market weakness in 2018. An unusually hot summer powered a 3.1% increase in U.S. electricity demand and resulted in increase of electric consumption in Q3. The EEI Index gained 1.3% in Q4 and 3.7% for the year, strongly outperforming the major indices for the year by 7 to 8%, mostly due to the market correction in Q4. Given our economic outlook, we believe the utility sector will play an important risk management role for the portfolio, through its diversification and defensive nature. We have chosen to weight this sector with the same weight as the S&P 500 benchmark. To valuate companies in this sector, a bottom-up valuation method was employed to calculate short term growth rates.



Technology and Consumer Demand

Electric generation has three dominant trends that are likely to continue into 2019 from the previous year: phasing out of coal-fired generation, steady growth in natural gas, and rapid growth in wind and solar generation. In the past ten years, generation of renewable energy from all sources has nearly doubled (see chart), with particularly large tailwinds for solar and off-shore wind energy. The drivers for renewable energy are favorable economic policies and increasing consumer preferences.

However, some risks exist around whether the federal or state levels will act favorably toward bolstering protections for electric generation assets under economic stress. Additionally, severe weather events continue to drive utilities to improve their response to losses and recovery capabilities and regulators to accommodate mitigation options. For example, after evidence that utility assets contributed to the spread of the California wildfires, regulators have worked with utilities on a new operating and regulatory model that enables utilities to curtail power when winds exceed specified speeds to reduce the risk of equipment potentially contributing to wildfires.

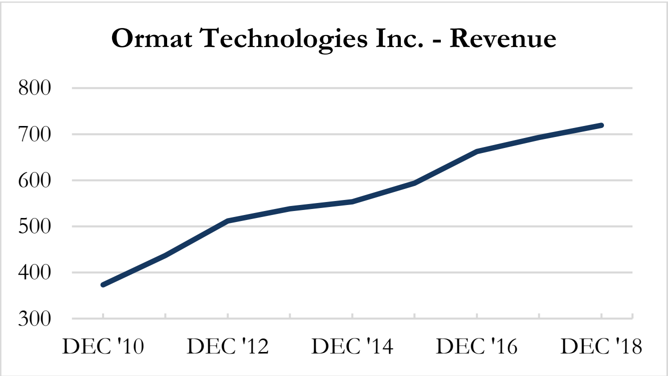
Consumer preferences are changing quickly, but regulated utilities will need to evolve more quickly to capitalize on these changing customer expectations. If they are not positioned to capture value from the shift toward distributed energy resources such as rooftop solar, battery storage, electric vehicles, and smart thermostats and appliances, they risk losing the lion's share of revenue in the coming years.

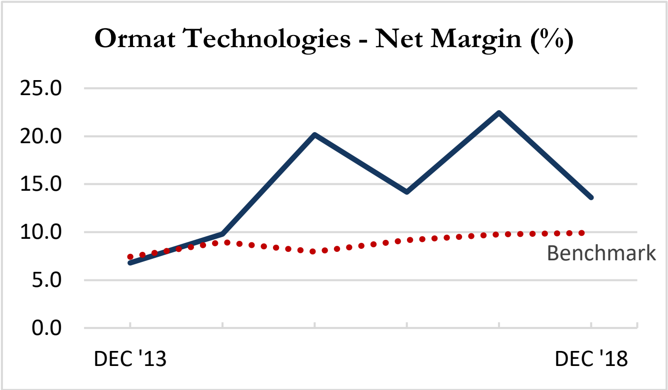
Policy

In June 2018, the IRS issued guidance on requirements to be eligible for the Investment Tax Credit (ITC). The ITC is currently a 30 percent federal tax credit that can be claimed against the tax liability for investors in solar energy property. Temporarily, the credit rate for solar is 30% through 2019, before being reduced to 26% in 2020 and 22% in 2021. Wind property may be eligible for the Production Tax Credit (PTC) and elect to receive the ITC in lieu of PTC through 2019. These tax incentives will also contribute to sector growth into 2019 and 2020.

Ormat Technologies, Inc. (ORA)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$75**	**$55.37**	**27.21x**	**Mid-Cap**	**0.6%**





Introduction:

Ormat Technologies, Inc. is an alternative and renewable energy technology provider. It designs, manufactures, and sells equipment for geothermal and recovered energy-based electricity generation. ORA operates power plants that utilize this proprietary technology to provide renewable electricity to the United States and other countries around the world, including Turkey, Kenya, Indonesia, and Guatemala. The highly vertically integrated firm focuses on providing scalable, clean-energy electric utility solutions world-wide and operates in three business segments: Electricity, Products, and Other.

