MARIST COLLEGE

School of Management

Memorandum of Transmittal

To: Professor John Finnigan

From: Brian Hart

Date: 5/4/2022

Subject: Final Submission

Attached please find the Final Paper which is due on 5/2/2022 as an assignment in BUS-420N-112, Investment Analysis.
The work and writing presented in this paper, unless specifically specified in an appropriately cited footnote, endnote, or reference note, is solely mine.

X____________________________________

Table of Contents

Executive Summary

At the Beginning of the semester, our Investment Analysis Class was given an assignment to develop a hypothetical portfolio of two stocks and an equity fund. Students were asked to take an investment survey to allow students to get a better understanding of their investment style and profile. The survey gave the students a score, and a beta that they should use to average out their portfolio. From here the students need to make their selection of the two stocks and the one fund. Once we found out stocks and fund, were would hypothetically invest $10,000 into each security. For your securities to qualify for selection, the stock had to have a higher expected return than your calculated required rate of return. The total average beta of the portfolio had to be less than what was assigned to you in the Investor Profile Questionnaire.

Following the risk assessment survey, I determined that I was a moderately conservative investor, which corresponded to a beta of 0.8. Knowing that I was a moderately conservative investor, I knew that I should invest in Large Cap stocks, as they typically decreased risk for an investor. By using resources such as Yahoo Finance and the Bloomberg Terminal, I was able to find three securities that averaged to be below 0.8 and had expected return projections that were higher than my required rate of return. After my research, I decided to invest my money in Starbucks, Biogen Inc, and the Hartford Core Equity Fund Class R5. The fund that I invested into had holdings of mainly large cap companies and diversified through all sectors. According to the CAPM formula using a risk-free rate of 1.782, a beta of 0.8 and a 10% market rate of return, my required rate of return was calculated to be 8.36%.

Once I chose my investments, I began a detailed analysis on a variety of aspects of the company and fund. I investigated the company history, management and board background, their major holders, and their peers. From here I investigated the company's income statement, balance sheet, and cash flow statement, and looked at the year-to-year changes over a three-year span from 2019 to 2021. From here I used the information I inherited to develop a pro forma income statement and a balance sheet projection for my businesses in 2022. From here I did a financial ratio analysis and compared it to some of its competitors to see how attractive my company's financial statements were in comparison to their competitors. To get some more information about the company's, I researched the company's insider transactions, option analysis, short sales and analyst recommendations. For my fund I used a variety of strategies to investigate the performance of my fund. I analyzed the top ten holdings, the management team, its performance over the last three years, and the strategy they have developed. To get a better understanding of how well my fund performed, I did some ratio analysis, and diversification analysis on the fund to see how it performed against its competitors.

Once the three months were over, I did calculations to determine how much progress my securities did over the period. For each security I calculated the total dollar return, total percentage return, and the effective annual rate. Since the three-month period was completed, I wanted to reflect on how my securities performed. The time and effort put into this project has given me so much more knowledge than I had previously. I information that I gained from this project is applicable in a work setting, and in my normal life as well. I'm glad that I was given the opportunity to do this project as it provided be with so much knowledge about finance and investing that I will be able to use it for the rest of my life.

On the Charles Schwab Investor Profile Questionnaire, I scored 8 points overall for my time horizon portion and received 15 points for my risk tolerance portion. The scores that I produced describe my investment profile as moderately conservative. Now, I am inexperienced with investments, and am beginning to learn a lot about the market in general, so I believe my assessment of moderately conservative is very accurate. Since I haven't begun investing yet, I am looking for stocks that have less risk, and less volatility. I'd prefer to have a significant return on my investments, but I also believe a large amount of risk is not worth the higher reward. According to the Charles Schwab Questionnaire, the profile of moderately conservative aligns with an average beta of 0.80. On average small- cap companies have a stronger return on investment in comparison to large-cap companies. Based on this information, the safer investment strategy that I should use based on my profile would be to invest in large-cap companies that are in different sectors to diversify my portfolio and will lead to a balanced return.

As a moderately conservative investor, I am looking to have steady growth on my investments. At this point in time, I'm a college athlete who hasn't had much opportunity to work or generate income due to COVID-19 restrictions, and athletic obligations. As someone who doesn't have the ability to throw their money around, the smart route is to invest in options that can't negatively affect my income. I plan to invest now and hold my investment until I urgently need the money. Due to COVID-19, I have been given an extra year of athletic eligibility, so I have time before I enter the workforce to watch my investment grow during my graduate school year.

As I mentioned previously, I will be moderately conservative in regard to my selection of stocks and funds. As an investor who is seeking stability and modest income, finding large-cap companies with low risk would be ideal. I am in a situation where I can't afford to lose money. Setting myself up into an investment where I feel comfortable, and don't have to check to see how my investments are looking is the most optimal situation for a college student like myself.

To find the best large-cap companies I will plan to select stocks and funds that have a beta close to 0.80 that will produce a return that matches my investment profile. Based on my investing profile, I believe that I could accept small amounts of risk and volatility, lower amounts of returns, and also willing to accept smaller losses. To find out my required rate of return, I used the Capital Asset Pricing Model to identify my required rate of return. As of January 29, 2022, the 10-year treasury yield is 1.782%, which is the number I'll use for my risk-free rate. By using Capital Asset Pricing Model, and the equation of $Rr = Rf + \beta(Rm\text{-}Rf)$, with my Rf equaling the 10- year treasury yield of 1.782%, the market-risk premium (*Rm*) for my companies and funds being 10%, and my beta association (*β*) equaling 0.80, I was able to calculate by required rate of return to be 8.36%.

Beta	0.8
10 - Year Treasury Rate	1.782%
Large Cap	10%
Large Cap	10%
Large Cap	10%
Market Rate	10%
CAPM	1.782% + 0.8 (10 - 1.782)
	8.36%

The securities that I have selected are Starbucks (SBUX), Biogen Inc. (BIIB) and Hartford Core Equity Fund Class R5 (HGITX). All of the securities that I have selected have a higher expected rate of return than the required rate of return that I recently calculated. Being a moderately conservate investor, I was in search of two companies that have lower betas that match my investment profile. Starbucks was the first company that I found, and has a beta of 0.89, which is slightly higher than my beta. To help average this out, I was in search of a large cap company that has a lower beta. The company that I believed best suited my investment style was Biogen Inc, a biotechnological company that specializes in developing therapy for neurological diseases. This company has a beta of 0.44, which helps to average out my investment profile. Both companies have expected returns above my required rate of return, as Starbucks is expected for 21.78% return, and Biogen is expected 21.17% return. I believe that finding two companies in separate sectors was important as it will help diversify my portfolio. I decided to take my most risk with my equity fund. The fund I chose is called the Hartford Core Equity Fund Class R5 (HGITX). This large cap equity fund has a beta of 0.95, which helps to even my portfolio beta closer to 0.80 like I hoped. I liked this equity fund because it has had a three-year average return of 19.93%, which is much higher than my required rate of return. The diversification that I have developed in my portfolio will help to mitigate risk and stay in line with my profile of being moderately conservative.

Portfolio

Portfolio Beta	
SBUX	0.89
BIIB	0.44
HGITX	0.95
Beta Average	**0.76**
Portfolio Expected RR	
SBUX	22.39
BIIB	21.17
HGITX	19.93
Portfolio Expected RR	**20.96**

E_R = (\$1.96 + \$116.42 - \$96.72) / \$96.72 = 22.39%

E_R = (\$272.90 - \$225.21) / \$225.21 = 21.17%

E_R = 19.93 (3- Year Average)

Based on the chart above, my portfolio's beta is equal to 0.76, and my expected rate of return is 20.96%. Now that I have chosen my securities, I will invest $10,000 into each security on January 29th, for a total investment equaling $30,000. I will analyze the progress of my investments over an entire quarter and hopefully follow their growth. I am excited about the portfolio that I have built because it matches my investment strategy and profile. I have a conservative beta, but still have higher expected return than my required rate of return which makes it more encouraging.

Starbucks (SBUX) :NASDAQ

Fiscal Year End: October 3, 2021

Headquarters: Seattle, Washington

Beta: 0.89

Purchase Price on 1/28/2022: $96.72

Close Price on 2/11/2022: 93.73

Close Price on 4/1/2022: $91.49

Close Price on 9/4/2022 : $74.64

Quantity of Shares: $10,000 worth of 103.39 shares

Dividend Yield: $1.96

Market Capitalization: 109.19 billion USD

Sector: Consumer Cyclical

Industry: Restaurants

Expected Return for Starbucks (SBUX) Stock:

E_R = ($1.96 + $116.42 - $96.72) / $96.72 = 22.39%

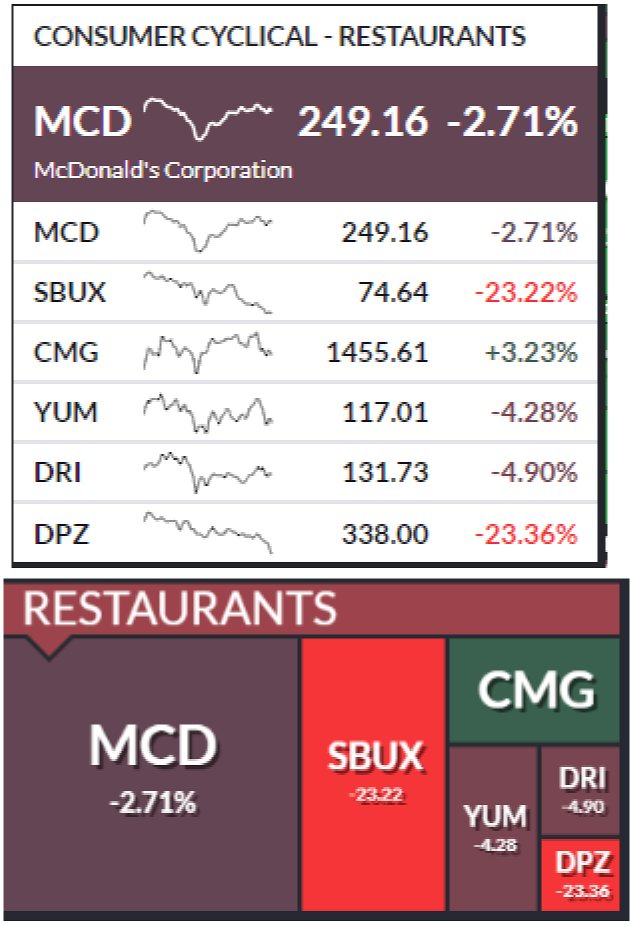
Company Description:

Starbucks Corporation is a retail restaurant company that provides specialty drinks to customers worldwide. The company originated in 1971 in Seattle, Washington by Jerry Baldiwn, Gordon Bowker, and Zev Siegl, where it was able to open its first store.[1] The company's name originated from the character Starbuck, in the novel Moby Dick. The company's main products include a variety of flavored fresh-roasted coffee beans, and teas. The company was able to grow around the United States and around the world. The company is privileged to provide products and services to millions of customers around the world. Today the company has over 30,000 locations in 83 different countries.[2]

Starbucks has upgraded their products and services over the years and has been classified as one of the top coffee restaurants in the world. The company does most of their operations in North America but has operations occurring in 83 different markets. [3]Their variety of flavors for their coffee and drinks is the reason they have thrived over the years. Recently, Starbucks has developed a menu of breakfast items to increase their variety. Their implementation of breakfast products like donuts, muffins, scones, and breakfast sandwiches has given customers another reason to go there.

Heat Map:

[1] Starbucks | Description, History, & Facts | Britannica , Accessed February 10, 2022
[2] Company Profile - Starbucks Stories , Accessed February 10, 2022
[3] IBID

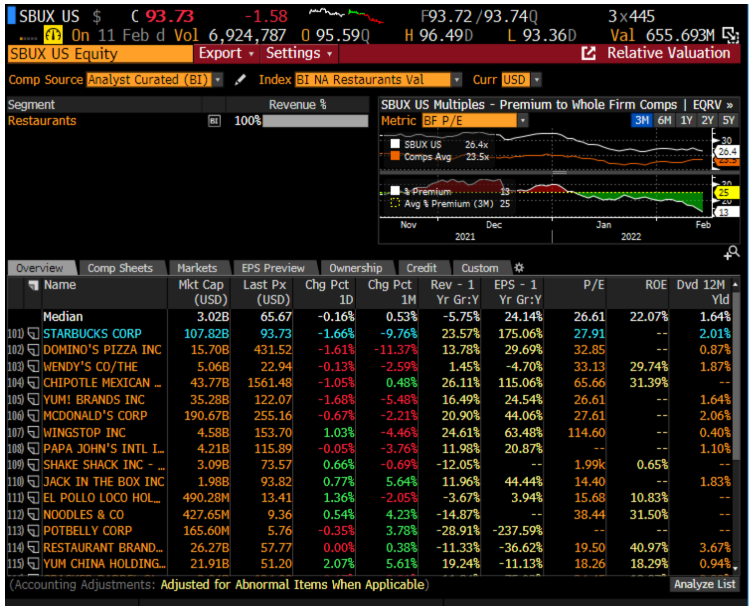


[4]

The graphs and charts listed above show the three-month heat map for the Consumer Cyclical sector for the S&P 500 Index as of 2/1/2021 to 5/1/2022. On the charts you can see the performances of the other companies and their performances in that timeframe. Compared to their competitors, Starbucks struggled. In the last three months, Starbucks returned -23.22%, while some competitors within their sector such as Chipotle, had a positive return over the same timeframe.[5]

Peer Group:

[4] S&P 500 Map (finviz.com), Accessed, May 1 2022
[5] IBID



	Name	Mkt Cap (USD)	Last Px (USD)	Chg Pct 1D	Chg Pct 1M	Rev - 1 Yr Gr:Y	EPS - 1 Yr Gr:Y	P/E	ROE	Dvd 12M Yld
	Median	3.02B	65.67	-0.16%	0.53%	-5.75%	24.14%	26.61	22.07%	1.64%
101)	STARBUCKS CORP	107.82B	93.73	-1.66%	-9.76%	23.57%	175.06%	27.91	--	2.01%
102)	DOMINO'S PIZZA INC	15.70B	431.52	-1.61%	-11.37%	13.78%	29.69%	32.85	--	0.87%
103)	WENDY'S CO/THE	5.06B	22.94	-0.13%	-2.59%	1.45%	-4.70%	33.13	29.74%	1.87%
104)	CHIPOTLE MEXICAN ...	43.77B	1561.48	-1.05%	0.48%	26.11%	115.06%	65.66	31.39%	--
105)	YUM! BRANDS INC	35.28B	122.07	-1.68%	-5.48%	16.49%	24.54%	26.61	--	1.64%
106)	MCDONALD'S CORP	190.67B	255.16	-0.67%	-2.21%	20.90%	44.06%	27.61	--	2.06%
107)	WINGSTOP INC	4.58B	153.70	1.03%	-4.46%	24.61%	63.48%	114.60	--	0.40%
108)	PAPA JOHN'S INTL I...	4.21B	115.89	-0.05%	-3.76%	11.98%	20.87%	--	--	1.10%
109)	SHAKE SHACK INC - ...	3.09B	73.57	0.66%	-0.69%	-12.05%	--	1.99k	0.65%	--
110)	JACK IN THE BOX INC	1.98B	93.82	0.77%	5.64%	11.96%	44.44%	14.40	--	1.83%
111)	EL POLLO LOCO HOL...	490.28M	13.41	1.36%	-2.05%	-3.67%	3.94%	15.68	10.83%	--
112)	NOODLES & CO	427.65M	9.36	0.54%	4.23%	-14.87%	--	38.44	31.50%	--
113)	POTBELLY CORP	165.60M	5.76	-0.35%	3.78%	-28.91%	-237.59%	--	--	--
114)	RESTAURANT BRAND...	26.27B	57.77	0.00%	0.38%	-11.33%	-36.62%	19.50	40.97%	3.67%
115)	YUM CHINA HOLDING...	21.91B	51.20	2.07%	5.61%	19.24%	-11.13%	18.26	18.29%	0.94%

(Accounting Adjustments: Adjusted for Abnormal Items When Applicable) Analyze List

6

The companies listed above make up the peer group for Starbucks Co. Out of all the company's listed, Starbucks has one of the largest market capitalizations, just behind McDonald's at $109.64B [7]. Based on the graph, a lot of the peers had negative returns over the last month, and Starbucks, having a -9.76% return in the last month. [8]

Economic Factors: Porter's 5 :

- *Threat of New Entrants:* There is always the potential for new entrants into any industry. The main competitors that lie in the same industry as Starbucks are Dunkin Donuts, McDonald's, and Ready Coffee. Operating any small coffee cafe has much less needs and costs in comparison to a chain such as Starbucks.[9] The cost of growth and development that Starbucks has done will increase costs, and potentially increase the product sale price, and may give an opportunity for a new coffee cafe to enter. These new entrants pose a moderate threat to Starbucks but should have their focus on other issues before this.
- *Bargaining Power of Supplies:* The bargaining power of suppliers is one of the last things that Starbucks must worry about. Currently, Starbucks has hired coffee farmers in different regions of the world that allow for them to have better control of their supply chain. [10]This eliminates the middleman that can control the selling price of Starbucks coffee. The supply chain success that Starbucks has implemented has decreased the amount of expenses that need to be paid, which gives Starbucks more bargaining power.[11] Currently, this is one of the lowest threats that Starbucks needs to worry about in the time being.

---

[6] Starbucks Co. Peer Group. Source Bloomberg, RV Function
[7] IBID
[8] IBID
[9] [Porter's Five Forces Analysis of Starbucks - notesmatic](), Accessed February 10,2022
[10] IBID
[11] IBID

- *Bargaining Power of Buyers:* Out of all the 5 forces affecting Starbucks, the bargaining power of buyers may be the most significant out of all the forces. Based on the prices that Starbucks has for their products, customers have the power of switching brands to save money.[12] A customer could stay away from Starbucks, and purchase beverages from different locations or in vending machines. The individual buyer is the one that will determine the need for a Starbucks product over another product.
- *Threat of Substitute Products:* Substitute Products show a potential to negatively affect the Starbucks Coffee business. Starbucks chooses to make the highest quality and best flavored coffee on the market.[13] With this in mind, Starbucks believes that they can price their products slightly higher in comparison to competitors. The main reason people drink coffee is for the caffeine intake. There are a variety of substitute products that provide caffeine, such as tea, energy drinks, soda, and many more. The large variety of other options provide any issue that Starbucks must handle. Like the Bargaining power of the buyers, this is one of the stronger forces that Starbucks must take into consideration.
- *Rivalry:* Almost every company in the world has competitors and rivals. Without competitors, some industries would turn into monopolies. Starbucks is a company that has many rivals in all shapes and sizes. Starbucks main competitors include Dunkin Donuts and McDonalds. Both of these competitors have coffee prices that are lower than Starbucks, for Starbucks to remain sustainable, they have two options, one is to change their prices, or they could stick to their original strategy of producing the highest quality and best tasting coffee on the market and selling it at their normal price. Out of the five forces, Starbucks shall consider this one to be moderate, as they will continue to have their reliable customers there with them.

Chairman & CEO:

Kevin Johnson is the current Chief Executive Officer and President for Starbucks Corporation.[14] Johnson is a graduate of New Mexico State with a degree in Business Administration. Johnson joined Starbucks as a member of their board in 2009, when the company was able to reach record- setting growth and development. In 2015, Johnson was fortunate enough to take over the role as CEO and President. [15]Some of the key responsibilities Johnson has been managing global operations, supply chain functions, marketing, resources and technology. Johnson formally assumed the role as President and CEO when Howard Schultz moved into the executive chairman role.[16] Johnson has a variety of experience working with global businesses, working 16 years at Microsoft, and serving as CEO of Juniper Networks for five years. Lastly, he was appointed by President's George W Bush and Barack Obama as the National Security Telecommunications Advisory Committee in 2008.

