Final-Project Team Report

SHS-da1

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Portfolio Breakdown

Short Term Or Long Term	Sector	Company	Who Managed Stock	20% requirement
Long Term	Technology	BABA	Charles Tang	x
Long Term	Technology	ANET	Andrew Zhou	
Short Term	Consumer Discretionary	CCL	Emily Zhou	x
Long Term	Consumer Discretionary	MCD	Emily Zhou	x
Long Term	Consumer Discretionary	GM	William Wu	
Long Term	Consumer Staples	CVS	Emily Zhou	x
Long Term	Consumer Staples	PG	Emily Zhou	x
Long Term	Producer Durables	LMT	Michelle Zhang	
Short Term	Producer Durables	DAL	Michelle Zhang	
Short Term	Healthcare	PFE	Michelle Zhang	x
Long Term	Materials	SSRM	Charles Tang	
Short Term	Energy	XOM	William Wu	

Starting from the end of the summer, the five of us have worked together in a supportive group to grow and learn as individuals. During our wild journey, we developed multiple tactics to create a portfolio that fits Mr. Hagenbuch's needs, created a unique team decision-making strategy, and utilized a computer program to decide our allocations.

Our team strategy is unique due to our distinctive interaction between each individual and the group. Although the team was assembled through exchanges in online group chats, we broke barriers and worked closely together to decide what was best for our client's portfolio. Each team member chose one or two sectors that they were interested in and researched with another partner interested in the same sector using their selection strategies along with a basic team template. After researching, they would develop a report and present the company to the team. The group collectively cross-examined the company and provided difficult questions to challenge their arguments. This constructive criticism allowed for the development of a solid justification. By communicating our ideas in its germinating state, we were able to save time by deciding immediate rejections. Our discussions always had an agenda before starting and we regularly wrote down details of our discussion for later reference. Finally, based on the team's collective votes regarding each company, they were placed onto our final stock portfolio.

Since our team was assembled early on, we had to modify our list after the Case Study was published. We prioritized the client's requirements of social responsibility and adjusted our stock picks accordingly. Most were actually bolstered by the client's requirements, but MNST wasn't and was removed from our list due to a conflict of social values. MNST was not making a morally right choice as it was targeting children with products that may have detrimental effects to drive profits. On the other hand, we found numerous companies that displayed a strong sense of social responsibility. BABA offers international exposure, participates in many charitable projects, and promotes sustainability, aligning with client requirements.[1] One of the stocks that seemed like a morally incorrect choice was MCD. However, in 2013, MCD began working with the Alliance For A Healthier Generation to increase access to low-cost, healthier food, and the effects were monumental.[2] Additionally they are starting to make their menu options healthier and fresher. CVS supports projects with the goal of health for all people, business, community, and planet. They stopped selling tobacco products in most stores in 2014, contributing to an overall drop in sales for tobacco products.[3] PFE is a leader in the race for a coronavirus vaccine and recently developed a vaccine that is 95% effective. Once finalized, Pfizer will contribute in allowing Americans to receive the vaccine for free. PG is intent on contributing to society—they plan to go 100% recyclable by 2030.[4] CCL works to decrease their footprint while continuing to facilitate interactions of different cultures.[5] We took Mr. Hagenbuch's requirements seriously and made 37.69% of our portfolio socially responsible companies.

During our research process, we used last year's approved stock list. However, there were a few stocks that were not on the new list. One of these was UAL, which we replaced with DAL. DAL and UAL are highly correlated, notable names in airline companies, have historically done well, and have good projected growth. Another one of the stocks that was not on the list was INFY. Instead of choosing another tech company, we decided to invest more money into ANET. We felt that ANET's big shot customers would set it up for future growth and steady returns. Although we faced several setbacks, we were able to turn them into positive results.

To determine allocations for our stocks, we used a computer program to calculate the percentage allocations for our selected stocks that yielded the optimal Sharpe ratio, a measure of

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[1] https://www.alibabagroup.com/en/about/sustainability
[2] https://www.optimistdaily.com/2009/04/why-investing-in-fast-food-may-be-a-good-thing/
[3] https://www.forbes.com/sites/brucejapsen/2017/02/20/after-cvs-stopped-cigarette-sales-smokers-stopped-buying-elsewhere-too/?sh=52b4209bc8f5
[4] https://us.pg.com/environmental-sustainability/
[5] https://carnivalsustainability.com/goals-performance/sustainability-goals-2020

risk adjusted return, over the past two decades. After verifying that the computer model matched our expectations for the amount of risk the client would be willing to take, we bought the stocks on the simulator in accordance with the percentages.