Connection to Global Middle Class

Geothermal electric generation utilizes heat from within the Earth's surface to generate electricity. Harnessing this renewable energy source produces virtually no harmful emissions into the atmosphere and provides stable energy year-round, differentiating it from other renewables like wind and solar power, which are affected by climate variations. Reliable energy is a vital driver of economic growth in developing countries, and Ormat Technologies has invested in two notable markets that are expected to emerge as geothermal powerhouses: Kenya and Indonesia.

Both geographic regions have vast geothermal electric generation potential; the volcanic East African Rift valley transects Kenya from north to south, and Indonesia's islands lay along the Pacific Rim, which holds 40% of the world's geothermal reserves. Additionally, both countries currently do not produce enough energy to keep up with their population's rising demand for electricity. In Kenya, less than 40% of its 44 million people have access to reliable electricity, and the population of Kenya is expected to nearly double by 2050. The demand is Indonesia is similar, where almost 20 million people lack access to electricity.

The combination of the increase demand for electricity and the abundance of indigenous, renewable geothermal resources make both these emerging markets attractive for return on investment. We believe the need for increased capacity in both regions is being overlooked by the market and is enough to increase Ormat Technologies growth by a conservative 1% to 2% in the coming years.

Fundamental Analysis

In 2018, Ormat Technologies generated $719 million in total revenues, representing a year-over-year increase of about 4%. Electricity sales accounted for 70.9% and Products and Other sales composed the other 28.1% and 1% of revenues, respectively. This revenue growth is modest, but significant in light of the halted operation of the Puna power plant in Hawaii, following the Kilauae volcano eruption. The company has well diversified revenue streams to mitigate risks associated with holding high-valued assets and has proper insurance coverage to further mitigate risks. The company expects insurance to cover the costs to rebuild the damaged assets and the company is in negotiations with their business interruption insurers as of May 2018.

The company has a healthy stream of organic growth and M&A activity. In 2018, it closed on three U.S. acquisitions, increased power generation by 6.9%, added 6 new power plants and expanded its footprint into 2 new states, Idaho and Nevada. Management has highlighted 9 additional potential opportunities for M&A domestically and internationally, further reinforcing its potential to diversify geographically and create revenue and cost synergies into the future.

Financial Statement Analysis

Balance Sheet:
Ormat Technologies ended 2018 with $177.5 million in cash and short-term investments. Net PP&E increased by 9.5% to $2.2 billion, and total assets increased by 16.7% to $3.1 billion. Short-term liabilities can be met, with current assets covering current liabilities fully, with a current ratio of 1.31. Return on assets decreased from 2017 to 3.38 but remains slightly above the industry average of 3.21.

Income Statement:
Revenue growth for 2018 was 3.82%, with the main contribution from the Electricity segment, growing 8.9%. Net income margin for 2018 came in at 13.6%, which is higher than the industry average of 9.9%. Revenues for the past year were affected materially by the Puna power plant outages, but the company expects the plant to resume production by end of 2019.

Valuation

Ormat Technologies has a modest dividend yield of less than 1%, but its value lies within its strong intellectual property in designs and manufacturing, growing electric generation capacity, scalable business practices and geographic diversification.

The company has a high potential for return on future invested capital, strengthened by growing global recognition of the efficiencies and availability of geothermal energy in key regions where capital has already been invested.

We project a conservative revenue growth of 5.57% for the next 5 years, encompassing reinvestment returns and the growing energy demands from the emerging middle class in Kenya and Indonesia. Using a free-cash-flow to equity model, with Monte Carlo simulation technique, we calculate ORA's intrinsic value to be $75. Even with this conservative growth estimate, ORA is undervalued.