---

[12] IBID
[13] Starbucks Coffee Five Forces Analysis (Porter's Model) & Recommendations - Panmore Institute, Accessed February 10,2022
[14] Kevin Johnson (starbucks.com), Accessed Februay 11, 2022
[15] IBID
[16] IBID

Kevin Johnson – Starbucks.
President & CEO
Source: Starbucks.com

Company Executives:

- John Culver - Group President, North America and Chief Operating Officer[17]
- Rachel Ruggeri- Executive Vice President and Chief Financial Officer[18]
- Michael Conway- Group President, International and Channel Development[19]
- Rachel A. Gonzalez- Executive Vice President and General Counsel [20]
- Angela Lis- Executive Vice President, Chief Partner Officer[21]
- Gina Woods- Executive Vice President, Public Affairs and Social Impact[22]

Board of Directors:

- Mellody Hobson - Board Chair - Hobson is an American businesswoman who is the current Board Chair for Starbucks. Hobson is a Princeton University graduate. Hobson's main work experience has been with Ariel Investments, as she's worked with the firm for over two decades as president, CEO, and Chairman of Board of Trustees. [23]
- Richard E Allison, Jr - Domino's Pizza- Chief Executive Officer - As of July 2018, Richard Allison has served as the CEO for Domino's Pizza. Allison received a B.S. in business administration from the University of North Carolina. Before working at Domino's, Allison worked for Bain & Company, a consulting firm that works with many different restaurant brands. Allison was named a Starbucks board member in September 2019.[24]

[17] Leadership - Starbucks Stories , Accessed February 11, 2022
[18] IBID
[19] IBID
[20] IBID
[21] IBID
[22] IBID
[23] Ariel Investments - Mellody Hobson , Accessed February 11, 2022

[24] Richard Allison, Jr. | Board Member | Domino's Pizza (dominos.com), Accessed February 10, 2022

- Andrew Campion - Nike- Chief Operating Officer - Campion is the current COO at Nike and is also a board member for Starbucks Corporation. Campion is a UCLA graduate where he received his MBA, and later pursued a graduate degree at the University of San Diego School of Law. Campion was named to the board in 2019. Prior to this Campion held a position as Senior Vice President- Corporate Development for Walt Disney. [25]
- Mary N. Dillon - Ulta Beauty - Retired Chief Executive Officer - Mary Dillon is a businesswoman that has a variety of experience working with many different major companies. Mary Dillon has worked for Ulta Beauty, Quaker Foods, McDonald's and Cellular Corp. Dillon was elected as a Starbucks board member in 2016. Dillon completed her undergraduate studies at the University of Illinois.[26]
- Isabel Ge Mahe - Apple, Inc.- Vice President - Isabel Ge Mahe is the current Vice President at Apple. Ge Mahe joined Apple in 2008 as the Vice President of Wireless Technology. Ge Mahe has a fantastic academic background, as she performed her undergraduate studies at Simon Fraser in British Columbia, and completed her MBA at the University of California, Berkeley. [27]
- Jorgen Vig Knudstrop - LEGO- Executive Chairman _ Knudstrop serves as the executive chairman for Lego and is also a current board member for Starbucks. Knudstrop served as the CEO and President at the Lego Group for 13 years, between 2004-2017, before he was appointed as the Executive Chairman. Knudstrop has his Ph.D. in Business Administration. [28]
- Satya Nadella - Microsoft- Corp Chief Executive Officer - Nadella is the current CEO and Chairman at Microsoft and is also a current member of Starbucks board of directors. Nadella joined Microsoft in 1992 and was a key component to Microsoft's technological and business growth. Nadella was chosen as CEO in February 2014. The Bellevue, Washington naive received a bachelor's degree in Electrical Engineering from Mangalore University, and a master's degree in computer science from the University of Wisconsin. [29]
- Joshua Cooper Ramo- Sornay- Chief Executive Officer - Ramo is a current board member for Starbucks, and FedEx Corp. Ramo did his undergraduate degree at the University of Chicago and completed his graduate program at the University of New York. Ramo has served various other positions, such as Co- CEO at Kissinger Associates Inc., and Senior Editor at Ti Gotham, Inc. [30]

---

[25] Andrew Campion - Biography (marketscreener.com), Accessed February 10, 2022

[26] Mary Dillon - Biography (marketscreener.com), Accessed February 10, 2022

[27] https://www.apple.com/leadership/isabel-ge-mahe/, Accessed February 10, 2022

[28] Jorgen Vig Knudstorp | IMD Business School, Accessed February 10, 2022

[29] Satya Nadella - Stories (microsoft.com), Accessed February 10, 2022

[30] Joshua Cooper Ramo - Biography (marketscreener.com), Accessed February 10, 2022

- Clara Shih - Hearsay Systems - Chief Executive Officer - Shih is the current CEO of Hearsay Systems, a social marketing tool used by many different companies such as Allstate, JP Morgan, and Goldman Sachs. Prior to the foundation of Hearsay, Shih worked as an engineer at Microsoft, and worked at Google and Salesforce.com. [31]
- Javier G Teruel - Colgate - Palmolive Company Retired Vice Chairman - Teruel is a retired vice chairman of Colgate- Palmolive Co, where he worked his 35-year career. Currently Terual is working for an investment firm, Spectron Desarrollo, which specializes in housing projects in Mexico. Besides Starbucks, Teruel is also a board member for Pepsi Bottling Group Inc. [32]

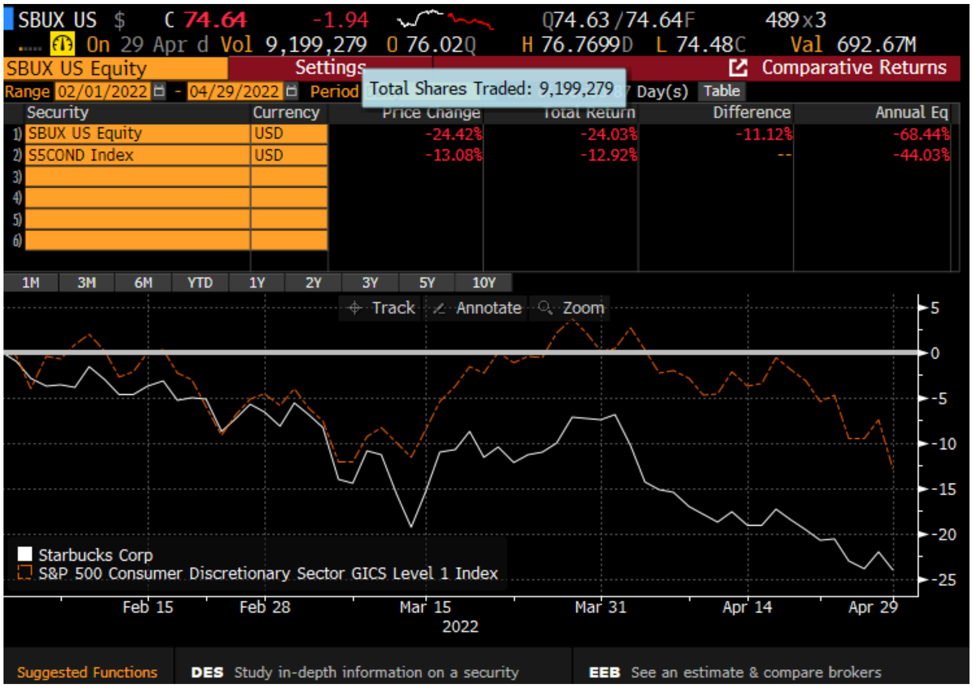
Risks Facing Company:

- Starbucks may not be capable of adequately protecting our intellectual property or adequately ensuring that we are not infringing the intellectual property of others, which could harm the value of our brand and our business.
- Starbucks reliance on key partners may adversely affect our business and operations.
- Interruption of Starbucks supply chain could affect its ability to produce or deliver its products and could negatively impact our business and profitability.
- The loss of key personnel or difficulties retaining qualified personnel could greatly impact our business and financial results.
- Starbucks is highly dependent on the financial performance of its North America operating segment.
- Starbucks faces intense competition in each of its channels and markets, which could potentially lead to reduced profitability.
- Starbucks is increasingly dependent on the success of certain international markets to achieve our growth targets.
- Starbucks faces risks as a global business that could adversely affect our financial performance.
- Failure to comply with applicable laws and regulatory restrictions could harm its business and financial output.

Benchmark Graph:

[31] Clara Shih, CEO and founder of Hearsay Systems – PCMA.org, Accessed February 10, 2022

[32] Javier Teruel | Directors and BoardsJavier Teruel | Directors and Boards



[33]

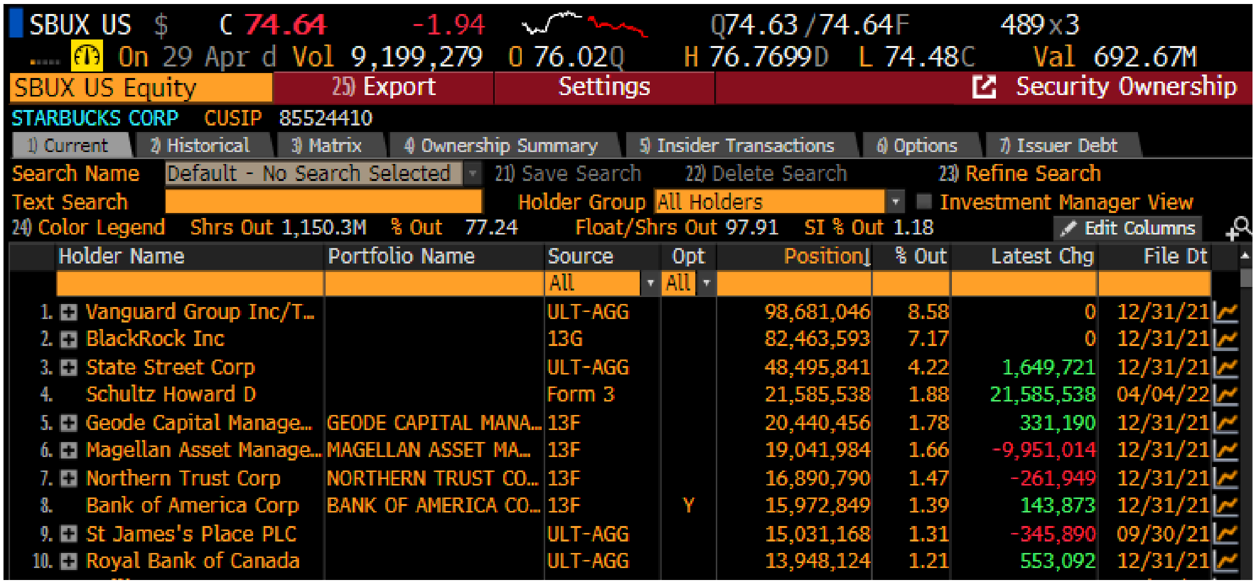
Starbucks Corp benchmark graph is shown in the chart above. The line graph shows Starbuck's 3-month rate of return compared to the rate of return of the S&P 500 Consumer Cyclical sector as of May 1st, 2022. Based on the chart, Starbucks produced a -24.42% return over the last three months, a very frustrating amount for investors to see, while the Consumer Cyclical sector returned -13.08% over the same time. [34]

Beneficial Owners:

---

[33] Starbucks Co. 3-Month performance compared to S&P 500 Consumer Discretionary Sector Index and S&P 500 Index. Source Bloomberg, COMP Function

[34] IBID



SBUX US $ C 74.64 -1.94 Q74.63 / 74.64F 489x3
On 29 Apr d Vol 9,199,279 O 76.02Q H 76.7699D L 74.48C Val 692.67M
SBUX US Equity 25) Export Settings Security Ownership
STARBUCKS CORP CUSIP 85524410
1) Current 2) Historical 3) Matrix 4) Ownership Summary 5) Insider Transactions 6) Options 7) Issuer Debt
Search Name Default - No Search Selected 21) Save Search 22) Delete Search 23) Refine Search
Text Search Holder Group All Holders Investment Manager View
24) Color Legend Shrs Out 1,150.3M % Out 77.24 Float/Shrs Out 97.91 SI % Out 1.18 Edit Columns

	Holder Name	Portfolio Name	Source	Opt	Position	% Out	Latest Chg	File Dt
			All	All				
1.	Vanguard Group Inc/T...		ULT-AGG		98,681,046	8.58	0	12/31/21
2.	BlackRock Inc		13G		82,463,593	7.17	0	12/31/21
3.	State Street Corp		ULT-AGG		48,495,841	4.22	1,649,721	12/31/21
4.	Schultz Howard D		Form 3		21,585,538	1.88	21,585,538	04/04/22
5.	Geode Capital Manage...	GEODE CAPITAL MANA...	13F		20,440,456	1.78	331,190	12/31/21
6.	Magellan Asset Manage...	MAGELLAN ASSET MA...	13F		19,041,984	1.66	-9,951,014	12/31/21
7.	Northern Trust Corp	NORTHERN TRUST CO...	13F		16,890,790	1.47	-261,949	12/31/21
8.	Bank of America Corp	BANK OF AMERICA CO...	13F	Y	15,972,849	1.39	143,873	12/31/21
9.	St James's Place PLC		ULT-AGG		15,031,168	1.31	-345,890	09/30/21
10.	Royal Bank of Canada		ULT-AGG		13,948,124	1.21	553,092	12/31/21

[35]

According to the SEC, a beneficial owner is a "a person or group of persons acquires beneficial ownership of more than five percent of a voting class of a company's equity securities registered under the Securities Exchange Act, they are required to file a Schedule 13D with the SEC." [36]If they meet this requirement, they are required to fill out a Schedule 13D form within 10 days of their acquisition. The top 10 holder names are listed in the chart above. Some companies such as Vanguard Group, BlackRock Inc., which own 8.58% and 7.17%, respectively, are considered beneficial owners as they own over 5% of the company's stock.[37] None of the shareholders listed above meet the requirement set by rule 16A-1, which states that if any person or group of people have equity ownership of more than 10% of a company, they must file it with the SEC. [38] One could describe the fact that Starbucks beneficial owners having a collective amount of 15.75% as risky because these owners have the option to sell out of their position.

Investment Thesis:

[35] Starbucks Co. Security Ownership. Source Bloomberg HDS function.
[36] Schedules 13D and 13G | Investor.gov, Accessed February 10, 2022

[37] Starbucks Co. Security Ownership. Source Bloomberg HDS function.
[38] Section 16 Reporting Requirements as Amended by the Sarbanes-Oxley Act: Olshan Frome Wolosky (olshanlaw.com), Accessed February 10, 2022

After completing the Charles Schwab Investor Profile questionnaire, I was looking for large cap companies that match my beta to make my portfolio comparable to my investor profile. As a moderately conservative investor, who would generally look for companies with a beta around 0.8, I chose Starbucks, a company with a beta of 0.89, because it is slightly over my beta, but not too aggressive to the point where I am being overly risky in comparison to my investor profile. Knowing that the company has a forward dividend of $1.96, and the expected one-year estimate at $116.42, and the purchase price on 1/29/22 being $97.21, I was able to calculate the expected return to be 21.78%, which is much higher than my required rate of return of 8.36%

Financial Analysis (SBUX)

Income Statement:

Starbucks Corp (SBUX US) - BBG Adjusted

In Millions of USD except Per Share 12 Months Ending	FY 2021 10/03/2021	Change	FY 2020 09/27/2020	Change	FY 2019 09/29/2019
Revenue	**29,060.6**	24%	**23,518.0**	-11%	**26,508.6**
+ Sales & Services Revenue	26,377.0	24%	21,190.9	-10%	23,633.6
+ Other Revenue	2,683.6	15%	2,327.1	-19%	2,875.0
- Cost of Revenue	20,652.0	12%	18,458.9	-3%	19,020.5
+ Cost of Goods & Services	20,652.0	12%	18,458.9	-3%	19,020.5
Gross Profit	**8,408.6**	66%	**5,059.1**	-32%	**7,488.1**
+ Other Operating Income	385.3	19%	322.5	8%	298.0
- Operating Expenses	3,531.9	9%	3,248.4	1%	3,215.6
+ Selling, General & Admin	2,215.5	15%	1,922.2	-5%	2,029.0
+ *Selling & Marketing*	*305.1*	18%	*258.8*	5%	*245.7*
+ *General & Administrative*	*1,910.4*	15%	*1,663.4*	-7%	*1,783.3*
+ Research & Development	0.0		0.0		—
+ Depreciation & Amortization	1,441.7	1%	1,431.3	4%	1,377.3
+ Other Operating Expense	-125.3	-19%	-105.1	45%	-190.7
Operating Income (Loss)	**5,262.0**	147%	**2,133.2**	-53%	**4,570.5**
- Non-Operating (Income) Loss	379.7	-4%	397.3	69%	234.5
+ *Interest Expense*	*469.8*	8%	*437.0*	32%	*331.0*
+ Foreign Exch (Gain) Loss	0.0		0.0		0.0
+ Other Non-Op (Income) Loss	-90.1	-127%	-39.7	59%	-96.5
Pretax Income (Loss), Adjusted	**4,882.3**	181%	**1,735.9**	-60%	**4,336.0**
- Abnormal Losses (Gains)	-474.6	-183%	571.5	539%	-130.2
+ Merger/Acquisition Expense	219.5	-25%	290.9	6%	274.6
+ Disposal of Assets	—		—		—
+ Early Extinguishment of Debt	—		—		—
+ Asset Write-Down	80.9		—		—
+ Impairment of Goodwill	—		—		10.5
+ Gain/Loss on Sale/Acquisition of Business	-864.5		—		-622.8

+ Legal Settlement	—		—		—
+ Restructuring	89.5	-68%	280.6	92%	146.2
+ Sale of Investments	—		—		—
+ Other Abnormal Items	—		—		61.3
Pretax Income (Loss), GAAP	**5,356.9**	360%	**1,164.4**	-74%	**4,466.2**
- Income Tax Expense (Benefit)	1,156.6	383%	239.7	-72%	871.6
+ Current Income Tax	1,281.6	378%	268.2	-88%	2,320.4
+ Deferred Income Tax	-125.0	-339%	-28.5	98%	-1,448.8
Income (Loss) from Cont Ops	**4,200.3**	354%	**924.7**	-74%	**3,594.6**
- Net Extraordinary Losses (Gains)	0.0		0.0		0.0
+ Discontinued Operations	0.0		0.0		0.0
+ XO & Accounting Changes	0.0		0.0		0.0
Income (Loss) Incl. MI	**4,200.3**	354%	**924.7**	-74%	**3,594.6**
- Minority Interest	1.0	128%	-3.6	22%	-4.6
Net Income, GAAP	**4,199.3**	352%	**928.3**	-74%	**3,599.2**
- Preferred Dividends	0.0		0.0		0.0
- Other Adjustments	0.0		0.0		0.0
Net Income Avail to Common, GAAP	**4,199.3**	352%	**928.3**	-74%	**3,599.2**
Net Income Avail to Common, Adj	**3,824.4**	177%	**1,379.8**	-61%	**3,498.5**
Net Abnormal Losses (Gains)	-374.9	-183%	451.5	549%	-100.7
Net Extraordinary Losses (Gains)	0.0		0.0		0.0
Basic Weighted Avg Shares	1,177.6	0%	1,172.8	-4%	1,221.2
Basic EPS, GAAP	**3.57**	352%	**0.79**	-73%	**2.95**
Basic EPS from Cont Ops, GAAP	**3.57**	352%	**0.79**	-73%	**2.95**
Basic EPS from Cont Ops, Adjusted	**3.25**	176%	**1.18**	-59%	**2.86**
Diluted Weighted Avg Shares	1,185.5	0%	1,181.8	-4%	1,233.2
Diluted EPS, GAAP	**3.54**	348%	**0.79**	-73%	**2.92**
Diluted EPS from Cont Ops, GAAP	**3.54**	348%	**0.79**	-73%	**2.92**
Diluted EPS from Cont Ops, Adjusted	**3.22**	175%	**1.17**	-59%	**2.84**

39

[39] Inline XBRL Viewer (sec.gov)

Revenue:

- ❖ Starbucks change in revenue in the last 3 fiscal years has varied. Due to the pandemic, Starbucks revenue decreased by 11% from 2019 to 2020, but then recovered from 2020 to 2021 as the corporation saw a 24% increase during the fiscal year.
- ❖ The 11% decline in revenue equated to $2.99 Billion decrease in revenue where the 24% increase equated to $5.54 Billion increase in revenue.
- ❖ Starbuck's cost of revenue changed similarly to the revenue, as the company say a 3% decrease from 2019 to 2020, but a 12% increase from 2020 to 2021.
- ❖ Starbucks experienced the decline in the 2020 fiscal year due to the COVID-19 pandemic. The restrictions on their operations made it difficult for them to produce the same output they did in 2019.
- ❖ With most restrictions being lifted by 2021, Starbucks was able to increase their revenue in this fiscal year, as workers and customers were able to purchase their specialty drinks at the point of sale.
- ❖ The growth in company operated store revenue was driven by a 20% increase in comparable store sales, a 9% increase in comparable transactions, a 10% increase in average ticket, and the implementation of 524 new Starbucks locations.
- ❖ For fiscal year 2021, Starbucks international net revenue increased by $1.7 billion, or 32% increase from 2020.