As a team, we discovered Google's COVID-19 Community Mobility Reports and realized that because transportation rates were double percentage points lower than before, oil prices had dropped to all-time lows. Since the performance of oil companies rely greatly on oil prices, we saw this as a perfect entry point to capitalize on transportation rates returning to normal. We analyzed each oil company's ability to hold out through the pandemic and was able to narrow down our decision to ExxonMobil. Exxon is involved in a multitude of business divisions making it one of the largest public oil companies in the world[6]. They have been able to readjust their business plan and spending. Their impeccable credit score, immediate liquidity of their multiple assets and diversified business presence has allowed them to borrow and maintain a cash supply.[7] Their strong business plan is beginning to focus more on stabilizing the company while keeping investors as happy as possible. However, since they are one of the few companies that are betting against renewable energy, and with a newly elected president who supports the increasing demand for renewable energy, we believe Exxon is a short term energy investment.

General Motors owns numerous recognizable car brands and is one of the largest automakers in the world. However, General Motors has struggled in terms of growth and in maintaining and gaining market share in numerous areas. Nevertheless, we believe that GM has potential for growth. A new and expanding market in the automaker industry is electric vehicles. here was a 65% growth in EV sales from just 2017 to 2018 alone![8] All across the globe,

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[6] https://www.foxbusiness.com/money/exxon-mobil-worlds-largest-public-oil-company-5-things-to-know

[7]https://www.marketwatch.com/story/exxon-borrows-95-billion-as-investment-grade-companies-race-to-fill-war-chests-ahead-of-earnings-2020-04-13

[8]https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/mckinsey-electric-vehicle-index-europe-cushions-a-global-plunge-in-ev-sales

including Europe and China, markets where GM has struggled, a growing number of people are becoming interested in purchasing electric vehicles. Currently, around 81% of all electric vehicles in the United States are Tesla vehicles.[9] GM has adapted their business strategy to cater toward the ever growing electric vehicle market and has begun remodeling popular cars, like the Hummer, to become electric. With GM being a large automaker and a current underdog in a growing market, there is only room for more growth in the coming years. GM is a perfect long-term consumer discretionary investment.

SSR Mining Inc. is a N/S America mining company that has strong financial assets as well as a strong growth outlook for the future. Current economic conditions, with the introduction of stimulus packages, will lead to inflation once consumers start using the money. Since precious metals act as a store of value, have intrinsic value, and are a hedge against inflation, they are a worthy investment in current conditions. We decided to select SSRM as a stock in our portfolio due to its competitive advantage over its competitor RGLD, since they work with gold and silver, resulting in more diversity within the company. In our portfolio, this stock acts to decrease the overall volatility and risk and is a great short-term investment.

Alibaba is an online commerce company centered in China that had strong growth in the past and a speedy recovery from the initial COVID crash. This caught our attention, and we decided that this would be a strong pick for our portfolio to diversify our international exposure and maintain a strong technology company with substantial growth. Since the Chinese government plays a role in supporting large companies such as Alibaba, it is highly unlikely that these companies will falter. In addition, they have a large market capitalization and large amount of assets, making them resistant to bankruptcy. Further, the BABA stock has a competitive advantage in the PE and PB ratio compared to its competitors. Alibaba has strong future business

[9]https://electrek.co/2020/08/21/tesla-holds-us-ev-market-losing-federal-tax-credit/

plans, such as expanding their audience into Southeast Asia and transforming the commerce experience to a digital one through Lazada. It achieved over 100% quarterly order growth, reflecting the fervent market.[10] Alibaba has also been dominating in the Asian cloud computing industry. According to IDC (July 2020), Alibaba Cloud was the largest public cloud service provider in China for the quarter that ended on March 31, 2020. We look towards the future of Cloud Computing where Alibaba may take a significant stance in such an industry.