Challenges

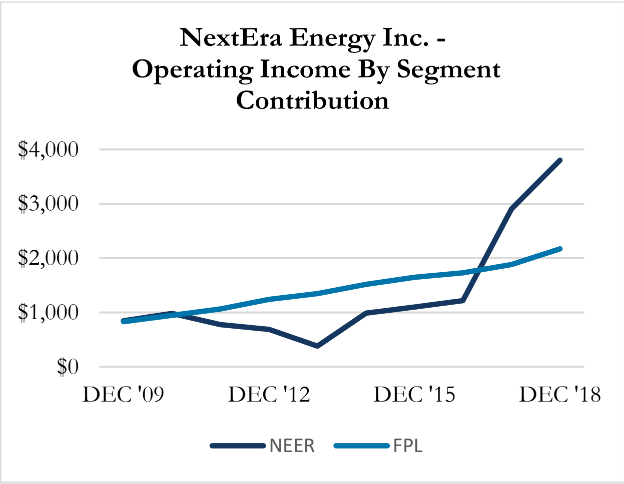
Ormat Technologies faces two major uncertainties related to revenue growth. The resumption of the Puna power plant in Hawaii could be delayed if damage to the geothermal production wells is extensive. If new wells are required, additional drilling will need to take place and will extend the resume target beyond end of 2019. The company has mobilized a large rig to the island to enable drilling, if necessary. Secondly, Ormat Technologies generated 23.5% of its revenues from Turkish utilities and product sales in 2018, and the recent economic uncertainty in Turkey could affect growth of this market. However, it is unlikely that utilities will be affected greatly. Management has diversified their international revenues to compensate for slowing growth in Turkey.

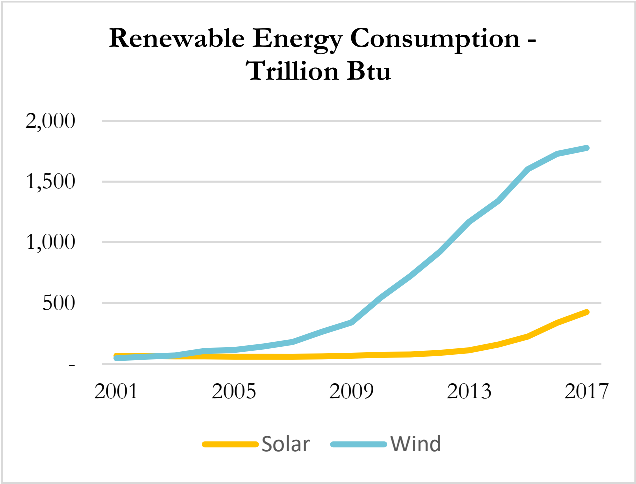
Conclusion & Recommendation

With opportunities for organic and inorganic growth on the rise and a track-record of high return on investment, Ormat Technologies is poised to benefit greatly from its expanded electric generation capacity and geographic diversification. The company is undervalued by more than 35%. We recommend a BUY.

NextEra Energy, Inc. (NEE)

Recommendation	Valuation	Last Price	Adjusted P/E	Style	Dividend Yield
BUY	**$210**	**$187**	**12.52x**	**Large Growth**	**3.56%**





Introduction

NextEra Energy is an electric power and energy infrastructure company with two principal operating businesses: Florida Power & Light Company (FPL) and NextEra Energy Resources (NEER). FPL is the largest electric utility in the state of Florida and engages in generation, transmission, distribution and sale of electric energy. NEER is a wholesale electricity supplier and is the world's largest operator of wind and solar projects.

Connection to Socially Responsible Investing

Renewable energy is on the rise (see chart) and growth in 2019 is likely to be driven by expanding corporate investment interest, favorable emerging state and local policies, and advancing technologies. As of Dec 2018, 156 corporations across the globe, including many headquartered in the US, have committed to achieving 100% renewable power as part of the RE100 campaign. Corporations are continuing to procure increasing volumes of renewable energy voluntarily, driven by their own sustainability goals and increasing variety of affordable procurement options. Voluntary procurements represented 52 percent of utility-scale solar projects in development and 73 percent of projects announced in the first half of 2018. Additional to voluntary procurement, nearly 50 percent of US wind and solar development was driven by state mandates, especially renewable portfolio standards (RPS). As of December 2018, mayors of over 200 communities in the United States had adopted goals to transition to 100 percent renewable energy community-wide no later than 2035. Strong demand and renewable development at the state, municipal, and community levels are ushering in growth and opportunities for renewable energy companies like NextEra Energy.

Increase in expenditures for renewable energy, driven by socially responsible goals will directly benefit NextEra Energy top line growth as it continues to be the world leader in electricity generation from wind and solar sources. The company is expecting to invest upwards of $25 billion into 2020 to grow its current generating capacity from 28GW to 40GW by 2020. Capturing the seemingly insatiable demand for renewable electricity within the continental US could contribute to earnings from its NEER business segment growing even faster than the current trends.