Gross Profit:

- ❖ Starbucks gross profit decreased by 32% from fiscal year 2019 to 2020 but increased by 66% from fiscal year 2020 to 2021.
- ❖ The large decrease from 2019 to 2020 can be attributed to the decrease in sales transactions at Starbucks locations in 2020 due to the COVID-19 pandemic restrictions.
- ❖ Starbucks was able to recover from the 2020 with an increase of $5.54 billion of revenue from 2020 to 2021.
- ❖ A majority of the costs of goods sold came direct labor as the hours of workers increase back after the COVID-19 pandemic.

- In 2020, sales and revenue decreased by 10% while cost of revenue and cost of goods and services also decreased by 3%
- In 2021, sales and revenue grew by 24% with cost of revenue and cost of goods and services increasing by 12%.

Operating Income and Expenses:

- From 2019 to 2020, operating income decreased 57% or $2.244 billion and from 2020 to 2021 it increased by 147% or $3.128 billion.
- Operating expenses from fiscal year 2019 to 2020 increased by 1% whereas from 2020 to 2021, the operating expenses increased by 9%.
- The largest increase within operating expenses from 2019 to 2020 was within selling and marketing expenses which increased by 5% from the prior year and increased by 18% from 2020 to 2021.
- For Starbucks, a company who makes almost all of their profits off of in store sales, the investment that they put into marketing and advertising has paid off, as the company has seen an increase in revenue from 2020 to 2021.

Pretax Income:

- The Pretax Income for Starbucks was also inconsistent over the 3-year span. From 2019 to 2020, the Pretax Income decreased by 60%, but from 2020 to 2021, it was able to recover as it increased by 181%.

Tax Analysis:

- The effective tax rates for Starbucks Corp. in 2021, 2020, and 2019 were 21.6%, 20.6%, and 19.5%. The tax rate has increased each of the last three fiscal years.
- Starbucks must be attentive foreign tax rates which are different in each company they do business in.

Reconciliation of the statutory U.S. federal income tax rate with our effective income tax rate:

Fiscal Year Ended	Oct 3, 2021	Sep 27, 2020	Sep 29, 2019
Statutory rate	21.0 %	21.0 %	21.0 %
State income taxes, net of federal tax benefit	2.7	2.2	2.1
Foreign rate differential	0.5	(3.2)	(0.1)
Change in tax rates	(1.3)	(2.2)	—
Excess tax benefits of stock-based compensation	(0.9)	(4.2)	(2.1)
Foreign derived intangible income	(0.5)	(1.4)	(1.5)
Charitable contributions	(0.4)	(1.7)	—
Valuation allowances	0.2	10.0	—
Residual tax on foreign earnings	—	—	1.7
Tax impacts related to sale of certain operations	—	—	(1.3)
Other, net	0.3	0.1	(0.3)
Effective tax rate	21.6 %	20.6 %	19.5 %

40

Net Income:

- ❖ Starbucks Net Income from year to year has been inconsistent over the three-year span. From fiscal year 2019 to 2020 the company saw a 74% decrease but saw a 352% increase from 2020 to 2021. The net change between 2019 and 2020 was $2.67 Billion decline, but a $3.27 Billion increase from 2020 to 2021.
- ❖ Net income in 2019 was $3.59 billion and at the end of fiscal 2021 it had increased to $4.199 billion.
- ❖ Even though Starbucks had a massive decline from 2019 to 2020, it was able to recover from the COVID-19 pandemic in 2021.

Earnings Per Share:

- ❖ Listed below are two companies that are found in Starbucks Peer Group, McDonald's, and Chipotle, as well as their Earnings per share in the years 2019,2020, and 2021, as well as the three-year average.
- ❖ The Earnings per share is calculated by taking the company's net income and dividing it by the amount of shares outstanding.
- ❖ Based off the chart, Starbucks has the lowest three-year average for Earnings per share in comparison to McDonalds and Chipotle.
- ❖ One reasoning to believe that McDonald's and Chipotle were able to stay consistent during the pandemic was because they were able to have contactless order and delivery. Doordash, a food delivery company was able to have workers order these chains food and

[40] Inline XBRL Viewer (sec.gov)

have them delivered to people's house, without there being any COVID-19 transmission risk. Starbucks is not a restaurant that does deliveries through Doordash, which could have been a reason as to why their Net Income and Earnings per share were down in 2020.

	2021	2020	2019	3-Year AVG
Starbucks (SBUX)	**$3.54**	**$0.79**	**$2.92**	**$2.41**
McDonald's (MCD)	**$10.04**	**$6.31**	**$7.88**	**$8.07**
Chipotle (CMG)	**$22.90**	**$12.52**	**$12.38**	**$15.93**

Balance Sheet:

Starbucks Corp (SBUX US) - Standardized

In Millions of USD except Per Share 12 Months Ending	FY 2021 10/03/2021	Change	FY 2020 09/27/2020	Change	FY 2019 09/29/2019
Total Assets					
+ Cash, Cash Equivalents & STI	6,617.9	43%	4,632.1	68%	2,757.1
+ Cash & Cash Equivalents	6,455.7	48%	4,350.9	62%	2,686.6
+ ST Investments	162.2	-42%	281.2	299%	70.5
+ Accounts & Notes Receiv	940.0	6%	883.4	0%	879.2
+ Accounts Receivable, Net	940.0	6%	883.4	0%	879.2
+ Notes Receivable, Net	0.0		0.0		0.0
+ Inventories	1,603.9	3%	1,551.4	1%	1,529.4
+ Raw Materials	903.8	2%	888.2	-5%	933.0
+ Work In Process	0.0		0.0		0.0
+ Finished Goods	329.3	12%	293.9	2%	288.0
+ Other Inventory	370.8	0%	369.3	20%	308.4
+ Other ST Assets	594.6	-20%	739.5	51%	488.2
+ Derivative & Hedging Assets	147.6	846%	15.6	24%	12.6
+ Deferred Tax Assets	—		—		—
+ Taxes Receivable	20.7	-94%	356.9		—
+ Misc ST Assets	426.3	16%	367.0	-23%	475.6
Total Current Assets	**9,756.4**	25%	**7,806.4**	38%	**5,653.9**

+ Property, Plant & Equip, Net	14,605.5	2%	14,375.5	124%	6,431.7
+ Property, Plant & Equip	23,064.8	3%	22,289.4	56%	14,273.5
- Accumulated Depreciation	8,459.3	7%	7,913.9	1%	7,841.8
+ LT Investments & Receivables	281.7	37%	206.1	-6%	220.0
+ LT Investments	281.7	37%	206.1	-6%	220.0
+ Other LT Assets	6,749.0	-3%	6,986.5	1%	6,914.0
+ Total Intangible Assets	4,027.2	-3%	4,149.3	-3%	4,272.6
+ Goodwill	*3,677.3*	2%	*3,597.2*	3%	*3,490.8*
+ Other Intangible Assets	*349.9*	-37%	*552.1*	-29%	*781.8*
+ Deferred Tax Assets	1,874.8	5%	1,789.9	1%	1,765.8
+ Derivative & Hedging Assets	84.3	-3%	87.3	232%	26.3
+ Investments in Affiliates	268.5	-44%	478.7	21%	396.0
+ Misc LT Assets	494.2	3%	481.3	6%	453.3
Total Noncurrent Assets	**21,636.2**	0%	**21,568.1**	59%	**13,565.7**
Total Assets	**31,392.6**	7%	**29,374.5**	53%	**19,219.6**
Liabilities & Shareholders' Equity					
+ Payables & Accruals	4,296.5	46%	2,945.5	-40%	4,894.0
+ Accounts Payable	1,211.6	21%	997.9	-16%	1,189.7
+ Accrued Taxes	566.0	117%	260.9	-82%	1,468.4
+ Interest & Dividends Payable	578.1		0.0	-100%	485.7
+ Other Payables & Accruals	1,940.8	15%	1,686.7	-4%	1,750.2
+ ST Debt	2,250.2	-23%	2,937.5		0.0
+ ST Borrowings	0.0	-100%	438.8		0.0
+ ST Lease Liabilities	1,251.3	0%	1,248.8		—
+ ST Finance Leases	*0.0*		*0.0*		—
+ ST Operating Leases	*1,251.3*	0%	*1,248.8*		—
+ Current Portion of LT Debt	998.9	-20%	1,249.9		0.0
+ Other ST Liabilities	1,604.7	10%	1,463.8	15%	1,274.7
+ Deferred Revenue	1,596.1	10%	1,456.5	15%	1,269.0
+ Derivatives & Hedging	8.6	18%	7.3	28%	5.7
+ Misc ST Liabilities	0.0		0.0		0.0
Total Current Liabilities	**8,151.4**	11%	**7,346.8**	19%	**6,168.7**
+ LT Debt	21,354.9	-4%	22,321.3	100%	11,167.0
+ LT Borrowings	13,616.9	-7%	14,659.6	31%	11,167.0
+ LT Lease Liabilities	7,738.0	1%	7,661.7		—
+ LT Finance Leases	*0.0*		*0.0*		—
+ LT Operating Leases	*7,738.0*	1%	*7,661.7*		—
+ Other LT Liabilities	7,200.8	-4%	7,505.8	-8%	8,114.9
+ Accrued Liabilities	0.0		0.0		0.0
+ Pension Liabilities	0.0		0.0		0.0
+ Pensions	*0.0*		*0.0*		*0.0*
+ Other Post-Ret Benefits	*0.0*		*0.0*		*0.0*
+ Deferred Revenue	6,463.0	-2%	6,598.5	-2%	6,744.4
+ Deferred Tax Liabilities	—		—		—

+ Derivatives & Hedging	8.2	-90%	79.3	534%	12.5
+ Misc LT Liabilities	729.6	-12%	828.0	-39%	1,358.0
Total Noncurrent Liabilities	**28,555.7**	-4%	**29,827.1**	55%	**19,281.9**
Total Liabilities	**36,707.1**	-1%	**37,173.9**	46%	**25,450.6**
+ Preferred Equity and Hybrid Capital	0.0		0.0		0.0
+ Share Capital & APIC	847.3	126%	375.1	787%	42.3
+ Common Stock	1.2	0%	1.2	0%	1.2
+ Additional Paid in Capital	846.1	126%	373.9	810%	41.1
- Treasury Stock	0.0		0.0		0.0
+ Retained Earnings	-6,315.7	19%	-7,815.6	-35%	-5,771.2
+ Other Equity	147.2	140%	-364.6	28%	-503.3
Equity Before Minority Interest	**-5,321.2**	32%	**-7,805.1**	-25%	**-6,232.2**
+ Minority/Non Controlling Interest	6.7	18%	5.7	375%	1.2
Total Equity	**-5,314.5**	32%	**-7,799.4**	-25%	**-6,231.0**
Total Liabilities & Equity	**31,392.6**	7%	**29,374.5**	53%	**19,219.6**

Source: Bloomberg
[41]

[41] IBID

Current Assets:

- The amount of total current assets has increased significantly over the last three years. From 2019 to 2020, Starbucks saw an increase of 38% and from 2020 to 2021, they saw an increase of 25%.
- Cash, short term investments, and cash equivalents hold a significant portion of where Starbucks saw and increase in total current assets from 2019 to 2020. From 2020 to 2021, Starbucks had its biggest gain in total assets from Derivative and Hedging Assets, which increase by 846% during the fiscal year.
- Starbucks closed out fiscal year 2020 and fiscal year 2021 with $7.806 Billion and $9.756 Billion in Total Current Assets, respectively.
- In Fiscal Year 2020 to 2021, the total current assets saw a 25% increase, but saw loses in short-term investments, other short-term assets, and tax receivables.

Noncurrent Assets:

- From fiscal year 2019 to 2020, Starbucks saw a gain of 59% in their noncurrent assets and saw almost no gain from 2020 to 2021.
- From 2019 to 2020, the largest noncurrent asset gains came from Property, Plant and Equipment, where in 2020 to 2021 the largest gains came from LT Investments and Receivables. The company has more locations, which would account for why there was an increase in this account in 2020.
- Starbucks closed out fiscal year 2020 and fiscal year 2021 with $21.56 Billion and $21.64 Billion in Total Noncurrent Assets, respectively.

Current Liabilities:

- Starbucks Current Liabilities saw a steady increase over the three fiscal years. From fiscal year 2019 to 2020, Starbucks saw a 19% increase in current liabilities, and from 2020 to 2021, Starbucks saw an 11% increase.

- ❖ In the fiscal year of 2019 to 2020, the company saw the majority of its liability gains from short term liabilities, deferred revenue, and miscellaneous short-term liabilities.
- ❖ In the fiscal year of 2020 to 2021, most of the liability gains came from accounts payable, accrued taxes, and derivates and hedging.
- ❖ With the increase in liabilities, the company will want to be able to pay these off by using their assets, and to not accumulate too much debt.

Noncurrent Liabilities:

- ❖ The amount of total noncurrent assets for Starbucks at year end for 2019, 2020, and 2021, were $19.21 Billion, $29.83 Billion, and $28.56 Billion, respectively.
- ❖ From 2019 to 2020, Starbucks saw a 55% increase in noncurrent liabilities, but saw a 4% decrease from 2020 to 2021.
- ❖ From 2019 to 2020, the most amount of the noncurrent liabilities came from long term barrowing, and derivatives and hedging. From 2020 to 2021, The majority of Starbucks loses of noncurrent assets came from derivatives and hedging, and miscellaneous long-term liabilities, which most likely means that Starbucks paid these off.

Shareholder’s Equity:

- ❖ At the yearend for each fiscal year during the three-year span, Starbucks had a negative amount for their equity. Starbucks equity finished 2019 with -$6.23 billion, 2020 finished -$7.80 billion, and 2021 finished -$5.32 billion.
- ❖ The total equity from 2019 to 202 saw a decrease of 25% in total equity but saw an increase of 32% from 2020 to 2021.

Cash Flow Statement:

Starbucks Corp (SBUX US) - Standardized

In Millions of USD except Per Share 12 Months Ending	FY 2021 10/03/2021	Change	FY 2020 09/27/2020	Change	FY 2019 09/29/2019
Cash from Operating Activities					
+ Net Income	4,199.3	352%	928.3	-74%	3,599.2
+ Depreciation & Amortization	1,524.1	1%	1,503.2	4%	1,449.3
+ Non-Cash Items	-362.5	-141%	891.8	150%	-1,791.3
+ Stock-Based Compensation	319.1	28%	248.6	-19%	308.0
+ Deferred Income Taxes	-146.2	-467%	-25.8	98%	-1,495.4
+ Other Non-Cash Adj	-535.4	-180%	669.0	211%	-603.9
+ Chg in Non-Cash Work Cap	628.2	136%	-1,725.5	-196%	1,789.8
+ (Inc) Dec in Accts Receiv	-43.0	-1493%	-2.7	99%	-197.7
+ (Inc) Dec in Inventories	-49.8	-357%	-10.9	94%	-173.0
+ Inc (Dec) in Accts Payable	189.9	190%	-210.8	-761%	31.9
+ Inc (Dec) in Other	531.1	135%	-1,501.1	-171%	2,128.6
+ Net Cash From Disc Ops	0.0		0.0		0.0
Cash from Operating Activities	**5,989.1**	275%	**1,597.8**	-68%	**5,047.0**
Cash from Investing Activities					
+ Change in Fixed & Intang	-1,470.0	1%	-1,483.6	18%	-1,806.6
+ Disp in Fixed & Intang	0.0		0.0		0.0
+ Disp of Fixed Prod Assets	*0.0*		*0.0*		—
+ Disp of Intangible Assets	*0.0*		*0.0*		—
+ Acq of Fixed & Intang	-1,470.0	1%	-1,483.6	18%	-1,806.6
+ Acq of Fixed Prod Assets	*-1,470.0*	1%	*-1,483.6*	18%	*-1,806.6*
+ Acq of Intangible Assets	*0.0*		*0.0*		*0.0*
+ Net Change in LT Investment	0.0		0.0		0.0
+ Dec in LT Investment	0.0		0.0		0.0
+ Inc in LT Investment	0.0		0.0		0.0
+ Net Cash From Acq & Div	1,175.0		0.0	-100%	684.3
+ Cash from Divestitures	1,175.0		0.0		0.0
+ Cash for Acq of Subs	0.0		0.0		0.0
+ Cash for JVs	0.0		0.0	-100%	684.3
+ Other Investing Activities	-24.5	89%	-227.9	-304%	111.5
+ Net Cash From Disc Ops	0.0		0.0		0.0
Cash from Investing Activities	**-319.5**	81%	**-1,711.5**	-69%	**-1,010.8**
Cash from Financing Activities					
+ Dividends Paid	-2,119.0	-10%	-1,923.5	-9%	-1,761.3
+ Cash From (Repayment) Debt	-1,681.2	-133%	5,166.5	214%	1,646.0

+ Cash From (Repay) ST Debt	-431.2	-198%	438.9		0.0
+ Cash From LT Debt	0.0	-100%	4,727.6	137%	1,996.0
+ Repayments of LT Debt	-1,250.0		0.0	100%	-350.0
+ Cash (Repurchase) of Equity	149.2	110%	-1,492.0	85%	-9,924.1
+ Increase in Capital Stock	246.2	-18%	298.8	-27%	409.8
+ Decrease in Capital Stock	-97.0	95%	-1,790.8	83%	-10,333.9
+ Other Financing Activities	0.0	100%	-37.7	-115%	-17.5
+ Net Cash From Disc Ops	0.0		0.0		0.0
Cash from Financing Activities	**-3,651.0**	-313%	**1,713.3**	117%	**-10,056.9**
Effect of Foreign Exchange Rates	86.2	33%	64.7	232%	-49.0
Net Changes in Cash	**2,104.8**	26%	**1,664.3**	127%	**-6,069.7**
Cash Paid for Taxes	**756.3**	-55%	**1,699.1**	261%	**470.1**
Cash Paid for Interest	**501.1**	26%	**396.9**	33%	**299.5**

Source: Bloomberg
[42]

Cash from Operating Activities:

- ❖ Net Income over the three-year span has seen lots of ups and downs. From fiscal year 2019 to 2020, Starbucks Net Income decreased 74%, but increased by 352% from 2020 to 2021. This equates to a $2.67 Billion decrease from 2019 to 2020 but $3.27 Billion increase from 2020 to 2021.
- ❖ The amount of cash provided by operating activities from in 2019, 2020, and 2021 was $5.04 Billion, $1.59 Billion, and $5.99 Billion, respectively. Excluding the 2020 year, which was highly impact by the COVID-19 pandemic, seeing Starbucks recover $5.99 Billion in 2021 shows that they have strong operating performance.
- ❖ The money that is produced by operating activities will most likely be used to finance the company and pay dividends to their investors.

Cash from Investing Activities:

- ❖ Starbucks had an interesting 3-year span with the cash from investing activities. From 2019 to 2020, the companies cash began at $-1.01 Billion and decreased by 69% in 2020 to $-1.71 Billion in 2020.

[42] IBID

- Most of their losses in this year came from other investing activities that were not listed.
- Starbucks was able to regain these loses from 2020 as their Cash from investing activities went from $- 1.71 billion in 2020 to $ - 319 million in 2021, an 81% increase from year-to- year.

Cash from Financing Activities:

- Cash from financing activities increased by 117% from 2019 to 2020 and decreased by 313% from 2020 to 2021.
- The biggest reasoning as for the large increase between 2019 and 2020 was because of the cash received from short term and repayment debt.
- The main reasoning as for why the Cash for financing activity decreased between 2020 and 2021 was because they took on more short term and long-term debt.

Net Change in Cash:

- The Net Change in Cash saw a significant increase from 2019 to 2020, as it increased from $-6.07 million to $1.66 billion or 127%. Cash continued increase in 2021 with Net Change in Cash increasing by 26% to $2.10 billion.