Acknowledging the profitability of the technology sector, we selected Arista Networks, a computer networking company. The company is a highly profitable network vendor that is exposed to the secular growth of cloud computing. ANET is a fairly newer company, but is filling the gap left by the legacy network vendors by addressing the performance required by emerging cloud giants. Their Cognitive Campus service, which has helped small businesses update their legacy networking, is on track to have generated $100 million in revenue in its first year.[11] Compared to ANET's main competitors, like Cisco and Juniper Networks, it has higher profit and operating margins as well as better ratios in general. ANET was also the most undervalued company as compared to its competitors. The company is also very stable due to its partnerships with tech giants. It collaborated with Facebook to offer network devices that support Facebook's network operating system and worked closely with Microsoft to build cloud data centers. In 2019, the company reported that Microsoft and Facebook represented 23% and 16.6% of Arista's total revenue, respectively.[12] This means that almost 40% of their revenue is backed by even more stable, well-established giants.

CVS is known for their pharmacy retail chain, but they also own much more.[13] They have consistently shown strong revenue and income growth. They have a large amount of long-term

[10] https://www.alibabagroup.com/en/news/press_pdf/p200820.pdf
[11] https://www.nasdaq.com/articles/where-will-arista-networks-be-in-5-years-2020-06-19
[12] https://www.nasdaq.com/articles/3-tech-products-you-dont-realize-you-use-every-day-2020-05-09
[13] https://cvshealth.com/about-cvs-health

debt, but they have sufficient cash for the repayment of it. Furthermore, CVS's acquisition of Aetna, a health insurance provider, sets them up for more success as a healthcare company rather than just a retail company. They have been working on projects for more personalized health care through the use of data. They also launched HealthHubs, an extremely personalizable and attractive one-stop shop for health, and are working on expanding them as well.[14] Compared to Walgreens, their largest competitor, the acquisition of Aetna sets them up for long-term success, as Walgreens is purely a retail company.[15] Therefore, we chose CVS as an ideal healthcare company for long-term investment.

CCL is the world's largest leisure travel company; it accounts for nearly half of the global cruise market.[16] They have shown a very strong growth in earnings: doubling in just the 6 years between 2013 and 2019. Additionally, 16 new ships are scheduled to be delivered by 2020, part of a series of new flagships intended to stimulate and serve demand in Asia and Australia, the fastest-growing cruise markets.[17] Although COVID-19 has halted many travel companies, they are bound to recover eventually. They can survive through the crisis because they raised $6.4 billion in additional liquidity—enough to keep it afloat through next year. Furthermore, in comparison to one of its competitors, RCL, CCL has more cash and less leverage. This means that RCL will be paying more in interest payments in comparison to CCL.[18] It was hit harder by COVID and thus will take longer to recover from it. Therefore, CCL is the short-term stock to invest in the rebound of the travel industry.

PG is a consumer goods corporation that provides branded consumer packaged goods in 180 countries.[19] In 2017, a $10 billion cost-savings initiative, portfolio restructuring, and plan to

[14] https://cvshealth.com/news-and-insights/press-releases/cvs-health-outlines-strategy-to-accelerate-growth
[15] https://www.nasdaq.com/articles/better-coronavirus-stock%3A-cvs-health-or-walgreens-2020-05-17
[16] https://www.carnivalcorp.com/corporate-information
[17] https://www.carnivalcorp.com/static-files/c2010078-d066-42c7-a6c2-1789cb6b709d
[18] https://www.nasdaq.com/articles/better-buy%3A-carnival-vs.-royal-caribbean-2020-04-09
[19] https://us.pg.com/structure-and-governance/corporate-structure/

build a strong e-commerce business was introduced along with more efficient decision making and improved accountability.[20] This reinvention fared well as growth accelerated and total shareholder return increased. Through the COVID-19 crisis, PG has shown strong sales and EPS growth. They are expected to maintain this strong momentum through COVID and well past it due to apprehension and taking more precautions[21]. PG also focuses on expanding into Enterprise Markets, which have attractive market growth rates. UL, one of their competitors, has fewer cash resources, meaning they have less flexibility in increasing dividends or share repurchases.[22] PG also has a larger market capitalization, which means more stable returns and stability in this unpredictable market. PG is the obvious choice for a consumer staples long-term stock.

LMT is an American aerospace and defense company that has global reach within its sector. LMT is the largest defense contractor in the world, and has received more money from the U.S. government than any other company.[14] In mid-2019, LMT secured its hold on the monopoly over fighter jets by signing onto a trillion dollar 60-year deal for the F-35 jet with the Department of Defense. Overall, in recent years, LMT stock has been increasing consistently and has a substantial dividend of 2.78%. Defense stocks like LMT remain stable and are a low-risk option for investors, especially in times of uncertainty. Within the past year, LMT stock has remained consistent and traded at around $380.00 per share. LMT has also been expanding its reach from beyond fighter jets, and is now focusing on its arsenal of hypersonics, weapons, and control systems which has helped its stock prices ride out during the pandemic. Its dominating presence in the defense and aerospace industries in addition to its dividend payout makes it an ideal long-term producer durables investment.