Fundamental Analysis

Next Energy reported $16.7 billion in total sales in 2018, with the regulated FPL utility segment and unregulated

NEER segment contributing 70.9% and 29.1% to total sales, respectively. The FPL utility segment is one of the largest U.S. electric utilities, focused on low cost for its customers, high reliability and excellent customer service. Growth in the NEER segment will be fueled by increased demands for renewable energy. Efficiency improvements and cost reductions in both solar and wind electrical generation technology, and in battery storage technologies will contribute to operating revenue for the segment, which already makes up more than 63% of total operating income. With the new IRS guidance for the U.S. solar tax credit incentive, NextEra is smart to continue its investment in fixed assets while the tax credit lasts.

Additionally, the company has made some key acquisitions for increasing growth. Last year, the company closed on the purchase of the City of Vero Beach's municipal electric system and the purchase of Gulf power, a utility company servicing 7k square miles in northwest Florida, adding 480k customers. The company also recently expanded into the natural gas pipeline market, with 2 joint ventures and an acquisition of 7 natural gas pipelines in Texas, further diversifying its offerings both in products and geographic locations. As returns from these investments pay off, we expect growth in DPS could be as high as 14% through 2020.

Financial Statement Analysis

Balance Sheet:
In total, NextEra Energy has roughly $104 Billion in assets with fixed assets composing about 89%. As it continues to improve and scale its storage business and generation capacity, we expect company expenditure to be focused on expanding fixed assets in the NEER segment. Short term debt increased in Q4 of 2018 by $5 Billion, to finance the purchase of Gulf Power. While NextEra Energy is leveraged above-average with a debt-to-equity ratio of 106.67, the company is well equipped to meet its debt obligations with interest coverage at 2.92x.

Income Statement:
The company reported a decrease in sales of 0.37% from FY 17 to FY18 due to storm-related losses from an above average hurricane season and the
The company reported a decrease in sales deconsolidation of some assets with its partner NextEra Renewable Partners (NEP). As the company refines its strategy for scalable growth, we can take comfort in the strong EBITDA margins at 49%, standing higher than the industry average margin of 33%.

Valuation

We estimated NextEra Energy's sales growth at a conservative 5.4%, mostly fueled by organic growth from previous reinvestment: 3.4% growth from NEER and 2.0% from FPL. We project NextEra Energy's near-term growth to continue for at least the next five years. These growth assumptions are conservative, omitting growth from gas pipelines, expected tax credits, and recent acquisitions. Even so, the company is undervalued with an intrinsic value of $210. If any of our growth assumptions are even close to accurate, the company is even more dramatically undervalued.

Challenges

The company faces three challenges that could affect the intrinsic value. Changes made to the complex regulation of the businesses by federal, state and other agencies pose risks to the company's operations, increasing operating costs to comply with new laws. Severe weather conditions also threaten to damage the fixed assets NextEra Energy operates, which can derail revenue growth and asset turnover. Lastly, there is significant volatility in market prices for renewable and other energy commodities. We assess these challenges as low probability but still possible.

Conclusion & Recommendation

We expect NextEra Energy to see returns from their capital expenditure projects, generating unprecedented earnings growth next year. Our discounted dividend model estimates the company is currently undervalued by at least 12%. We recommend a BUY position for this security.

Appendix

Crummer SunTrust Portfolio Investment Policy Statement

(Revised January 2019)

Crummer SunTrust Portfolio

1.1 History The SunTrust Banks of Central Florida Foundation contributed all of the Crummer SunTrust Portfolio's (Portfolio) initial assets, totaling $500,000 beginning with $100,000 per year in 1999, and no additional contributions are expected. The Portfolio is part of the Rollins College endowment and is exempt from federal income taxes.

1.2 Purpose The Portfolio was established to fund periodic scholarships for students at the Crummer Graduate School of Business and to provide Crummer students with practical experience in portfolio management. The Portfolio expects to exist in perpetuity and the only required distribution is the funding of scholarships.

1.3 SunTrust Scholars SunTrust Scholarships are funded by an annual amount established by the Crummer School that generally follows the endowment distribution policy of Rollins College.