Ratio Analysis:[43]

Gross Margin	2021	2020	2019
Starbucks (SBUX)	68.6%	69.6%	68.5%
McDonald’s (MCD)	54.3%	52.3%	52.8%
Chipotle (CMG)	20.2%	19.5%	19.2%

The gross margin is a ratio calculated by investors by taking the gross profit and dividing it by the net sales. The gross profit margin is an indicator of how much profit a company has made before subtracting out the general, selling, and administrative costs. Based on the chart above, Starbucks has the highest gross margin in comparison to its two peers. From 2019-2021, Starbucks had gross margins of 68.5%, 69.6%, and 68.6%, respectively. McDonald’s had the second highest gross margin average over the three years, while Chipotle had the lowest.

[43] Bloomberg

Operating Margin	2021	2020	2019
Starbucks (SBUX)	16.77%	6.64%	15.38%
McDonald's (MCD)	44.59%	38.13%	42.45%
Chipotle (CMG)	10.67%	4.85%	7.95%

The operating margin is a ratio calculated by investors by taking the company's operating income and dividing it by its total net sales. Having higher operating margin ratios are considered better for you company, as it illustrates, they you are effectively coordinating operations, and turning your sales into profits. Based on the chart above, McDonald's recorded the highest average operating margin over the three-year span. Starbucks best year was in 2021 when it produced an operating margin of 16.77%. Chipotle produced the lowest operating margin in a single year out of the three companies as it had a margin of 4.85% in 2020

Net Profit Margin	2021	2020	2019
Starbucks (SBUX)	14.45%	3.93%	13.56%
McDonald's (MCD)	32.49%	24.63%	28.20%
Chipotle (CMG)	8.65%	5.94%	6.27%

The Net Profit Margin is a ratio calculated by investors by taking the company's net income and dividing by the company's revenue. The ratio describes the amount profit produced for every dollar of revenue that is collected. The ratio gives investors an understanding of how efficiently the management can generate profit from its sales. Based on the chart above, Starbucks had net profit margins in 2019 to 2021 of 13.56%, 3.93%, and 14.45% respectively. The low number in 2020 most likely had to do with the COVID-19 pandemic, as Starbucks couldn't produce the same amount of net income during this year. The highest in one of the years was produced by McDonald's, in 2021 when they had a Net Profit Margin of 32.49%

Current Ratio	2021	2020	2019

Starbucks (SBUX)	1.20	1.06	0.92
McDonald's (MCD)	1.78	1.01	0.98
Chipotle (CMG)	1.58	1.73	1.61

The current ratio is a ratio calculated by investors the determines a company's ability to pay off short-term obligations due within the next year. The ratio gives investors feedback into how a company generate more assets to then satisfy the debts and payables of the company. The way to calculate this ratio is by taking the amount of current assets and dividing it by the amount of current liabilities. Based on the chart above, the Starbucks has the lowest average current ratio over the three years. The highest current ratio during a single year out of the three companies was McDonalds in 2021, when they had a ratio on 1.78. The lowest ratio in the three-year span was by Starbucks in 2019, when it calculated to be 0.92

Quick Ratio	2021	2020	2019
Starbucks (SBUX)	0.93	0.75	0.59
McDonald's (MCD)	1.64	0.90	0.86
Chipotle (CMG)	1.35	1.28	1.44

The quick ratio is very similar to the current ratio, as it is detecting how well the company can pay off the short-term obligations. The difference is that the quick ratio calculates the amount of assets minus the total inventory, which is then divided by the amount of current liabilities. This gives the investor an understanding of how well the company can pay off these short-term liabilities without the need to sell an of the inventory or other financing. In the current ratio chart, McDonalds had the highest three-year average, but Chipotle has the highest three-year average for the quick ratio. That means they have the best ability to pay off their short-term liabilities without the need to use their inventory. The lowest calculated quick ratio of the three in the three years wads Starbucks, when they produced a ratio of 0.59.

Inventory Turnover	2021	2020	2019
Starbucks (SBUX)	1.54	1.39	1.59

McDonald's (MCD)	49.43	49.53	51.01
Chipotle (CMG)	47.66	48.95	44.60

The inventory turnover is a ratio used by management and investors to see how many times a company has replaced its inventory during a specific period. The inventory turnover ratio gives management a better understanding of how they shall price, produce, and market their products. Having a high inventory turnover ratio means the company goods are sold quickly and can lead to higher profits. The formula to calculate the inventory turnover ratio is by taking the Cost of Goods Sold and dividing it by the average inventory, which is calculated by dividing the sum of the beginning and ending inventory. The chart above shows a vey interesting difference between a few of the companies. McDonald's has an average inventory turnover close to 50, and Chipotle has an inventory turnover close to 47, but Starbucks only has an average close to 1.5. This is a large difference between company's that are within the same peer group. This proves that Starbucks turnovers over its inventory less frequently in comparison to McDonalds and Chipotle.

Return on Equity	2021	2020	2019
Starbucks (SBUX)	-9.7%	-7.9%	-13.1%
McDonald's (MCD)	-35.6%	-17.6%	-19.1%
Chipotle (CMG)	5.8%	9.5%	4.3%

The Return on Equity is a financial measurement used by investors to how profitable a corporation is, and how efficient they are with producing profits. The return on equity is calculated by dividing the company's net income by the total shareholder' equity. The shareholder's equity is calculated by subtracting the company's assets by its total debt. Based on the chart above, Starbucks and McDonald's have negative Return on equity, mainly in part to these company's having negative values for their shareholder's equity. The lowest ROE of the two is McDonald's in 2021 with -35.6%. Chipotle is the only company of the three with a positive ROE, where they had their best year in 2020 with an ROE of 9.5%.

Return on Assets	2021	2020	2019
Starbucks (SBUX)	13.82%	3.82%	16.60%

McDonald's (MCD)	14.17%	9.45%	15.00%
Chipotle (CMG)	10.34%	6.42%	9.50%

A company's return on assets is a financial calculation used by investors and companies to determine how profitable the company is in comparison to the company's total assets. Based on the information above, Starbucks had ROA values from 2019-2021 of 16.60%, 3.82%, and 13.83%, respectively. As I have mentioned previously, Starbucks produced a very low dollar value of net income in 2020 due to the COVID-19 pandemic, which ultimately led them to having an ROA of 3.82. Consistently, McDonald's was able to have the highest three-year average of ROA for the three companies at 12.87%

Debt to Equity	2021	2020	2019
Starbucks (SBUX)	-1.75	-2.01	-1.72
McDonald's (MCD)	-7.74	-4.78	-4.16
Chipotle (CMG)	1.90	1.96	2.03

The Debt-to-Equity ratio is an indicator of how a company's management chooses to set its capital structure. The Debt-to-Equity ratio is calculated by taking the company's total debt and dividing by the total shareholder's equity. Based on the chart above, Chipotle is the only one the three companies to have a positive value for its debt-to-equity ratio. The reason for why McDonalds and Starbucks have negative values is because these companies choose to have a negative shareholder equity value. Based on the chart, it is evident that these three businesses choose to have more debt than equity. To get the best debt/equity ratio, these companies shall use the weighted average cost of capital to determine which ratio provides them the least costs.

Assumptions:

Fiscal 2021 ROE: -9.7% (Negative Shareholder Equity)

Fiscal 2021 EPS: $3.54

Fiscal 2021 Dividend: $0.49

Retention Ratio = 1 – (Dividend/EPS)

= 1 – (0.49/3.54)

= .8616

Sustainable Growth = ROE * Retention Ratio

= -9.7% * .8616

= -8.36%

5 Year Geometric Growth:

Year	Revenue	% Change	1 + return
2021	$29060.60	23.57%	1.236
2020	$23518	-11.28%	0.887
2019	$26508.60	7.24%	1.072
2018	$24719.50	10.51%	1.105
2017	$22368.80	4.94%	1.049
2016	$21315.9		
Arithmetic Return		6.99%	
Geometric Return		6.37%	

Year	Gross Profit	% Change	1 + return
2021	$20231.90	27.86%	1.279
2020	$15813.10	-12.00%	0.880
2019	$17981.70	7.11%	1.071
2018	$16788.80	9.58%	1.096
2017	$15321.00	19.63%	1.196
2016	$12806.90		
Arithmetic Return		10.44%	
Geometric Return		9.58%	

Year	Operating Income	% Change	1 + return
2021	$4872.1	211.98%	3.120
2020	$1561.69	-61.70%	0.383
2019	$4077.90	5.01%	1.050
2018	$3883.30	-6.08%	0.939
2017	$4134.70	-0.89%	0.991

2016	$4171.90	
Arithmetic Return		29.66%
Geometric Return		3.16%

Year	Net Income	% Change	1 + return
2021	$3824.40	311.98%	4.120
2020	$928.80	-74.21%	0.258
2019	$3599.2	-20.34%	0.797
2018	$4518.30	56.63%	1.566
2017	$2884.70	2.38%	1.024
2016	$2817.70		
Arithmetic Return		55.29%	
Geometric Return		5.22%	

Projected Annual Income Statement for 2022:

Data in Millions $USD	Projected FY 2022	Geometric Growth Rate	FY 2021
Revenue	30,911.76	6.37%	29,060.60
Cost of Goods Sold	8,741.64		8,828.70
Gross Profit	22,170.12	9.58%	20,231.90
Operating Expenses	16,741.84		14,969.90
Operating Income	5,428.28	3.16%	5,262.00
Other Expenses	298.20		(94.25)
Pre-Tax Income	5,130.08	ETR = 21.56%	5,356.25
Income Taxes	1,106.04		1,531.85
Net Income	4,024.03	5.22%	3,824.40

Projected Balance Sheet for 2022:

***Data in Millions**

***2021 Retained = -6,315.70**

***2021 Net Income = 4,199.30**

***2021 Repurchase = 2.1**

Dividend: 1.96

***Shares Outstanding: 1150**

=1.96 * 1150 = 2254

= -6,315.70 + 4199.30 – 2254 – 2.1

= -4372.50

Assets

9756.4/31392.6= 31.08%

21636.2/31392.6 = 68.92%

Data in Millions $USD	Projected FY 2022	Change	FY 2021

Current Assets	10360.3	31.08%	9756.4
Noncurrent Assets	22975.5	68.92%	21636.2
Total Assets	33335.8		31392.6
Current Liabilities	8151.4		8151.4
Long-Term Liabilities	28555.7		28555.7
Total Liabilities	36707.1		36707.1
Retained Earnings	-4372.5		-6,315.70
Shareholder's Equity	-3371.3		-5,314.50
Total Liabilities and Shareholder's Equity	33335.8		31392.6

Insider Transactions:

[44]

44 *Starbucks. Insider Transactions. Source: Bloomberg, HDS Function (Updated 3/25/2022)*

SBUX US $ C 74.64 -1.94 Q74.63 / 74.64F 489x3
On 29 Apr d Vol 9,199,279 O 76.02Q H 76.7699D L 74.48C Val 692.67M
SBUX US Equity 25) Export Settings Security Ownership
STARBUCKS CORP CUSIP 85524410
1) Current 2) Historical 3) Matrix 4) Ownership Summary 5) Insider Transactions 6) Options 7) Issuer Debt
Transaction Type All Range 04/30/21 - 04/29/22 10) Chart 11) Table
Shareholders All

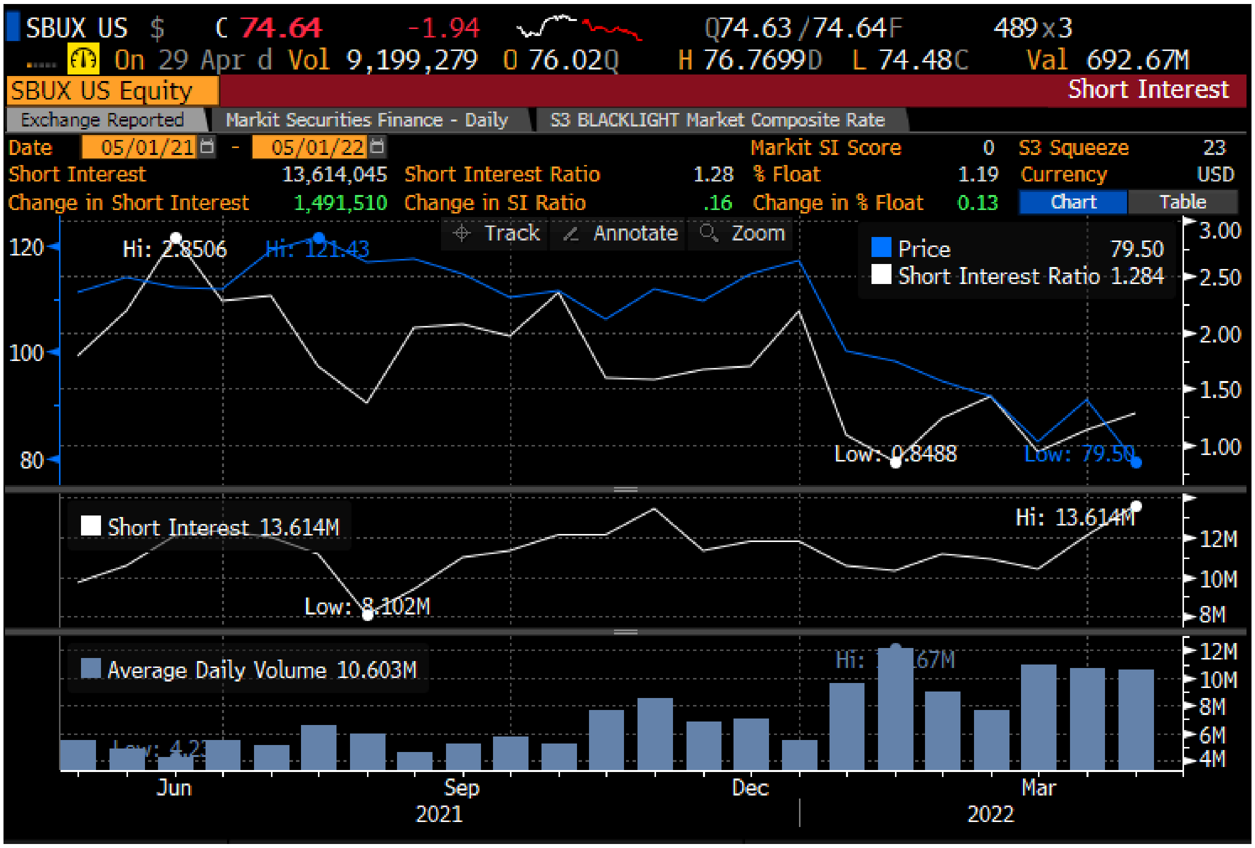
	Trade Date	No. Part	Participants	Net Sell (Shares)	Net Buy (Shares)	Close Price	Volume
12)	04/18/2022	1	Jenkins Zabrina		12,346	79.6000	7.797MLN
13)	03/16/2022	10	Hobson Mellody, Teruel Javier, Dillon Mary, Kn…		38,320	87.4100	21.208MLN
14)	02/15/2022	3	Conway Michael, Walker Jill, Woods Gina	-2,536		94.5100	7.724MLN
15)	12/10/2021	1	Lis Angela	-6,000		116.7300	6.111MLN
16)	12/08/2021	1	Johnson Kevin			116.2500	5.807MLN
17)	11/23/2021	1	Woods Gina	-4,030		113.5800	7.912MLN
18)	11/22/2021	1	Conway Michael	-16,930		111.4500	5.969MLN
19)	11/15/2021	7	Johnson Kevin, Culver John, Gonzalez Rachel, …	-160,317		111.8700	6.566MLN
20)	11/11/2021	8	Johnson Kevin, Culver John, Conway Michael, …	-12,080		111.4400	7.192MLN
21)	11/10/2021	8	Johnson Kevin, Culver John, Conway Michael, …		143,929	113.2500	6.564MLN
22)	11/09/2021	6	Johnson Kevin, Culver John, Gonzalez Rachel, …		338,697.201	114.1300	6.755MLN
23)	09/15/2021	1	Lis Angela	-446		114.6400	11.556MLN
24)	08/06/2021	1	Culver John			119.0500	6.833MLN
25)	08/02/2021	1	Culver John			120.3700	5.997MLN
26)	07/29/2021	1	Johnson Kevin			122.3800	6.618MLN
27)	06/15/2021	1	Ruggeri Rachel	-1,047		111.8900	3.487MLN
28)	05/17/2021	1	Gonzalez Rachel	-3,853		110.9800	4.521MLN

45

Within the past year, most of the insider transactions were placed by former Starbucks CEO Kevin Johnson. Within the year, the company stock price ranged from $87.41 to $114.64. The biggest purchase of shares came on 11/09/21, when Kevin Johnson and five others purchase 338,697.201 shares of Starbucks at $114.13. Interestingly, John and a group of other members ended up selling 160,317 worth of shares five days later, at $111.45. There haven't been many insider purchases of stocks, as the purchase 38,320 shares by 10 members is one of the few purchases of shares by a group of insiders. In the last year most of the transactions from insiders has been of them selling their shares. Kevin Johnson ended his tenure with Starbucks on April 4th, and since then we haven't seen many transactions besides Zabrina Jenkins purchase of 12,346 shares on 4/18/2022

Short Interest:

[45] *Starbucks. Insider Transactions. Source: Bloomberg, HDS Function (Updated 3/25/2022)*



[46] *Starbucks. Short Interest. Source: Bloomberg, SI Function (Updated 3/25/2022)*

SBUX US $ C 74.64 -1.94 Q74.63/74.64F 489x3
On 29 Apr d Vol 9,199,279 O 76.02Q H 76.7699D L 74.48C Val 692.67M

SBUX US Equity | Export | Short Interest

Exchange Reported | Markit Securities Finance - Daily | S3 BLACKLIGHT Market Composite Rate

Date	05/01/21 - 05/01/22			Markit SI Score	0	S3 Squeeze	23
Short Interest	13,614,045	Short Interest Ratio	1.28	% Float	1.19	Currency	USD
Change in Short Interest	1,491,510	Change in SI Ratio	.16	Change in % Float	0.13	Chart	Table

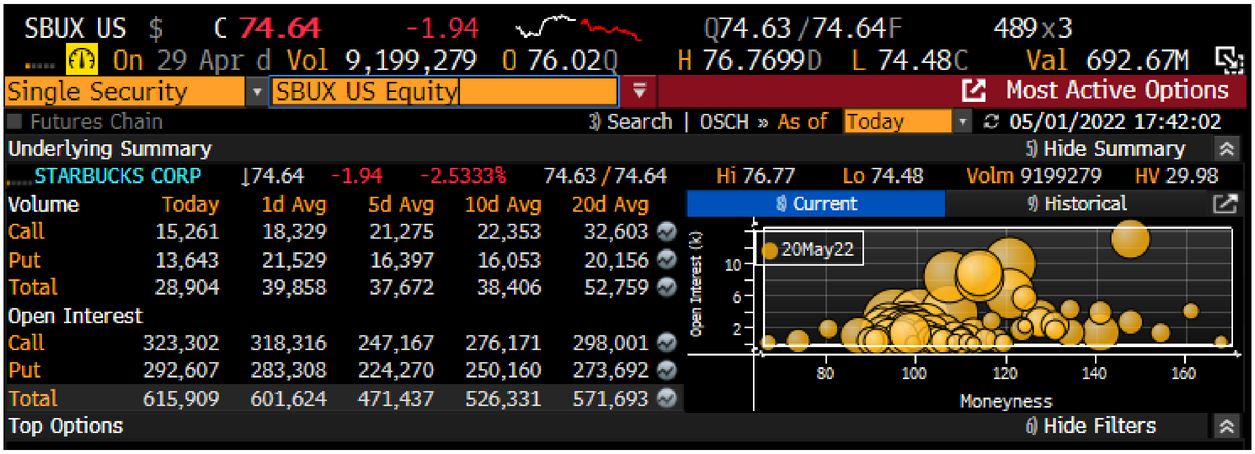
Date	Short Interest	Closing Price	Average Daily Volume	Short Interest Ratio
04/14/2022	13,614,045	79.50	10.60 M	1.284
03/31/2022	12,122,535	90.97	10.74 M	1.129
03/15/2022	10,356,546	83.12	10.96 M	0.945
02/28/2022	10,926,382	91.79	7.66 M	1.427
02/15/2022	11,162,791	94.51	9.02 M	1.237
01/31/2022	10,327,071	98.32	12.17 M	0.849
01/14/2022	10,533,973	100.12	9.66 M	1.090
12/31/2021	11,829,251	116.97	5.40 M	2.190
12/15/2021	11,861,550	114.68	7.01 M	1.693
11/30/2021	11,327,934	109.64	6.78 M	1.671
11/15/2021	13,434,449	111.87	8.50 M	1.580
10/29/2021	12,201,935	106.07	7.64 M	1.596
10/15/2021	12,130,803	111.45	5.16 M	2.353
09/30/2021	11,294,508	110.31	5.73 M	1.971
09/15/2021	10,948,320	114.64	5.27 M	2.077
08/31/2021	9,382,422	117.49	4.58 M	2.051
08/13/2021	8,102,453	116.76	5.93 M	1.367
07/30/2021	11,161,207	121.43	6.56 M	1.701
07/15/2021	11,962,998	118.97	5.15 M	2.325
06/30/2021	12,368,268	111.81	5.42 M	2.282
06/15/2021	12,072,776	111.89	4.24 M	2.851

[47]

As of April 14, 2022, SBUX has 13614,045 shares being sold short, a 1,491,510 increase from March 31, 2022, and am increase of 3,257,499 of from February March 15, 2021. This increase in short sale could imply that investors believe that the stock price will be decreasing. The number of shares being shorted over the last year has ranged from about 14M to 10M. Over the last year, SBUX's short interest ratio has ranged between 0.8 and 2.5. The short interest ratio is calculated by taking the number of shorted sales of a stock and dividing it by the average daily trading volume. The peak short interest ratio since 10/15/2021 was on that date, when there 12,130,803 shares being shorted, with a daily volume of 5.16M, which equates to a 2.353 short interest ratio. The minimum short interest ratio since that date was on 1/31/2022, when the company had 10,327,071 shares being shorted, a daily volume of 12.17M, and a short interest ratio equating to 0.849.