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[20] https://www.nasdaq.com/articles/procter-gamble-navigates-soft-sales-with-cost-saving-plans-2017-11-21
[21] https://www.marketingweek.com/pg-coronavirus-push-forward-back/
[22] https://www.nasdaq.com/articles/better-buy-procter-gamble-vs-unilever-2019-02-23
[14]https://www.usatoday.com/story/money/business/2019/03/27/lockheed-martin-boeing-get-most-money-federal-government/39232293/

DAL is an American airline company that focuses mainly on American consumers. DAL owns nine major airline hubs around the United States and is in multiple partnerships with other airlines around the world, the majority based in Europe. Over the past year, DAL stock has dropped by almost 50%, due to the Covid pandemic. In previous years, DAL has struggled with its debt, but the company has been able to maintain a modest P/E ratio of 4.60. During the pandemic, DAL was forced to rely on government financing and fell back on its five billion dollar loan. However, this problem isn't isolated to DAL, other airline companies such as UAL are facing the same problems, which severely mitigates the severity of this problem. Despite these roadblocks, DAL has been working hard to maintain cash and is expanding its presence internationally in an effort to globalize and tap into a broader market.[23] DAL is another great short-term stock to invest in the rebound of the travel industry.

PFE is an American pharmaceutical company that has developed one of the front-running vaccines for the COVID-19 pandemic. It is one of the largest pharmaceutical companies in the US and has produced many different effective drugs and medications. In early 2020, PFE began to develop its COVID-19 vaccine. Since its initial development, PFE's vaccine has become the top candidate for the US, and was a forerunner in the race. As a result, we believed that the company had great potential for growth. Recently, Pfizer has had tremendous breakthroughs in their vaccine and is set for approval from the FDA by mid-December.[24] The approval of PFE's vaccine would mean a tremendous rapid increase in its stock price, which makes it the best option for a short-term investment. Although other companies such as MRNA and AZNCF are developing vaccinations as well, they aren't as successful or popular giving PFE an edge over its competition. In addition, the investment into PFE carries much less risk because it is already a

[23] https://finance.yahoo.com/news/delta-dal-introduce-more-flights-151103171.html
[24] https://www.usatoday.com/story/news/health/2020/11/29/pfizer-covid-vaccine-faa-belgium-air-shipment/6445339002/

well established company and has many other drugs within its pipeline aside from the Covid vaccine itself making it a wonderful short-term healthcare investment.

MCD is an American fast food company, but also has locations all around the world. In the past, they have struggled with growing sales. However, the introduction of all-day breakfast, return of the dollar-menu, use of fresher ingredients, environmentally friendly packaging, and expansion to new markets took MCD out of its slump.[25] In the future, they are planning on expanding menu items to maximize profits based on demand and accelerating technology innovation. MCD plans to improve marketing and further establish McDonald's as the iconic brand it is.[26] For example, they are preparing to launch a line of plant based menu items.[27] All of these improvements would drive an increase in profits and show that they are a company that always looks for refinement. Although MCD has many fast-food competitors, we felt MCD was a company worth investing in due to its lead in the industry, large market capitalization, and far-reaching influence. Additionally, MCD has proven to be less volatile and outperform in unpredictable markets and have consistently increased their dividends. They are a great long-term consumer discretionary investment.

Over the course of a couple of months, our team went from a couple of strangers meeting through online meetings to becoming a close-knit group. Throughout the process, we have grown and learned a lot about ourselves, each other, and working together as a team. As we reflect, we are greatly thankful for the opportunities and learning experiences we have been provided and hope to return next year no matter the outcome.

[25] https://www.eater.com/2018/1/30/16937672/mcdonalds-comeback-stock-price-all-day-breakfast-delivery
[26] https://corporate.mcdonalds.com/corpmcd/en-us/our-stories/article/Featured.Accelerating-Arches.html
[27] https://www.bloomberg.com/news/newsletters/2020-11-15/mcdonald-s-mcd-takes-control-of-its-destiny-with-mcplant-plant-based-burger