Governance

2.1 Students The students in Crummer's portfolio management class (class) act as security analysts and portfolio managers, making recommendations on portfolio strategy and individual asset selection, subject to the guidelines and limitation set forth in this Investment Policy Statement. This statement assumes the class is only offered in the spring term (January to April).

2.2 Oversight An Oversight Committee (Committee), consisting of industry practitioners, a member of the Rollins College Board of Trustees, if the Board so chooses, a member selected by the Vice President of Finance at Rollins College and a Crummer faculty member, provides guidance for the Portfolio. The overall philosophy of the Committee is one of oversight and not direct portfolio management. When the class is not in session, however, changes in the portfolio can be made by the Committee but only in light of events with the potential to significantly impact the portfolio's value.

2.3 Prohibited Transactions No transactions for the portfolio can be undertaken that are contrary to the SunTrust gift agreement, if any, or to applicable Rollins College Trustee policies.

Long-term and Short-term Investment Approaches

3.1 Long-term Strategy The Portfolio operates in both long-term and short-term environments. As a perpetual portfolio, its long-term investment strategy is designed for a conservative investor who seeks a real total rate of return that will maintain the purchasing power of the Portfolio after distributions and net of expenses. A long-term portfolio will inevitably encounter many market cycles, so the asset allocation is expected to be relatively constant. Table A contains the current long- term real growth and inflation expectations. These expectations are subject to an annual review by the class.

3.2 Short-term Tactics On an annual basis the Portfolio will adopt a tactical (short-term) sector tilt relative to the sector market weights of the S&P 500 Index. This investment tactic is designed to take advantage of short-term (one year or less) market movements by establishing the managers' economic outlook and then underweighting sectors that are expected to do poorly and overweighting sectors that are expected to do well. The current S&P 500 sectors are shown in

Table B. Tactical sector targets may deviate as much as +/- 50% from each sector's S&P 500 market weight (e.g. if the Consumer Discretionary sector has a market weight of 12%; the tactical target weighting may vary from 6% to 18% of the total equity allocation). Up to two sectors may be eliminated from any representation in the portfolio provided that the resulting re-allocation does not violate upper bound (150% weighting) of the remaining sectors. Both individual equity securities and sector exchange-traded funds (ETFs) can be used to achieve the desired sector allocations.

3.3 Objective These short-term and long-term approaches are consistent with the intent to protect the Portfolio's value in down market environments and increase its value in up market environments while funding scholarships—all without incurring a permanent destruction of principal value.

Long-Term Perspective and Asset Allocation

4.1 Risk in the Portfolio comes, in part, from the allocation among asset classes and investment styles within asset classes. The Portfolio's asset classes, strategic targets, and designated benchmarks are discussed in Section 10.2 and listed in Table C. Monitoring asset allocation, combined with a sector focus, is designed to keep the Portfolio consistent with both its short and long-term goals.

4.2 Quantitative analysis is used to address risk management. Techniques include, but are not limited to, Value-at-Risk and evaluation of portfolio alternatives such as risk parity, mean-variance optimization, minimum variance, and equal allocation. Risk should be consistent with the portfolio's target rate of return.

Rate of Return

5.1 Target The Portfolio's target rate of return incorporates the investment goals and spending policy. The target rate of return, investment goals, and expected volatility are interrelated and must be viewed as such. The long-term target rate of return goal that accommodates the Portfolio's expenses and distributions is attached as Table A.

5.2 Horizon The investment horizon of the Portfolio is perpetual and preservation of the real value of principal is necessary with such a long-term perspective.

5.3 Investment Decisions Long term objectives guide asset allocation decisions. Short term opportunities guide sector weight decisions.

5.4 Growth The primary source of Portfolio growth is expected to be judicious and timely security selection. While the Portfolio might fund additional scholarships with a more aggressive asset allocation (e.g., all equity)—prudence, and the perpetual life of the Portfolio, suggest a less risky approach that will allow the value of the Portfolio to rise with the US economy. This organic economic growth is expected to be in line with historical experience—in the range of 2 to 2½%.

Portfolio Transactions

6.1 The class recommends one portfolio composition per year to the Committee. The Committee has the authority to make changes in these recommendations.

6.2 Trades in the Portfolio are made in only one batch each year, typically in mid-April, following the class presentation to the Committee. See Section 2.2 for exceptions.

Cash Requirements

7.1 Scholarship Funding Because the date of the scholarship draw varies around the end of the College's fiscal year (May 31), as of May 1 the Portfolio will hold a cash reserve large enough to cover the annual scholarship funding rather than requiring security liquidation.