[47] *Starbucks. Short Interest. Source: Bloomberg, SI Function (Updated 3/25/2022)*

Option Analysis:



[48]

As of May 1, 2022, there are 323,302 open call option contracts and 292,607 open put option contracts. These are both high values, as they both fall in the above of the 1-, 5-,10-, and 20-day averages. Typically, when the amount of call options is above the amount of put options, investors believe that the price of the stock is going up. The amount of call options has consistently been above the amount of put options over the last 20 days.

Company News:

[The Starbucks CEO change and the big topic boards struggle with (cnbc.com)]

Starbuck's CEO Kevin Johnson has announced that he will be stepping down from the position on April 4 and will be replaced by the founder of the company, Howard Schultz. According to Mellody Hobson, an independent chair member for Starbucks stated that it was known for over a year that Johnson would be stepping down from the position. The Board of Directors is looking for a permanent member to control the position. This has become a common pattern by many S&P 500 companies, as 56 of the 500 companies have seen CEOs resign since 2020. For stockholders of Starbucks share, they are hoping that the new CEO will hold similar values to Johnson. This puts Starbucks Board of Directors into a difficult situation, as they want their stockholders to feel content with the succession. The difficult situation is not easy to plan, as the current CEO is typically performing as expected, so there is minimal urgency to find a successor.

[Knoxville Starbucks employees await final union decision after company challenges vote (yahoo.com)]

Employees at a Starbuck's location in Knoxville, Tennessee is looking to unionize and are waiting for a final ballot count. At the first ballot count on March 29th, 2022, the employees of the Merchant Drive location voted in favor of unionizing, at a tally of 8-7. The 16th vote and final unopened vote has left the results to be unknown. For unionization, the vote must reach a simple majority, but if the vote ends in a tie, the unionization effort will fail. The employees looking to unionize have argued that the 16th and final vote should not be counted, as the last employee

48 *Starbucks. Option Interest. Source: Bloomberg, MOSO Function (Updated 3/25/2022)*

member is an assistant store manager, which would most likely be in favor of no unionization. The employee members filed the petition in December and received permission in February to move in the direction of a vote. Currently there are eight Starbucks locations that have unionized, according to the Starbucks Workers United. Now, to The National Labor Relations Board will be given 15 days to decide upon the challenging ruling.

Your Starbucks Habit Will Keep Getting More Expensive, The Company Says — Eat This Not That

Starbucks customers have been told some bad news by the company, as the company believes that their customers coffee habits will become slightly more expensive. The company has stated that inflation and an increase in cost for employee benefits and training has led them to the decision to increase prices. This is now the third time the company has increased its price in the last year, most recently being in October and January. The decisions by the company have been viewed as controversial by customers, as Starbuck's profit last quarter increased by 31%, and the company increased the salary of former CEO Kevin Johnson by 40%. Now that Johnson has retired, stockholders are hoping that Founder and interim CEO Howard Schultz will e able to work his magic to see their stock price increase. Since the summer of 2021, Starbucks stock price has decreased by 31%, and The Wall Street Journal has pointed out that they believe inflation could hurt the sales growth by Starbucks in 2022. Starbuck's is hoping that their loyal customers are okay with the cost adjustments, and that they won't flock to cheaper Competitors such as Dunkin and McDonald's.

Starbucks Manager Cries About Baristas Protesting Outside Her Store (newsweek.com)

There has been some controversy in regard to Starbucks unionization by store managers across the nations. Starbucks baristas are against the unionization and have expressed this to the managers. A Denver manager had to hold back tears during an internal anti- union all for Starbucks managers. In the last week, a large amount of Starbucks baristas protested outside the stores. The baristas allegedly booed and yelled at customers, looking to purchase Starbucks products. This is an interesting story that investors should continue to follow, as it appears that workers are unhappy with their conditions.

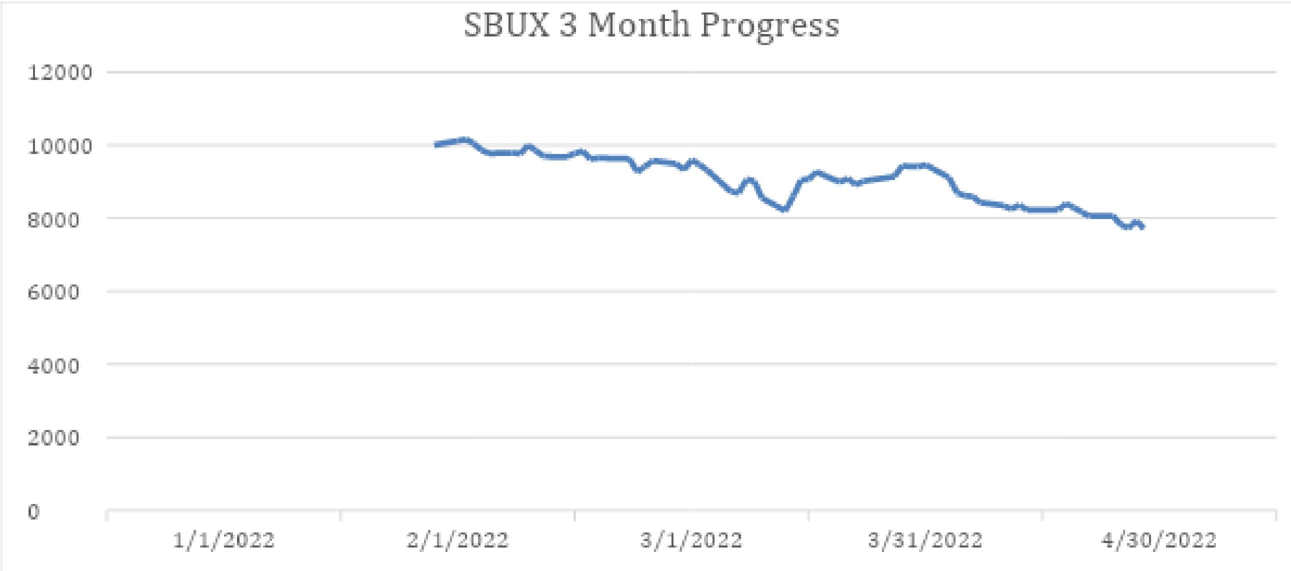
Investment Assessment (4/4/2022): Starbucks is in an interesting situation. In recent news, the company has announced that their CEO Kevin Johnson will be retiring and leaving the company on 4/4/2022. From the time I purchase the stock, the stock value has gone down over $5. From my initial purchase, I was expecting to receive at least a 22% return, but my stock value is moving in the opposite direction. As an investor, I am hoping that Starbucks is looking for a new CEO with similar values to Johnson. I wouldn't appreciate a new CEO coming in and making lots of changes to the company. I picked Starbucks as a security originally because of the amount of risk that the company presented. If they hire someone that chooses to make riskier decisions, than this stock may not be the best security based on my investment characteristics. If Starbucks is able to find someone who is able to carry over Johnson's values, then I will have more faith that the stock price will go back up.

Beta Analysis:
A stock's beta informed an investor how volatile a stock is in comparison to the overall market. Since January, Merck's beta has increased from 0.89 to 0.90. The increase in beta proves that Starbucks's stock price has become more sensitive in comparison to the market and has more systemic risk. Overall, the change in beta is not significant enough for me issues with my investment on January 28th, 2022.

Analyst Recommendations:

The chart above shows the analyst recommendations for Starbucks's price over the last two years. A variety of analysts have given their opinion on what Starbucks investors should do in regard to the security. Out of 34 possible ratings, only one analyst believes that one should sell the Starbucks security. Out of the other ratings, 16 believe that investors should buy Starbucks, and 17 believe that current investors should hold onto the security. Based off these recommendations, this seems like optimistic information for current and potential Starbuck's investors.

Starbucks Portfolio Value:



Purchase Price as of 1/28/2022	**96.72**
Quantity Purchased	**103.39**
Initial Investment	**10,000**
Price as of 4/29/2022	**74.64**
Dividend on 2/10/2022	**0.49**
Dividend * Shares	**$50.66**
Stock Appreciation Return	**7,717.12**
Dollar Return	**(2,282.88)**
Total Dollar Return Including Dividend	**(2,232.22)**
Percent Return	**-22.32%**
EAR	**-63.59%**

The table and chart listed above show the performance of my $10,000 investment in Starbucks from 1/28/2022 to 4/29/2022. Adjusted closing prices from Yahoo Finance were the numbers I used to calculate these returns. Additionally, a dividend of $0.49 per share was issued to shareholders om 2/10/2022 which was added into my return calculation. On 1/28/2022, I purchased $10,000 worth of Starbucks stock at $96.72 equating to 103.39 shares. As of 4/29/2022, the stock price is listed at $74.64, equating to a -22.32% return, including the dividend payout. The effective annual rate for Starbucks was -63.59%, which is much lower than my required rate of return, and my expected rate of return. If I was to hold onto Starbucks shares for another three months, I am confident that the stock price would rise back up.

Final Assessment:

When I initially invested in Starbucks, I calculated the expected rate of return to be 22.39%, which was significantly higher than my required rate of return of 8.36%. I originally invested into Starbucks because its beta matched perfectly with my investor profile. After reviewing their financial ratios over the last three months, I believe that I could have invested into one of their competitors instead, as a majority of them produced significantly better returns over the three months than Starbucks. Looking back, I regret my decision to invest my $10,000 in Starbucks. In my Investor Profile, my style came out as moderately conservative, and having a three month return of -22.32% is extremely unacceptable. This stock has been very disappointing, and I wish I had decided to invest into another sector originally.

Biogen Inc. (BIIB) :NASDAQ

Fiscal Year End: October 3, 2021

Headquarters: Cambridge, Mass

Beta: 0.44

Purchase Price on 1/29/2022: $225.21

Close Price on 2/11/2022: $214.59

Close Price on 4/1/2022: $210.65

Close Price on 4/29/2022 : 207.44

Quantity of Shares: $10,000 worth of 44.40 shares

Dividend Yield: N/A

Market Capitalization: 32.68 billion USD

Sector: Healthcare

Industry: Drug Manufacturers

Expected Return for Biogen Inc (BIIB) Stock:

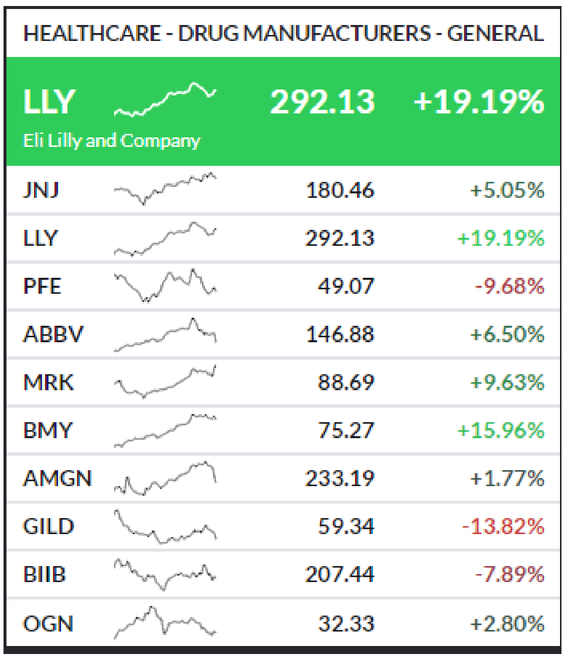
E_R = ($272.90 - $225.21) / $225.21 = 21.17%

Company Description:

Biogen is one of the world's first biotechnological companies in the world. The company's mission is to defeat neurological diseases, by using innovative scientific research to find a cure. The biotechnological company founded by Charles Weissmann, Kenneth Murray, Heinz Schaller, Walter Gilbert and Phillip Sharp started in 1978.[49] The diseases Biogen does innovative research on include multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS).[50]

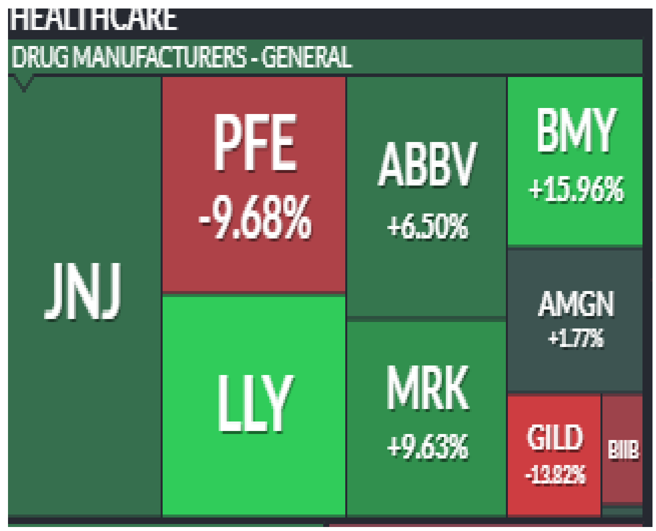
Biogen believes that these disease's urgently need medical attention. Using some of the best neuroscientists in the world, Biogen focuses on deep medical research through many different technological and engineering capabilities.[51] The abilities they have led to product development, to manufacturing which will provide people with high-quality medicine for those in need. With the large number of people suffering from COVID-19, and health care workers are focused on these patients, Biogen is working to be a part of the solution by providing the health care system more solutions in other areas.

Heat Map:



HEALTHCARE - DRUG MANUFACTURERS - GENERAL

LLY (Eli Lilly and Company)	292.13	+19.19%
JNJ	180.46	+5.05%
LLY	292.13	+19.19%
PFE	49.07	-9.68%
ABBV	146.88	+6.50%
MRK	88.69	+9.63%
BMY	75.27	+15.96%
AMGN	233.19	+1.77%
GILD	59.34	-13.82%
BIIB	207.44	-7.89%
OGN	32.33	+2.80%



[52]

The graphs and charts listed above show the three-month heat map for the Healthcare- Drug Manufacturers sector for the S&P 500 Index as of 2/1/2022 to 5/1/2022. On the charts you can see the performances of the other companies and their performances in that timeframe. Compared to their competitors, Biogen Inc. struggled. In the last three months, Biogen Inc. returned -7.89%, while a majority of their competitors saw positive returns over the same time period. [53]

[49] About Biogen, Accessed February 12, 2022

[50] IBID
[51] IBID
[52] S&P 500 Map (finviz.com), Accessed February 10, 2022
[53] IBID

Peer Group:

54

The companies shown above make up the peer group for Biogen Inc. Based on the chart, Biogen has the lowest market capitalization in comparison to Gilead Sciences and Amgen Inc. According to the data, Biogen Inc returned -4.77% In the last month, while Gilead Sciences and Amgen Inc returned -14.09% and -1.54%, respectively.[55]

Economic Factors: Porter's 5:

- *Threat of New Entrants:* Level: Low. In the biotechnological industry, companies are using science to create new things that are hard to mimic. Making something that can't be copied is ideal in all industries, as you have a definite advantage over your competitors. For Biogen to tackle the threat of new entrants, they must produce new products and

[54] Biogen Inc. Peer Group. Source Bloomberg, RV Function
[55] IBID

services, while also lowering their costs, and increasing their value to their customers.[56] By building effective barriers, Biogen can safeguard its competitive edge over their rivals.

- *Bargaining Power of Supplies:* Level: High. The bargaining Power of the suppliers for the biotechnological industry is one of the strongest of the 5 forces. For a company like Biogen, who makes their money off revenue from sales of their medicine, they buy a large amount of their raw materials directly from their suppliers. Suppliers could change the amount they'd like to sell. A way for Biogen to decrease this issue is to implement changes on their supply chain, possibly starting their own production of these raw materials. [57]
- *Bargaining Power of Buyers:* Level: High. Buyers are always looking for the best possible option that allows them to pay the minimum price needed. For a company like Biogen, whose customers include people with neurological diseases, their customer base is very specific and small. All these people are looking for the safest and cheapest option that will help their disease long term. If there are other companies producing similar products that provide the same treatment, then the customer will usually choose the less expensive option. [58]
- *Threat of Substitute Products:* Level: Low. To eliminate the chances of a substitute product or service, you must develop a value proposition that differentiates your product or service from the rest from the rest. If you are unable to match or exceed your competitors' product or service, your profitability will most likely suffer hardship. To tackle the threat, a solution that Biogen should establish is understanding what the customer needs, instead of what the customer is purchasing. [59]
- *Rivalry:* Level: Moderate. If the intensity within the biotechnological industry intensifies, the only route for the competitors would be to decrease prices, which will decrease the company's overall profitability. Knowing that this is a highly competitive industry,the high competition may force these companies to pay a price in the long run. To tackle the issues with the existing competition within this industry, Biogen could collaborate with its competitors to increase the market share, instead of competing for the already small market size. [60]

Chairman & CEO:

Michel Vounatsos is the current CEO for Biogen and has served in this position since 2017. Mr. Vounatsos received his C.S.C.T. certificate in Medicine from the Université Victor Segalen, Bordeaux II, France, and his M.B.A. from the HEC School of Management in Paris. As CEO, Vountatsos has spent his time working to bolster Biogen as a leading pioneer in neuroscience and therapeutics. His decision making will hopefully lead to long term growth to the company. [61]

---

[56] Biogen Inc. Porter Five (5) Forces & Industry Analysis [Strategy] (fernfortuniversity.com), Accessed February 11, 2022

[57] IBID
[58] IBID
[59] IBID
[60] IBID
[61] Board of Directors Bio (biogen.com), Accessed February, 12, 2022.

Prior to Biogen, Vounatsos spent decades working in the pharmaceutical industry, and brings a unique package to the workplace with an academic perspective of both business and medicine experience. Vountatsos originally served as the company's Executive Vice President and Chief Commercial Officer in April 2016, before receiving his promotion as companies CEO. Before these, he held a 20- year career with Merck, with the goal of expanding the business into new and emerging markets. He worked in a variety of different markets, such as China, France, and Poland. His unique resume and accomplishments are the reason for the success he has had in his career. Vountatsos will feel accomplished with his work if he is able to find cures to the wide variety of neurological diseases, including multiple sclerosis, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS). [62]

Michel Vounatsos – Biogen Inc.
CEO
Source: Biogen.com

Company Executives:

- Michel Vounatsos - Chief Executive Officer[63]
- Susan H Alexander- Executive Vice president, Chief Legal Officer and Secretary[64]
- Michael R McDonnell- Executive Vice President and Chief Financial Officer[65]
- Alphonse Galdes, Ph.D.- Executive Vice President, Pharmaceutical Operations and Technology[66]
- Ginger Gregory, Ph.D. - Executive Vice President and Chief Human Resources Officer[67]
- Chirfi Guindo - Executive Vice President, Global Product Strategy and Commercialization[68]

[62] IBID
[63] Inline XBRL Viewer (sec.gov), Accessed February 11, 2022
[64] IBID
[65] IBID
[66] IBID
[67] IBID
[68] IBID

- Rachid Izzar - Executive Vice President, Head of Alzheimer's and Dementia Business Unit[69]
- Robin C. Kramer - Senior Vice President, Chief Accounting Officer[70]

Board of Directors:

- Stelios Papadopoulous, Ph.D., Chairman of the Board - Papadopoulous has been the Biogen Chairman since June 2014 and has been a part of the board since 2008. Papadopoulous has lots of experience in medicine and business, as he has founded and worked for biopharmaceutical companies, and was a Vice Chairman for Cowen & Co., LLC, a financial services company. Papadopoulous maintains affiliation with New York University School of medicine, as he is a part of the faculty for the Department of Cell Biology. [71]
- Alexander J. Denner, Ph.D. - Denner has been a part of Biogen's board since 2009. Denner is a founder and CIO for Sarissa Capital Management, an investment advisor agency. From 2006-2011, Denner was the Senior Managing Director at Icahn Capital L.P., and worked for Morgan Stanley Investment Management, a global management firm.[72]
- Caroline D. Dorsa - Dorsa joined Biogen Board of Directors in 2010. Dorsa has worked for a variety of medical companies, such as Gilead Sciences, Merck & Co., and Intellia Therapeutics. Dorsa has also served as an Executive Vice President and CFP of an energy company named Public Service Enterprise Group, Inc.[73]
- Maria Freire Ph.D.- Freire is one of the newer members of the board, as she was elected in 2021. Beginning in November 2012, Freire has served as a President and Executive Director for the Foundation for the National Institutes of Health. Freire also serves as a director of Alexandria Real Estate equities, which focuses on collaborative life science and technological development campus locations. [74]
- Williams A. Hawkins- Hawkins has been on the Biogen board since 2019. The board member is the former Chairman and CEO of Medtronic, Inc, a technological medical company. He was with the company for 9 years, between 2022 and 2011. Hawkins has also served as a CEO and President for Novoste Corporation, an interventional cardiology company. Hawkins graduated with a dual degree in Electrical and Biomedical Engineering from Duke University and a M.B.A. from the University of Virginia' s Darden School of Business. [75]
- William D. Jones- Jones is another member that has recently been elected to the Board at Biogen, joining the board in 2021. Since 1994, Jones has controlled the

---

[69] IBID
[70] IBID
[71] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[72] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[73] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[74] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[75] Board of Directors Bio (biogen.com), Accessed February 10, 2022

positions of CEO and President of CityLink Investment Corporation, a real estate investment company. Jones has also served as a manager with some real estate subsidiaries of The Prudential in 1989- 1993. [76]

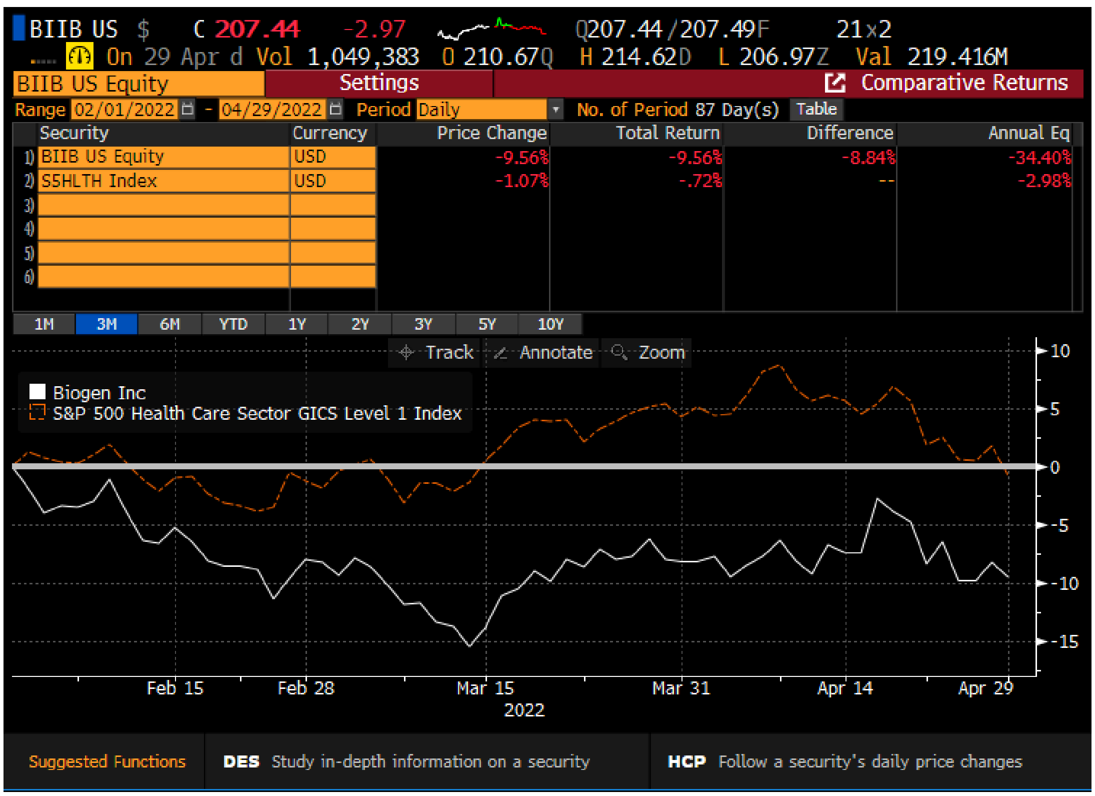
- Nancy L. Leaming - Leaming has served on the Biogen board since 2008. From 2003 to 2005, Leaming was the CEO and President of Tufts Health Plan, a healthcare insurance provider. Between 1986 and 2003, she served as President, COO and CFO for the company. [77]
- Jesus B. Mantas - Mantas has served as a board member for Biogen since 2019. Manatas is the Senior Managing Partner for IBM, a worldwide innovative development company. Some of his responsibilities include acquisitions, strategic alliances, and global ventures. Mantas serves as an adjunct professor at the University of California - Irvine, teaching in the Graduate School of Management Program.[78]
- Richard C. Mulligan, Ph.D. - Mulligan has been a board member for Biogen since 2009. Mulligan is currently a professor at Harvard Medical School. Before working at Harvard, Mulligan was able to work as a Molecular Biology teacher at Massachusetts Institute of Technology. Mulligan has experience in founding Sarissa Capital Management LP, a registered investment advisory program. [79]
- Brian S. Posner- Posner serves as Biogen Chair of Compensation Management and Development committee. Posner has been on their Board since 2008. Besides Biogen, Posner also serves as a Board of Director for Arch Capital Group Ltd., a specialty insurance provider, and a Board of Trustee for AQR Mutual Funds, an investment fund. Posner has worked with a variety of different asset management company's beginning the 1980s to 1999.[80]
- Eric K. Rowinsky, M.D. - Dr Rowinsky has been on the Board of Directors for Biogen since 2010. Rowinsky has been the President of RGenix, Inc ince November 2015. Rowinsky has lots of Medical Therapeutic experience working for Primrose Therapeutics, ImClone Systems, and Stemline Therapeutics. Rowinsky has worked on staff at Johns Hopkins Hospital and has been a professor of oncology at the Johns Hopkins School of Medicine. [81]
- Stephen A Sherwin, M.D - Dr. Sherwin is the last Board of Director for Biogen and has been on the Board ever since 2010. Currently, he is a Clinical Professor of Medicine at the University of California, San Francisco. Sherwin also serves as the Chairman of Ceregene, Inc, a life sciences company that he founded, until it was acquired by Sangamo BioSciences, Inc in 2013. Besides Biogen Inc, Dr. Sherwin serves as a Board Member for Neurocrine Biosciences, Inc.[82]

[76] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[77] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[78] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[79] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[80] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[81] Board of Directors Bio (biogen.com), Accessed February 10, 2022
[82] Board of Directors Bio (biogen.com), Accessed February 10, 2022

Risks Facing Company:

- Biogen is substantially dependent on revenue from our products.
- Biogen's long-term success depends on the innovation of new products and additional indications for our existing products.
- If Biogen fails to compete effectively, its business and market position would suffer.
- Biogen's business may be adversely affected if we do not effectively execute or realize the anticipated benefits of our strategic and growth initiatives.
- Biogen depends on collaborators, joint venture partners and other third-parties for revenue.
- Biogen's results of operations may be adversely affected by current and potential future healthcare reforms.
- If Biogen is unable to obtain adequate protection for its data, intellectual property and other proprietary rights, its business may be harmed.
- The illegal distribution of Biogen products could negatively impact its reputation and business.

Benchmark Graph:



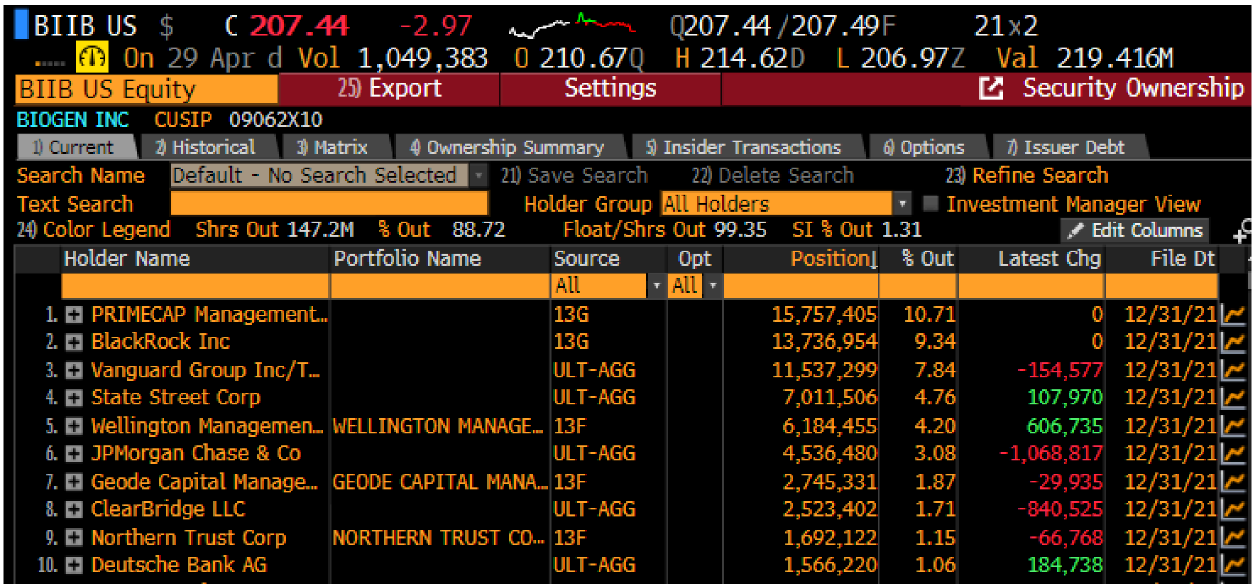
[83]

---

[83] Biogen Inc. 3-Month performance compared to S&P 500 Healthcare Sector Index and S&P 500 Index. Source Bloomberg, COMP Function

The benchmark graph for Biogen is listed above. The graph shows the 3-month rate of return for Starbucks, in comparison to the rate of rate for the S&P 500 and the S&P 500 healthcare sector as of 5/1/2022. Based on the graph the Biogen stock returned -9.56% in the three months, where the S&P 500 healthcare sector returned -1.07%. [84]

Beneficial Owners:


BIIB US $ C 207.44 -2.97 Q207.44 / 207.49F 21x2
On 29 Apr d Vol 1,049,383 O 210.67Q H 214.62D L 206.97Z Val 219.416M
BIIB US Equity | 25) Export | Settings | Security Ownership
BIOGEN INC CUSIP 09062X10
1) Current | 2) Historical | 3) Matrix | 4) Ownership Summary | 5) Insider Transactions | 6) Options | 7) Issuer Debt
Search Name Default - No Search Selected 21) Save Search 22) Delete Search 23) Refine Search
Text Search Holder Group All Holders Investment Manager View
24) Color Legend Shrs Out 147.2M % Out 88.72 Float/Shrs Out 99.35 SI % Out 1.31 Edit Columns

	Holder Name	Portfolio Name	Source	Opt	Position	% Out	Latest Chg	File Dt
			All	All				
1.	PRIMECAP Management...		13G		15,757,405	10.71	0	12/31/21
2.	BlackRock Inc		13G		13,736,954	9.34	0	12/31/21
3.	Vanguard Group Inc/T...		ULT-AGG		11,537,299	7.84	-154,577	12/31/21
4.	State Street Corp		ULT-AGG		7,011,506	4.76	107,970	12/31/21
5.	Wellington Managemen...	WELLINGTON MANAGE...	13F		6,184,455	4.20	606,735	12/31/21
6.	JPMorgan Chase & Co		ULT-AGG		4,536,480	3.08	-1,068,817	12/31/21
7.	Geode Capital Manage...	GEODE CAPITAL MANA...	13F		2,745,331	1.87	-29,935	12/31/21
8.	ClearBridge LLC		ULT-AGG		2,523,402	1.71	-840,525	12/31/21
9.	Northern Trust Corp	NORTHERN TRUST CO...	13F		1,692,122	1.15	-66,768	12/31/21
10.	Deutsche Bank AG		ULT-AGG		1,566,220	1.06	184,738	12/31/21

85

According to the SEC, a beneficial owner is a "a person or group of persons acquires beneficial ownership of more than five percent of a voting class of a company's equity securities registered under the Securities Exchange Act, they are required to file a Schedule 13D with the SEC."[86]. The top ten holder names are listed in the chart above. Some people or groups such as PRIMECAP Management, BlackRock Inc, Vanguard Group own 10.71%, 9.34% and 7.84% respectively. One of the groups, PRIMECAP Management, listed above meets the requirement set by rule 16A-1, which states that if any person or group of people have equity ownership of more than 10% of a company, they must file it with the SEC.[87] The rest of the companies or people listed don't meet the 5% threshold so therefore don't meet the requirement to be listed as a beneficial owner.[88] There is a lot of risk involved with Biogen's beneficial owners, as they own 27.54%, slightly over a quarter of the company. This is considered risky because these groups could sell out of their position, which could hurt the stock price.

---

[84] IBID
[85] Starbucks Co. Security Ownership. Source Bloomberg HDS function
[86] [Schedules 13D and 13G | Investor.gov](), Accessed February 11, 2022

[87] [Section 16 Reporting Requirements as Amended by the Sarbanes-Oxley Act: Olshan Frome Wolosky (olshanlaw.com)](), Accessed February 11, 2022
[88] Starbucks Co. Security Ownership. Source Bloomberg HDS function

Investment Thesis:

After completing the Charles Schwab Investor profile Questionnaire and looking into my results, I believe that investing into Biogen was a smart decision. On 1/29/2022, I was able to purchase $10,000 of stock at $225.21. The company's one year estimate is 272.90, which would make my expected rate of return to be 21.17%, which is substantially higher than the required rate of return of 8.36% that I calculated prior to my investments. As a company within the healthcare industry during the COVID-19 pandemic, I believe that there will be a variety of opportunities for their sales to increase with the increase in sick patients. I also believed this was a great investment because the stocks beta was at 0.44, which would help to average out my investment portfolio to get my average beta closer to the 0.8 that I anticipated.

Financial Analysis (BIIB)

Income Statement:

Biogen Inc (BIIB US) - BBG Adjusted

In Millions of USD except Per Share 12 Months Ending	FY 2021 12/31/2021	Change	FY 2020 12/31/2020	Change	FY 2019 12/31/2019
Revenue	**10,981.7**	-18%	**13,444.6**	-6%	**14,377.9**
+ Sales & Services Revenue	8,846.9	-17%	10,692.2	-22%	13,670.2
+ Other Revenue	2,134.8	-22%	2,752.4	289%	707.7
- Cost of Revenue	2,109.7	17%	1,805.2	-8%	1,955.4
+ Cost of Goods & Services	2,109.7	17%	1,805.2	-8%	1,955.4
Gross Profit	**8,872.0**	-24%	**11,639.4**	-6%	**12,422.5**
+ Other Operating Income	0.0		0.0		0.0
- Operating Expenses	5,426.4	-24%	7,170.5	35%	5,329.2
+ Selling, General & Admin	2,674.3	7%	2,504.5	5%	2,374.7
+ Research & Development	2,501.2	-37%	3,990.9	75%	2,280.6
+ Other Operating Expense	250.9	-63%	675.1	0%	673.9
Operating Income (Loss)	**3,445.6**	-23%	**4,468.9**	-37%	**7,093.3**
- Non-Operating (Income) Loss	274.4	40%	196.5	68%	116.9
+ Interest Expense, Net	242.6	34%	180.5	168%	67.4
+ *Interest Expense*	*253.6*	14%	*222.5*	19%	*187.4*
- *Interest Income*	*11.0*	-74%	*42.0*	-65%	*120.0*
+ Foreign Exch (Gain) Loss	22.4	109%	10.7	53%	7.0
+ Other Non-Op (Income) Loss	9.4	77%	5.3	-88%	42.5
Pretax Income (Loss), Adjusted	**3,171.2**	-26%	**4,272.4**	-39%	**6,976.4**
- Abnormal Losses (Gains)	1,426.0	284%	-775.1	-418%	-149.5
+ Acquired In-Process R&D	18.0	-76%	75.0		—
+ Merger/Acquisition Expense	-50.7	68%	-159.3	-449%	45.7
+ Disposal of Assets	—		—		—

+ Impairment of Intangibles	629.3		—		—
+ Legal Settlement	—		—		—
+ Restructuring	—		2.8	-44%	5.0
+ Sale of Investments	821.1	218%	-693.9	-247%	-200.2
+ Other Abnormal Items	8.3	2667%	0.3		—
Pretax Income (Loss), GAAP	**1,745.2**	-65%	**5,047.5**	-29%	**7,125.9**
- Income Tax Expense (Benefit)	52.5	-95%	992.3	-14%	1,158.0
+ Current Income Tax	479.3	-43%	843.3	-23%	1,090.9
+ Deferred Income Tax	-426.8	-386%	149.0	122%	67.1
+ Tax Allowance/Credit	—		—		—
- (Income) Loss from Affiliates	-34.9	-558%	-5.3	-107%	79.4
Income (Loss) from Cont Ops	**1,727.6**	-57%	**4,060.5**	-31%	**5,888.5**
- Net Extraordinary Losses (Gains)	0.0		0.0		0.0
+ Discontinued Operations	0.0		0.0		0.0
+ XO & Accounting Changes	0.0		0.0		0.0
Income (Loss) Incl. MI	**1,727.6**	-57%	**4,060.5**	-31%	**5,888.5**
- Minority Interest	171.5	186%	59.9		0.0
Net Income, GAAP	**1,556.1**	-61%	**4,000.6**	-32%	**5,888.5**
- Preferred Dividends	0.0		0.0		0.0
- Other Adjustments	0.0		0.0		0.0
Net Income Avail to Common, GAAP	**1,556.1**	-61%	**4,000.6**	-32%	**5,888.5**
Net Income Avail to Common, Adj	**2,667.8**	3%	**2,596.7**	-54%	**5,672.9**
Net Abnormal Losses (Gains)	1,111.7	179%	-1,403.9	-551%	-215.6
Net Extraordinary Losses (Gains)	0.0		0.0		0.0
Basic Weighted Avg Shares	149.1	-7%	160.9	-14%	187.1
Basic EPS, GAAP	**10.44**	-58%	**24.86**	-21%	**31.47**
Basic EPS from Cont Ops, GAAP	**10.44**	-58%	**24.86**	-21%	**31.47**
Basic EPS from Cont Ops, Adjusted	**17.89**	11%	**16.14**	-47%	**30.32**
Diluted Weighted Avg Shares	149.6	-7%	161.3	-14%	187.4
Diluted EPS, GAAP	**10.40**	-58%	**24.80**	-21%	**31.42**
Diluted EPS from Cont Ops, GAAP	**10.40**	-58%	**24.80**	-21%	**31.42**
Diluted EPS from Cont Ops, Adjusted	**17.83**	11%	**16.10**	-47%	**30.27**

Source: Bloomberg
[89]

[89] Inline XBRL Viewer (sec.gov)

Revenue:

- Biogen change in revenue in the last 3 fiscal years has struggled. Due to the pandemic, Biogen's revenue decreased by 6% from 2019 to 2020, but and decreased again from 2020 to 2021 as the corporation saw an 18% decrease during the fiscal year.
- The 6% decline in revenue equated to $9.33 million decrease in revenue where the 18% decline equated to $2.46 Billion decrease in revenue.
- Biogen's cost of revenue changed somewhat differently in comparison to the revenue, as the company say an 8% decrease from 2019 to 2020, but a 17% increase from 2020 to 2021.
- Biogen experienced the decline in the 2020 fiscal year due to the COVID-19 pandemic. The restrictions on their operations made it difficult for them to produce a similar revenue value in comparison to 2019.
- With most restrictions being lifted by 2021, Biogen was unable to increase their revenue in during the fiscal year, as their revenue value continued to decrease from the prior fiscal year.