7.2 Transactions Costs and Fees Trading costs and fees will be funded in cash and incorporated into the annual transactions to avoid forced security liquidation and will usually be covered by normal sell recommendations.

Volatility

8.1 The target rate of return will ultimately dictate the level of risk in the Portfolio. If the expected volatility of the Portfolio is deemed inappropriate, the class will recommend a change in the target rate of return to the Committee.

Income, Appreciation and Taxes

9.1 The Portfolio pays no taxes on investment income and, therefore, the investments are not tax sensitive. Portfolio distributions are not limited to realized income and, therefore, the Portfolio need not generate income to fund its spending policy. The cash requirements can be met by liquidating securities (see Section 7) and usually will be covered by normal sell recommendations.

Sector and Asset Allocation

10.1 Short-term Sector Allocation To achieve its short-term tactical investment objective the Crummer SunTrust Portfolio's assets shall be managed by under- and overweighting S&P's market sectors. The current sectors are listed in Table B, but these may change from time to time. The tactical target deviations are +/- 50% of their S&P 500 market weights. Cash is a separate asset class and governed by the asset allocation policy.

> 10.1.1 Exchange Traded Funds To allow the class to thoroughly analyze current and prospective security holdings, each sector shall hold an appropriate ETF and, at most, three individual securities. The amount allocated to the ETF and the individual securities in each sector is subject to a risk budget. Justification of the risk budget is part of the annual report.

10.2 Long-term Asset Allocation Asset classes are outlined in Table C. In the short-term, security selections are driven by sector weights and, although stable asset class allocations are important for risk control, they are flexible enough to allow tactical sector allocations in the short run.

> 10.2.1 Equity Styles Asset allocation recognizes equity investment styles to help manage the risk of the portfolio. Investment styles within the equity asset class are defined as follows:
>
> > 10.2.1.1 Value–companies believed to be undervalued with potential for capital appreciation.
> >
> > 10.2.1.2 Growth–companies that are expected to have above average long-term growth in earnings and profitability.
>
> 10.2.2 Market Capitalizations Asset allocation differentiates between securities based on the market capitalizations of different companies. Market capitalizations are defined as follows:

10.2.2.1 Small Cap–companies with total market capitalization less than one billion dollars.

10.2.2.2 Mid Cap–companies with total market capitalization between one and five billion dollars.

10.2.2.3 Large Cap–companies with total market capitalization greater than five billion dollars.

10.2.3 International–equity investments in companies domiciled outside the U.S. are limited to American Depository Receipts (ADRs) listed on major U.S. exchanges or to mutual funds or exchange traded funds.

10.2.4 No target allocation will be set for equity styles and market capitalizations; however, each equity selection will be identified with a style and market capitalization. Overall weightings with respect to style and market capitalization will be supported by the current economic and market outlook. Overall market capitalization weightings will not deviate excessively from those found in the overall US equity market.

10.2.5 While equity styles go in and out of favor over time, the portfolio's strategic risk control relies on a stable asset allocation near the target. Chasing the best performing equity style is inconsistent with maintaining value in the long term.

10.3 <u>Bonds</u> Bonds function as both an asset class and a sector.

10.3.3 <u>Allocation Range</u> The portfolio relies on the bond asset class to moderate risk over the long term through diversification. Therefore, the bond allocation range is limited.

10.3.4 <u>Bonds as a Sector</u> Bonds are similar to a sector with an economic outlook that the managers have the flexibility to incorporate into the portfolio.

10.3.5 <u>Risk Control</u> The bond allocation's ability to temper the portfolio's risk is dependent on reasonable controls over the risk of the bond portfolio.

10.3.6 <u>Effective Duration</u> To establish risk control, the bond portfolio's effective duration is bounded between 3.5 and 5.5 years.

10.3.7 <u>Flexibility and Risk Control</u> By varying both the bond allocation and the effective duration, the managers have enough flexibility to take a view of the bond sector's prospects without distorting the risk profile of the portfolio.

10.4 <u>Diversification Limit</u> No individual asset in the portfolio may represent more than 5% of the total market value of the portfolio. This rule does not apply to mutual funds or exchange traded funds.