Gross Profit:

- Biogen's gross profit decreased by 6% from fiscal year 2019 to 2020 and decreased by 24% from fiscal year 2020 to 2021.
- It is evident that Biogen was unable to regain profit after the COVID- 19 health pandemic.
- The main reason for the decrease in gross profit in 2020 to 2021 is due to a 17% increase in cost of revenue.
- In 2019 to 2020, sales and revenue decreased by 6% while cost of revenue and cost of goods and services also decreased by 8%
- Biogen's gross profit value in 2029, 2020, and 2021 were $12.42 Billion, $11.64 Billion, and $8.87 Billion, respectively

Operating Income and Expenses:

❖ From 2019 to 2020, operating income decreased 37% or $2.624 billion and from 2020 to 2021 it decreased by 23% or $1.023 billion.

❖ Operating expenses from fiscal year 2019 to 2020 increased by 35% whereas from 2020 to 2021, the operating expenses decreased by 24%.

❖ The largest increase within operating expenses from 2019 to 2020 was within research and development expenses which increased by 75% from the prior year, but then decreased by 37% from 2020 to 2021.

❖ Biogen's operating income value in 2029, 2020, and 2021 were $7.093 Billion, $4.47 Billion, and $3.45 Billion, respectively.

Pretax Income:

❖ The Pretax Income for Biogen was consistent over the 3-year span. From 2019 to 2020, the Pretax Income decreased by 39%, and from 2020 to 2021, the pretax income decreased by 26%.

❖ Based on this information, it is evident that Biogen struggled to make profit over the three years. The COVID-19 pandemic prevented them from standard production methods, and potentially lead to the decrease in pretax income.

Tax Analysis:

❖ The effective tax rates for Biogen in 2021, 2020, and 2019 were 3.0%, 19.7%, and 16.3%. It is interesting how inconsistent the tax rate over the three-year span has been for Biogen.

.

	For the Years Ended December 31,		
	2021	2020	2019
Statutory rate	21.0 %	21.0 %	21.0 %
State taxes	0.8	0.7	0.8
Taxes on foreign earnings	(10.5)	(3.3)	(4.5)
Tax credits	(3.8)	(1.2)	(1.1)
Purchased intangible assets	(1.6)	0.7	0.4
Divestiture of Denmark manufacturing operations	—	(0.4)	1.0
Internal reorganization of certain intellectual property rights	—	—	(2.1)
TECFIDERA impairment	—	1.8	—
GILTI	1.3	1.3	1.5
Swiss tax reform	—	—	(0.8)
Neurimmune tax impacts	(5.3)	(0.1)	—
Other	1.1	(0.8)	0.1
Effective tax rate	3.0 %	19.7 %	16.3 %

90

Net Income:

- Biogen's Net Income from year to year has been consistent poor over the three-year span. From fiscal year 2019 to 2020 the company saw a 32% decrease, and a 61% decrease from 2020 to 2021. The net change between 2019 and 2020 was $1.887 Billion decline, and a $2.44 Billion decline from 2020 to 2021.
- Net income in 2019 was $5.88 billion and at the end of fiscal 2021 is has decreased to $1.556 billion.
- Ever since the COVID-19 pandemic started in 2019, Biogen has struggled to regain it's net income that it was obtaining before the pandemic. Management must find ways to increase its revenue or decrease its expenses to make Biogen more sustainable.

Earnings Per Share:

- Listed below are two companies that are found in Biogen's Peer Group, Gilead Sciences, and Amgen, as well as their Earnings per share in the years 2019,2020, and 2021, as well as the three-year average.
- The Earnings per share is calculated by taking the company's net income and dividing it by the amount of shares outstanding.
- Based on the chart, Biogen has the has the highest three-year average for Earnings per share in comparison to Gilead Sciences and Amgen.

	2021	**2020**	**2019**	**3-Year AVG**
Biogen (BIIB)	**$10.40**	**$24.80**	**$31.42**	**$22.20**
Gilead Sciences (GILD)	**$4.93**	**$0.10**	**$4.22**	**$3.08**
Amgen (CMG)	**$10.28**	**$12.31**	**$12.88**	**$11.82**

[90] IBID

Balance Sheet:

Biogen Inc (BIIB US) - Standardized

In Millions of USD except Per Share 12 Months Ending	FY 2021 12/31/2021	Change	FY 2020 12/31/2020	Change	FY 2019 12/31/2019
Total Assets					
+ Cash, Cash Equivalents & STI	3,802.5	46%	2,610.1	-42%	4,475.9
+ Cash & Cash Equivalents	2,261.4	70%	1,331.2	-54%	2,913.7
+ ST Investments	1,541.1	21%	1,278.9	-18%	1,562.2
+ Accounts & Notes Receiv	1,549.4	-19%	1,913.8	2%	1,880.5
+ Accounts Receivable, Net	1,549.4	-19%	1,913.8	2%	1,880.5
+ Notes Receivable, Net	0.0		0.0		0.0
+ Inventories	1,351.5	26%	1,068.6	33%	804.2
+ Raw Materials	349.6	11%	314.9	86%	169.7
+ Work In Process	814.0	49%	544.5	18%	460.0
+ Finished Goods	187.9	-10%	209.2	20%	174.5
+ Other Inventory	0.0		0.0		0.0
+ Other ST Assets	1,153.1	-11%	1,294.6	6%	1,221.2
+ Derivative & Hedging Assets	83.4	-61%	213.3	369%	45.5
+ Misc ST Assets	1,069.7	-1%	1,081.3	-8%	1,175.7
Total Current Assets	**7,856.5**	14%	**6,887.1**	-18%	**8,381.8**
+ Property, Plant & Equip, Net	3,791.8	-1%	3,844.8	5%	3,674.3
+ Property, Plant & Equip	5,798.4	3%	5,627.1	7%	5,265.2
- Accumulated Depreciation	2,006.6	13%	1,782.3	12%	1,590.9
+ LT Investments & Receivables	2,831.5	-23%	3,671.1	38%	2,660.9
+ LT Investments	1,939.5	-33%	2,899.0	131%	1,252.8
+ LT Marketable Securities	892.0	16%	772.1	-45%	1,408.1
+ Other LT Assets	9,397.5	-8%	10,215.9	-18%	12,517.3
+ Total Intangible Assets	7,982.4	-10%	8,846.4	-5%	9,285.2

+ *Goodwill*	*5,761.1*	0%	*5,762.1*	0%	*5,757.8*
+ *Other Intangible Assets*	*2,221.3*	-28%	*3,084.3*	-13%	*3,527.4*
+ Deferred Tax Assets	1,415.1	3%	1,369.5	-58%	3,232.1
+ Derivative & Hedging Assets	0.0		0.0		0.0
+ Misc LT Assets	0.0		0.0		0.0
Total Noncurrent Assets	**16,020.8**	-10%	**17,731.8**	-6%	**18,852.5**
Total Assets	**23,877.3**	-3%	**24,618.9**	-10%	**27,234.3**
Liabilities & Shareholders' Equity					
+ Payables & Accruals	3,201.7	-12%	3,634.6	10%	3,289.7
+ Accounts Payable	589.2	30%	454.9	-14%	530.8
+ Accrued Taxes	174.7	23%	142.0	99%	71.4
+ Interest & Dividends Payable	—		—		—
+ Other Payables & Accruals	2,437.8	-20%	3,037.7	13%	2,687.5
+ ST Debt	1,088.2	1208%	83.2	-95%	1,569.4
+ ST Borrowings	0.0		0.0		0.0
+ ST Lease Liabilities	89.1	7%	83.2	13%	73.6
+ *ST Finance Leases*	—		—		—
+ *ST Operating Leases*	*89.1*	7%	*83.2*	13%	*73.6*
+ Current Portion of LT Debt	999.1		0.0	-100%	1,495.8
+ Other ST Liabilities	8.3	-66%	24.4	419%	4.7
+ Deferred Revenue	0.0		0.0		0.0
+ Derivatives & Hedging	8.3	-66%	24.4	419%	4.7
+ Misc ST Liabilities	0.0		0.0		0.0
Total Current Liabilities	**4,298.2**	15%	**3,742.2**	-23%	**4,863.8**
+ LT Debt	6,604.4	-16%	7,828.2	61%	4,871.7
+ LT Borrowings	6,274.0	-16%	7,426.2	67%	4,459.0
+ LT Lease Liabilities	330.4	-18%	402.0	-3%	412.7
+ *LT Finance Leases*	—		—		—
+ *LT Operating Leases*	*330.4*	-18%	*402.0*	-3%	*412.7*
+ Other LT Liabilities	2,015.0	-15%	2,362.4	-43%	4,159.7
+ Accrued Liabilities	0.0		0.0		0.0
+ Pension Liabilities	68.4	-9%	75.5	27%	59.6
+ *Pensions*	—		—		—
+ *Other Post-Ret Benefits*	—		—		—
+ Deferred Revenue	0.0		0.0		0.0
+ Deferred Tax Liabilities	694.5	-33%	1,032.8	-63%	2,810.8
+ Derivatives & Hedging	0.0		0.0	-100%	2.0
+ Discontinued Operations	—		—		—
+ Misc LT Liabilities	1,252.1	0%	1,254.1	-3%	1,287.3
Total Noncurrent Liabilities	**8,619.4**	-15%	**10,190.6**	13%	**9,031.4**
Total Liabilities	**12,917.6**	-7%	**13,932.8**	0%	**13,895.2**
+ Preferred Equity and Hybrid Capital	0.0		0.0		0.0
+ Share Capital & APIC	68.3	68200%	0.1	0%	0.1

+ Common Stock	0.1	0%	0.1	0%	0.1
+ Additional Paid in Capital	68.2		0.0		0.0
- Treasury Stock	2,977.1	0%	2,977.1	0%	2,977.1
+ Retained Earnings	13,911.7	0%	13,976.3	-15%	16,455.4
+ Other Equity	-106.7	64%	-299.0	-121%	-135.2
Equity Before Minority Interest	**10,896.2**	2%	**10,700.3**	-20%	**13,343.2**
+ Minority/Non Controlling Interest	63.5	547%	-14.2	-246%	-4.1
Total Equity	**10,959.7**	3%	**10,686.1**	-20%	**13,339.1**
Total Liabilities & Equity	**23,877.3**	-3%	**24,618.9**	-10%	**27,234.3**

Source: Bloomberg
[91]

Current Assets:

- ❖ The change in the amount of total current assets has over the last three years has been inconsistent. From 2019 to 2020, Starbucks saw a decrease of 18% and from 2020 to 2021, they saw an increase of 14%.
- ❖ Cash, cash equivalents and short-term investments hold a significant portion of where Biogen saw a decrease in total current assets from 2019 to 2020. From 2020 to 2021, Biogen had its biggest gain in total current assets in the same accounts, which lead to the increase within the fiscal year
- ❖ Biogen closed out fiscal year 2020 and fiscal year 2021 with $6.887 Billion and $7.857 Billion in Total Current Assets, respectively.
- ❖ In Fiscal Year 2020 to 2021, the total current assets saw a 14% increase, but saw decreases in notes receivable and derivatives, other short-term assets, and tax receivables.

Noncurrent Assets:

- ❖ From fiscal year 2019 to 2020, Biogen saw a loss of 6% in their noncurrent assets and saw a 10% loss from in the same account from 2020 to 2021.
- ❖ From 2019 to 2020, the largest noncurrent asset losses came from other intangible assets, where in 2020 to 2021 the largest losses came from deferred tax assets.
- ❖ Biogen closed out fiscal year 2020 and fiscal year 2021 with $17.73 Billion and $16.02 Billion in Total Noncurrent Assets, respectively.

[91] IBID

Current Liabilities:

- Biogen's Current Liabilities saw a unique trend over the three fiscal years. From fiscal year 2019 to 2020, Starbucks saw a 19% decrease in current liabilities, and from 2020 to 2021, Biogen saw a 15% increase.
- In the fiscal year of 2019 to 2020, the company saw the majority of its liability loses from the current portion of their long-term debt.
- In the fiscal year of 2020 to 2021, most of the liability gains came from increases in short term liabilities, accounts payable, and accrued taxes.
- With the increase in liabilities, the company will want to be able to pay these off by using their assets, and to not accumulate too much debt.

Noncurrent Liabilities:

- The amount of total noncurrent assets for Starbucks at year end for 2019, 2020, and 2021, were $9.03 Billion, $10.19 Billion, and $8.62 Billion, respectively.
- From 2019 to 2020, Starbucks saw a 13% increase in noncurrent liabilities, but saw a 15% decrease from 2020 to 2021.
- From 2019 to 2020, the most amount of the noncurrent liabilities came from long term debt and barrowing. From 2020 to 2021, the noncurrent liabilities in the company decrease as they paid off some of the long-term debt and barrowings.

Shareholder's Equity:

- At the year-end for each fiscal year during the three-year span, Biogen had a positive amount for their equity. Starbucks equity finished 2019 with $13.33 billion, 2020 finished $10.69 billion, and 2021 finished $10.96 billion.
- The total equity from 2019 to 202 saw a decrease of 20% in total equity but saw an increase of 3% from 2020 to 2021.

Cash Flow Statement:

Biogen Inc (BIIB US) - Standardized

In Millions of USD except Per Share 12 Months Ending	FY 2021 12/31/2021	Change	FY 2020 12/31/2020	Change	FY 2019 12/31/2019
Cash from Operating Activities					
+ Net Income	1,556.1	-61%	4,000.6	-32%	5,888.5
+ Depreciation & Amortization	1,117.0	67%	666.9	-2%	680.6
+ Non-Cash Items	967.8	350%	-387.6	-245%	266.9
+ Stock-Based Compensation	238.6	20%	198.3	9%	182.3
+ Deferred Income Taxes	-426.8	-386%	149.0	122%	67.1
+ Other Non-Cash Adj	1,156.0	257%	-734.9	-4299%	17.5
+ Chg in Non-Cash Work Cap	-1.0	98%	-50.1	-121%	242.6
+ (Inc) Dec in Accts Receiv	324.8	11500%	2.8	-96%	68.8
+ (Inc) Dec in Inventories	-462.4	-46%	-316.3	-1547%	-19.2
+ Inc (Dec) in Other	136.6	-48%	263.4	36%	193.0
+ Net Cash From Disc Ops	0.0		0.0		0.0
Cash from Operating Activities	**3,639.9**	-14%	**4,229.8**	-40%	**7,078.6**
Cash from Investing Activities					
+ Change in Fixed & Intang	-276.9	42%	-476.8	29%	-669.5
+ Disp in Fixed & Intang	0.0		0.0		0.0
+ Disp of Fixed Prod Assets	*0.0*		*0.0*		*0.0*
+ Disp of Intangible Assets	*0.0*		*0.0*		*0.0*
+ Acq of Fixed & Intang	-276.9	42%	-476.8	29%	-669.5
+ Acq of Fixed Prod Assets	*-258.1*	39%	*-424.8*	17%	*-514.5*
+ Acq of Intangible Assets	*-18.8*	64%	*-52.0*	66%	*-155.0*
+ Net Change in LT Investment	-403.3	-145%	901.7	20%	754.4
+ Dec in LT Investment	3,405.4	-53%	7,299.4	22%	6,007.0
+ Inc in LT Investment	-3,808.7	40%	-6,397.7	-22%	-5,252.6
+ Net Cash From Acq & Div	-18.0	76%	-75.0	93%	-1,044.4
+ Cash from Divestitures	0.0		0.0		0.0
+ Cash for Acq of Subs	-18.0	76%	-75.0	93%	-1,044.4
+ Cash for JVs	0.0		0.0		0.0
+ Other Investing Activities	134.5	114%	-958.5	-167%	1,430.0
+ Net Cash From Disc Ops	0.0		0.0		0.0
Cash from Investing Activities	**-563.7**	7%	**-608.6**	-229%	**470.5**
Cash from Financing Activities					
+ Dividends Paid	0.0		0.0		0.0
+ Cash From (Repayment) Debt	-170.0	-112%	1,467.4		0.0
+ Cash From (Repay) ST Debt	0.0		0.0		—
+ Cash From LT Debt	0.0	-100%	2,967.4		0.0
+ Repayments of LT Debt	-170.0	89%	-1,500.0		0.0
+ Cash (Repurchase) of Equity	-1,800.0	73%	-6,679.1	-14%	-5,868.3
+ Increase in Capital Stock	0.0		0.0		0.0

+ Decrease in Capital Stock	-1,800.0	73%	-6,679.1	-14%	-5,868.3
+ Other Financing Activities	-116.2	-90%	-61.0	-872%	7.9
+ Net Cash From Disc Ops	0.0		0.0		0.0
Cash from Financing Activities	**-2,086.2**	60%	**-5,272.7**	10%	**-5,860.4**
Effect of Foreign Exchange Rates	-59.8	-187%	69.0	17150%	0.4
Net Changes in Cash	**930.2**	159%	**-1,582.5**	-194%	**1,689.1**
Cash Paid for Taxes	**247.9**	-73%	**906.7**	-15%	**1,064.5**
Cash Paid for Interest	**280.8**	3%	**272.7**	12%	**244.2**

Source: Bloomberg
[92]

Cash from Operating Activities:

- ❖ Net Income over the three-year span had difficulty increasing in the period. From fiscal year 2019 to 2020, Biogen Net Income decreased 32%, and decreased by 61% from 2020 to 2021. This equates to a $1.89 Billion decrease from 2019 to 2020, and a 2.44 billion decrease from 2020 to 2021.
- ❖ The amount of cash provided by operating activities from in 2019, 2020, and 2021 was $7.08 Billion, $4.23 Billion, and $3.43 Billion, respectively. Based on these numbers, it seems evident that Biogen struggled during the COVID-19 pandemic, and they are trying to recover to this day from the pandemic.
- ❖ The money that is produced by operating activities will most likely be used to finance the company and pay dividends to their investors.

Cash from Investing Activities:

- ❖ Biogen had an interesting three-year span with the cash from investing activities. From 2019 to 2020, the companies cash began at $470.5 million and decreased by 229% in 2020 to $- 608 million in 2020.
- ❖ Most of their losses in this year came from other investing activities that were not listed as well as an increase in long term investments.

[92] IBID

- Biogen was able to increase some these loses from 2020 as their Cash from investing activities went from $-608 million in 2020 to $ - 563.7 million in 2021, a 7% increase from year-to- year.

Cash from Financing Activities:

- Cash from financing activities increased by 10% from 2019 to 2020 and increased by 60% from 2020 to 2021.
- The main reasoning as for why the Cash for financing activity decreased between 2020 and 2021 was because of their repayments on debt within the year, as that increased by 89% from the prior year.

Net Change in Cash:

- The Net Change in Cash saw a significant decrease from 2019 to 2020, as it decreased from $1.69 billion to $-1.58 billion or -194%. Biogen was able to regain this as cash in 2021 with Net Change in Cash increasing by 159% to $9.30 million.

Ratio Analysis:[93]

Gross Margin	2021	2020	2019
Biogen (BIIB)	80.79%	86.57%	86.40%

[93] Bloomberg

Gilead Sciences (GILD)	75.82%	81.48%	79.18%
Amgen Inc (AMGN)	75.16%	75.77%	81.35%

The gross margin is a ratio calculated by investors by taking the gross profit and dividing it by the net sales. The gross profit margin is an indicator of how much profit a company has made before subtracting out the general, selling, and administrative costs. Based on the chart above, Biogen had the highest gross margin in comparison to its peers, Gilead Sciences and Amgen. Though Biogen had the highest Gross Margin, the others were a reasonable distance away, where they shouldn't be concerned about how low this ratio is.