10.5 <u>Derivatives</u> The Crummer SunTrust Portfolio may contain derivative securities. Typically, the Portfolio will only use derivatives as a hedge in association with the derivatives class. In this case, a separate written proposal must be approved by the instructors involved. The cash required by these hedges will constitute no more than 10% of the Portfolio's market value.

Rebalancing Procedure

11.1 Should the asset allocation range for a particular asset class or sector be breached by reason of gains, losses, or any other reason, the class will recommend whether to rebalance the assets to the target asset class allocation, taking into account the transaction cost. In addition, the Committee shall have the authority to review the actual allocations at any time to insure conformity with the adopted tactical and strategic allocations. See Section 2.2. The assets will not be automatically rebalanced on any set schedule.

Custodian

12.1 SunTrust Bank is the custodian for the assets of the Crummer SunTrust Portfolio.

Table A		
Target Rates of Return, Components, and Spending Policy		
	Long Term	**Short Term**
Administrative and Trading Expenses	½ - 1%	½ - 1%
Allowance for Inflation	1 - 3%	Consumer Price Index
Distribution from Portfolio	3½ - 5½%	As Indicated Annually
Portfolio Real Growth	2 - 2½%	> 0%
Target Total Return	8 -11½%	Dependent on Above

Table B	
Crummer SunTrust Portfolio Equity Portfolio Sectors	
S&P 500 Sector	**Benchmark**
Communication Services	S&P Communication Services Index
Consumer Discretionary	S&P Consumer Discretionary Index
Consumer Staples	S&P Consumer Staples Index
Energy	S&P Energy Index
Financials	S&P Financials Index
Health Care	S&P Health Care Index
Industrials	S&P Industrials Index
Information Technology	S&P Information Technology Index
Materials	S&P Materials Index
Real Estate	S&P Real Estate
Telecom	S&P Telecom Index
Utilities	S&P Utilities Index
Target Deviation for any sector is +/- 50% of its S&P 500 market weight	

Table C				
Crummer SunTrust Portfolio Asset Allocation Guidelines				
		Target Range		
Asset Class	*Low*	*Mid*	*High*	Benchmark
U.S. Equity	60%	70%	80%	S&P 500
International Equity	10%	15%	20%	MSCI - EAFE
Fixed Income	10%	15%	20%	Barclays US Float Adjusted Index (Vanguard Total Bond Market Index Fund)
Cash		Minimal		90-day T bill rate
Minimum weight for any asset class is 5% except Cash				

Value at Risk

Introduction

Value at Risk quantifies the risk of a portfolio for a specific time frame. VaR is often referred to as a measure of a set of worst-case scenarios; risk managers use VaR to measure the likelihood of an unusual loss due to a low probability event (also known as a black-swan event). VaR is made up of three components: a loss amount, a high confidence level and a specific time period. We use VaR to compare the risk exposure of our proposed portfolio to the risk exposure of the benchmark and the current portfolio.

Methods of Calculation

The Crummer SunTrust Portfolio has an investment horizon of one year with no trading being done after the initial trade. Therefore, we chose a one-year time frame for our VaR calculations. We decided to use the historical method and a confidence level of 95%. We calculated VaR for the portfolio using the current, proposed and benchmark sector weights. Using VaR, we are attempting to answer the following questions:

1. What is the most we expect to lose – with a 95% level of confidence – over the next year?
2. How does our proposed portfolio strategy compare with the benchmark and the current portfolio from a risk perspective?

Assumptions

We decided only to use the equity portion of our portfolio to calculate VaR because the fixed assets portion makes up only 15% of our portfolio and has minimal downside risk compared to the equity portion. Therefore, we are assuming that most of the risk is coming from the equity portion of our portfolio.

We are also excluding the Communication Services sector because there are not enough data points to accurately calculate risk using the historical method. To reduce complexity and the risk of introducing error, we decided it was safer to leave this sector out of our VaR calculations.

Conclusion

The current value of the equity portion of the portfolio (excluding the communication services sector) is $792,836. Our VaR analysis indicates that we expect not to lose more than $171,516 over the next year with a 95% confidence level. Our analysis also shows that our proposed strategy has the highest expected return and the lowest VaR compared to the current portfolio and the benchmark (see table below).

	Current Weighting	Benchmark	Proposed Weighting
Value at Risk (VaR)	23.72%	22.33%	21.63%
Expected Return	8.09%	8.11%	8.11%
Volatility (Std. Dev.)	17.26%	16.26%	16.02%