Operating Margin	2021	2020	2019
Biogen (BIIB)	25.87%	33.84%	48.98%
Gilead Sciences (GILD)	36.32%	16.49%	19.10%
Amgen Inc (AMGN)	29.40%	35.95%	41.41%

The operating margin is a ratio calculated by investors by taking the company's operating income and dividing it by its total net sales. Having higher operating margin ratios are considered better for you company, as it illustrates, they you are effectively coordinating operations, and turning your sales into profits. In comparison to its competitors over the three years, Biogen has the highest average operating margin. In 2019 Biogen was able to produce am operating margin of 48.98%, the highest out of the three companies over the three years. Gilead had the lowest recorded margin over the three years in 2020, where they output a 16.49% margin.

Net Profit Margin	2021	2020	2019
Biogen (BIIB)	14.17%	29.76%	40.96%
Gilead Sciences (GILD)	22.80%	0.50%	23.99%
Amgen Inc (AMGN)	22.68%	28.57%	33.57%

The Net Profit Margin is a ratio calculated by investors by taking the company's net income and dividing by the company's revenue. The ratio describes the amount profit produced for every dollar of revenue that is collected. The ratio gives investors an understanding of how efficiently the management can generate profit from its sales. Over the three-year span, Biogen has the highest Net profit Margin average out of the three, with Amgen and Gilead Sciences in second and third, respectively. Out of all of the years, Biogen was able to produce a 40.96% net profit margin in 2019, the highest out of the peers over the three spans.

Current Ratio	2021	2020	2019
Biogen (BIIB)	1.83	1.84	1.72
Gilead Sciences (GILD)	1.27	1.40	3.10
Amgen Inc (AMGN)	1.59	1.81	1.44

The current ratio is a ratio calculated by investors the determines a company's ability to pay off short-term obligations due within the next year. The ratio gives investors feedback into how a company generate more assets to then satisfy the debts and payables of the company. The way to calculate this ratio is by taking the amount of current assets and dividing it by the amount of current liabilities. Generally, having a current ratio above 1 means that the company is more likely to be able to pay off these short-term obligations. Based off the data above, Biogen and its two peers all have a current ratio above 1, which puts all three in a solid position to pay off their debt when necessary.

Quick Ratio	2021	2020	2019
Biogen (BIIB)	1.25	1.21	1.31
Gilead Sciences (GILD)	0.95	1.08	2.86
Amgen Inc (AMGN)	1.06	1.30	1.01

The quick ratio is very similar to the current ratio, as it is detecting how well the company can pay off the short-term obligations. The difference is that the quick ratio calculates the amount of assets minus the total inventory, which is then divided by the amount of current liabilities. This gives the investor an understanding of how well the company can pay off these short-term liabilities without the need to sell an of the inventory or other financing. Having a higher quick ratio is considered better for your company. Based on the chart above, Gilead Sciences has the best ability to pay off these obligations, as they have the highest average of the three companies over the three-year span. Biogen came in second, slightly higher than Amgen.

Inventory Turnover	2021	2020	2019
Biogen (BIIB)	0.49	0.46	0.56
Gilead Sciences (GILD)	1.62	0.83	1.93
Amgen (AMGN)	0.42	0.41	0.35

The inventory turnover is a ratio used by management and investors to see how many times a company has replaced its inventory during a specific period. The inventory turnover ratio gives management a better understanding of how they shall price, produce, and market their products. Having a high inventory turnover ratio means the company goods are sold quickly and can lead to higher profits. The formula to calculate the inventory turnover ratio is by taking the Cost of Goods Sold and dividing it by the average inventory, which is calculated by dividing the sum of the beginning and ending inventory. Based on the chart above, Gilead Sciences is best at turning over their inventory, as they had they highest average over the three years. Biogen's best year was in 2019, when they produced a 0.56 turnover ratio.

Return on Equity	2021	2020	2019
Biogen (BIIB)	14.41%	33.28%	44.64%
Gilead Sciences (GILD)	31.70%	0.60%	24.53%
Amgen Inc (AMGN)	73.16%	76.13%	70.73%

The Return on Equity is a financial measurement used by investors to how profitable a corporation is, and how efficient they are with producing profits. The return on equity is calculated by dividing the company's net income by the total shareholder' equity. The shareholder's equity is calculated by subtracting the company's assets by its total debt. Based on the chart above Amgen has the highest return on equity of the three peers. This means that Amgen has a good ability of maximizing its profits. Over the three-year period, Biogen produced ROEs for 2019, 2020, and 2021 of 44.64%, 33.28%, and 14.41%, respectively.

Return on Assets	2021	2020	2019
Biogen (BIIB)	6.42%	15.43%	22.42%

Gilead Sciences (GILD)	9.13%	0.19%	8.60%
Amgen Inc (AMGN)	9.50%	11.84%	12.44%

A company's return on assets is a financial calculation used by investors and companies to determine how profitable the company is in comparison to the company's total assets. Based on the information above, Biogen's return on assets has been decreasing over the three years. The company started with 22.42% in 2019, and then fell to 15.43% in 2020, and 6.42% in 2021. As for it's competitor Amgen, they have seen a decrease from 12.44% to 11.84% and 9.50% in the years following. Gilead's ROA has varied, as it started at 8.60% in 2019, down to 0.19% in 2020, and up to 9.13% in 2021.

Debt to Equity	2021	2020	2019
Biogen (BIIB)	0.66	0.69	0.45
Gilead Sciences (GILD)	1.31	1.79	1.13
Amgen Inc (AMGN)	4.97	3.51	3.09

The Debt-to-Equity ratio is an indicator of how a company's management chooses to set its capital structure. The Debt-to-Equity ratio is calculated by taking the company's total debt and dividing by the total shareholder's equity. Based on the chart above it is evident that Biogen chooses to hold onto less total debt than its shareholder equity. You can imply this due to the ratio being less then one. For the peers, Gilead Sciences and Amgen, it is easy to determine that they both do the opposite, as these two businesses have debt- equity ratios above 1, which means that they choose to have a capital structure that holds onto more debt than equity.

5 Year Geometric Growth:

Year	Revenue	% Change	1 + return
2021	$10981.70	-18.32%	0.817
2020	$13444.60	-6.49%	0.935
2019	$14377.90	6.88%	1.069
2018	$13453.90	9.61%	1.096
2017	$12273.90	7.21%	1.072
2016	$11448.80		
Arithmetic Return		-0.22%	
Geometric Return		-0.83%	

Year	Gross Profit	% Change	1 + return
2021	$8872.0	-23.78%	0.762
2020	$11639.40	-6.30%	0.937
2019	$12422.5	6.75%	1.068
2018	$11636.60	9.33%	1.093
2017	$10643.90	6.76%	1.068
2016	$9970.10		
Arithmetic Return		-1.45%	

Geometric Return	-2.31%

Year	Operating Income	% Change	1 + return
2021	$2840.70	-37.57%	0.624
2020	$4550.10	-35.39%	0.646
2019	$7042.60	19.60%	1.196
2018	$5888.60	10.15%	1.102
2017	$5345.80	3.77%	1.038
2016	$5151.70		
Arithmetic Return		-7.89 %	
Geometric Return		-15.92%	

Year	Net Income	% Change	1 + return
2021	$1556.70	-61.10%	0.389
2020	$4000.60	-32.06%	0.679
2019	$5888.50	32.90%	1.329
2018	$4430.70	74.50%	1.745
2017	$2539.10	-31.43%	0.686
2016	$3702.80		
Arithmetic Return		-3.44%	
Geometric Return		23.53%	

Projected Annual Income Statement for 2022:

Data in Millions $USD	Projected FY 2022	Geometric Growth Rate	FY 2021
Revenue	10,890.55	-0.83%	10,981.70
Cost of Goods Sold	2,223.50		2,109.70
Gross Profit	8,667.06	-2.31%	8,872.00

Operating Expenses	6,278.60		6,031.30
Operating Income	2,388.46	-15.92%	2,840.70
Other Expenses	(1,147.52)		90.39
Pre-Tax Income	3,535.98	ETR = 6.8%	2,750.31
Income Taxes	240.45		82.51
Net Income	3,295.53	23.53%	2,667.80

Projected Balance Sheet for 2022:

***Data in Millions**

***2021 Retained = 13,911.7**

***2021 Net Income = 2667.8**

***2021 Shares Repurchased = 1.8**

= 13,911.7 – 1556.7 – 1.8

= 15,466.6

Assets

7856.5/23877.3 = 32.9%

16020.8/ 23877.3 = 67.1%

Data in Millions $USD	Projected FY 2022	Change	FY 2021
Current Assets	8368.1	32.90%	7856.5
Noncurrent Assets	17064.1	67.10%	16020.8
Total Assets	25432.2		23877.3
Current Liabilities	4298.2		4298.2
Long-Term Liabilities	8619.4		8619.4
Total Liabilities	12917.6		12917.6
Retained Earnings	15466.6		13911.7
Shareholder's Equity	12514.6		10,959.70
Total Liabilities and Shareholder's Equity	25432.2		23877.3

Insider Transactions:

94

---

94 *Biogen. Insider Transactions. Source: Bloomberg, HDS Function (Updated 3/25/2022)*

BIIB US Equity | 25) Export | Settings | Security Ownership

BIOGEN INC CUSIP 09062X10

1) Current | 2) Historical | 3) Matrix | 4) Ownership Summary | 5) Insider Transactions | 6) Options | 7) Issuer Debt

Transaction Type: All | Range 04/30/21 - 04/29/22 | 10) Chart | 11) Table

Shareholders: All

	Trade Date	No. Part	Participants	Net Sell (Shares)	Net Buy (Shares)	Close Price	Volume
12)	04/01/2022	1	Murphy Nicole		155	210.6500	675,812
13)	02/18/2022	8	Vounatsos Michel, Guindo C…		8,107	209.7900	1.053MLN
14)	02/11/2022	7	Vounatsos Michel, Guindo C…		1,553	214.5900	1.119MLN
15)	01/19/2022	6	Vounatsos Michel, Guindo C…		19,350	230.8100	1.259MLN
16)	12/03/2021	1	Kramer Robin		239	223.9200	1.428MLN
17)	12/02/2021	1	Izzar Rachid		207	228.5200	1.276MLN
18)	09/01/2021	1	McDonnell Michael		3,423	338.2400	791,504
19)	08/09/2021	1	Alexander Susan	-523		340.2000	1.047MLN
20)	07/01/2021	13	Papadopoulos Stelios, Denn…		9,977	348.9200	997,983
21)	06/07/2021	2	Sandrock Alfred, Guindo Ch…	-10,759		395.8500	17.954MLN
22)	06/04/2021	1	Posner Brian	-360		286.1400	2.956MLN

[95]

Within the past year, most of the insider transactions have been placed by Biogen CEO Michel Vounastsos. Within the year, the company stock price ranged from $209.79 to $395.85. The biggest purchase of shares came on 01/19/22, when Vounatsos and five others purchased 19,350 shares of Biogen at $230.81. Since 06/04/2021, most of the insider transactions have been purchases, which can be viewed as encouraging as these members believe their stock value will increase in the future. The one large selling transaction that occurred since 6/04/2021 was by two members on 6/7/2021, when they sold 10,759 worth of shares.

Short Interest:

[95] *Biogen. Insider Transactions. Source: Bloomberg, HDS Function (Updated 3/25/2022)*

96

96 *Biogen. Short Interest. Source: Bloomberg, SI Function (Updated 3/25/2022)*

BIIB US $ C 207.44 -2.97 Q207.44/207.49F 21x2
On 29 Apr d Vol 1,049,383 O 210.67Q H 214.62D L 206.97Z Val 219.416M
BIIB US Equity Export Short Interest
Exchange Reported | Markit Securities Finance - Daily | S3 BLACKLIGHT Market Composite Rate
Date 05/01/21 - 05/01/22 Markit SI Score 0 S3 Squeeze 15
Short Interest 1,927,970 Short Interest Ratio 2.04 % Float 1.32 Currency USD
Change in Short Interest -1,111 Change in SI Ratio .06 Change in % Float 0.00 Chart Table

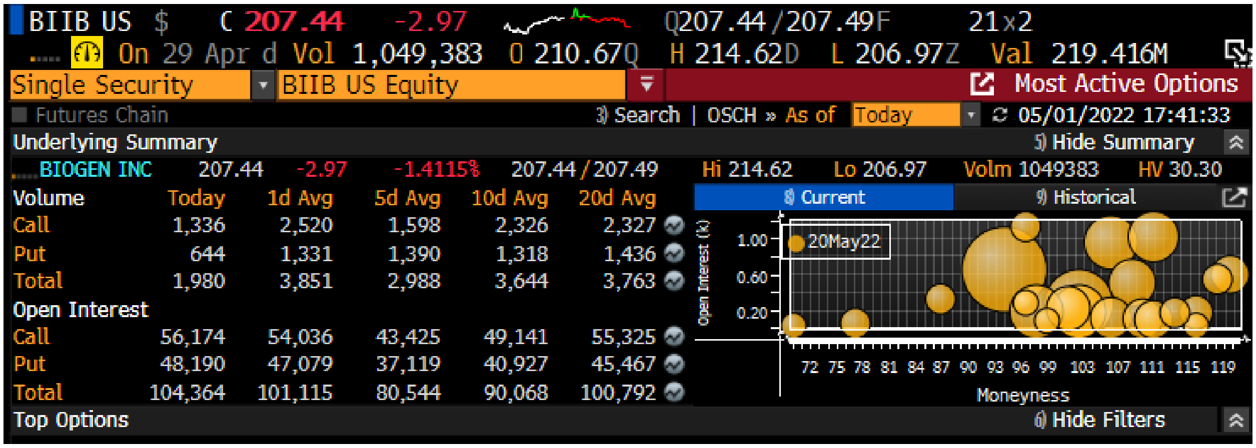
Date	Short Interest	Closing Price	Average Daily Volume	Short Interest Ratio
04/14/2022	1,927,970	212.55	945,323	2.039
03/31/2022	1,929,081	210.60	974,220	1.980
03/15/2022	2,198,762	197.36	1.10 M	1.997
02/28/2022	2,478,133	211.01	1.11 M	2.229
02/15/2022	2,542,355	217.37	1.10 M	2.310
01/31/2022	2,947,584	226.00	1.65 M	1.784
01/14/2022	2,888,420	239.30	2.27 M	1.274
12/31/2021	2,461,553	239.92	2.05 M	1.198
12/15/2021	2,325,305	235.88	1.25 M	1.853
11/30/2021	2,385,864	235.74	1.49 M	1.603
11/15/2021	2,049,474	271.82	979,362	2.093
10/29/2021	2,376,734	266.68	1.36 M	1.748
10/15/2021	2,398,022	281.19	821,856	2.918
09/30/2021	2,489,270	282.99	930,092	2.676
09/15/2021	2,444,966	299.21	1.24 M	1.965
08/31/2021	2,376,376	338.91	784,916	3.028
08/13/2021	2,179,462	342.25	916,636	2.378
07/30/2021	1,790,234	326.73	1.09 M	1.646
07/15/2021	1,869,287	328.16	1.56 M	1.197
06/30/2021	1,924,236	346.27	2.09 M	0.922
06/15/2021	3,482,465	396.08	5.08 M	0.685

[97]

As of April 14 2021, BIIB has 1,927,970 shares being sold short, a 1,111 decrease from March 31, 2022, and a decrease of 270792 from March15, 2021. This decrease in short sale could imply that investors believe that the stock price will rise soon. The number of shares being shorted over the last year has ranged from about 800k to 2.3M. Over the last year, BIIB's short interest ratio has ranged between 1.2 and 3. The short interest ratio is calculated by taking the number of shorted sales of a stock and dividing it by the average daily trading volume. The peak short interest ratio since 10/15/2021 was on that date, when there 2,398,022 shares being shorted, with a daily volume of 821,856, which equates to a 2.918 short interest ratio. The minimum short interest ratio since that date was on 12/31/2021, when the company had 2,461,553 shares being shorted, a daily volume of 2.05 M, and a short interest ratio equating to 1.198.

Option Analysis:

[97] *Biogen. Short Interest. Source: Bloomberg, SI Function (Updated 3/25/2022)*



[98]

As of May 1st, 2022, there are 56174 open call option contracts and 48190 open put option contracts. These are both high option values, as they both fall in the above of the 1-, 5-,10-, and 20-day averages. Typically, when the amount of call options is above the amount of put options, investors believe that the price of the stock is going up. The amount of call options has consistently been above the amount of put options over the last 20 days.

Company News:

[Biogen's ALS Drug Won't Move Forward After Trial Failures - TheStreet]

Amyotrophic Lateral Sclerosis, also known as Lou Gehrig's disease, is a deadly disease that patients are praying for a miracle drug that will change their life around. ALS is a neurodegenerative disease that affects the brain and spinal cord. The disease later leads to paralysis, where patients are unable to do common activity, such as eat, drink, and breathe. Biogen biopharmaceutical development company has halted their development on a treatment for ALS, the company recently announced. The treatment got its approval from the FDA a little over a year ago, but the company has received scrutiny over the efficacy of the studies and trials. Biogen Vice President Toby Ferguson stated, "While these were not the results we were hoping for, they are clear and will inform future research across our broad pipeline of investigational ALS therapies." The results have frustrated investors, as people believe that the drug could have transformed the company's identity. After more trials, the company hopes they can develop a drug that can meet the needs of ALS patients.

[Biogen Submits Final Protocol For Envision Trial Of Aduhelm On Alzheimer's Disease | Markets Insider (businessinsider.com)]

Biogen has announced that it is submitting is final study protocol to the Food and Drug Administration for an approval of an Alzheimer disease drug, known as Aduhelm. The company believes they could receive approval in time to start patient screening in May 2022, and trial completion in the next four years. The study and trial will be done around the world, as a placebo-controlled trail, looking to have 1,500 patients diagnosed with early Alzheimer. The

[98] *Biogen. Option Interest. Source: Bloomberg, MOSO Function (Updated 3/25/2022)*

company is looking to have at least 18 percent of the patients be within the Black/ African American and Latino Community, to see if this may produce different results. The accumulation of amyloid beta plaques in the brain is typically a main indictor of the early Alzheimer disease. Aduhelm is a monoclonal drug that is directed to attack this amyloid beta.

Al Sandrock takes on CEO role at gene therapy developer | BioPharma Dive

Al Sandrock, a top scientist at Biogen for more than two decades long has stepped down from his position with the company and has been appointed the CEO of Voyager Therapeutics, a gene therapy company. Sandrock was known for managing clinical development activities at Biogen. Sandrock specialized in developing treatment for Huntington's disease, ALS, and Spinal Muscular Atrophy. In his time at he developed successful drugs for MS, which lead to billions in sales for the company. This transition to Voyager should catch stockholder's eye, as the company will need to find someone to pick up what he left off. The company will need to adjust and make logical decisions to keep investors happy. Investors like to see that the company hires people with similar values to people that held the previous position. It will be interesting to see who Biogen fills into this role, and how their treatment development will look soon.

Things Just Got Worse for Biogen (msn.com)

Things aren't looking great for the future of Biogen Inc. In the last year, Biogen's revenue has decreased from $13.4 Billion to $11 Billion, and the company is expecting for it to be even lower in 2022. The company's EPS in 2020 was $24.13 and the company expects it to fall in the range of $14.25 to $16 in 2022. The reasoning for these expectations is from the news in Europe, that the company will discontinue their trials and search for authorization of its Alzheimer drug Aduhelm. Investors should be concerned, as the company has spent lots of time, money, and resources on the development of this drug.

Investment Assessment (4/4/2022): Since the time that I purchased Biogen's stock, the stock price has gone down nearly $15. When I purchased it, I expected to receive a 21% return on my investment, but it appears that that is going in the opposite direction. The stock market hasn't been too impressive in the last few months, due to issues with inflation, the war in Russia and Ukraine, and many more. The average consumer doesn't have the money to invest now. Within the company Biogen has seen some issues. The company recently was deep into trials for a drug that could potentially treat ALS but received notice that their trials were not effective enough for approval. For a company like Biogen who needs to administer trials, the cost of them to just get disapproved can hurt the company's revenue for that year. If Biogen can get an approval on their Alzheimer drug, that they have been working on, hopefully we will be able to see their stock price rise like I had expected it to.

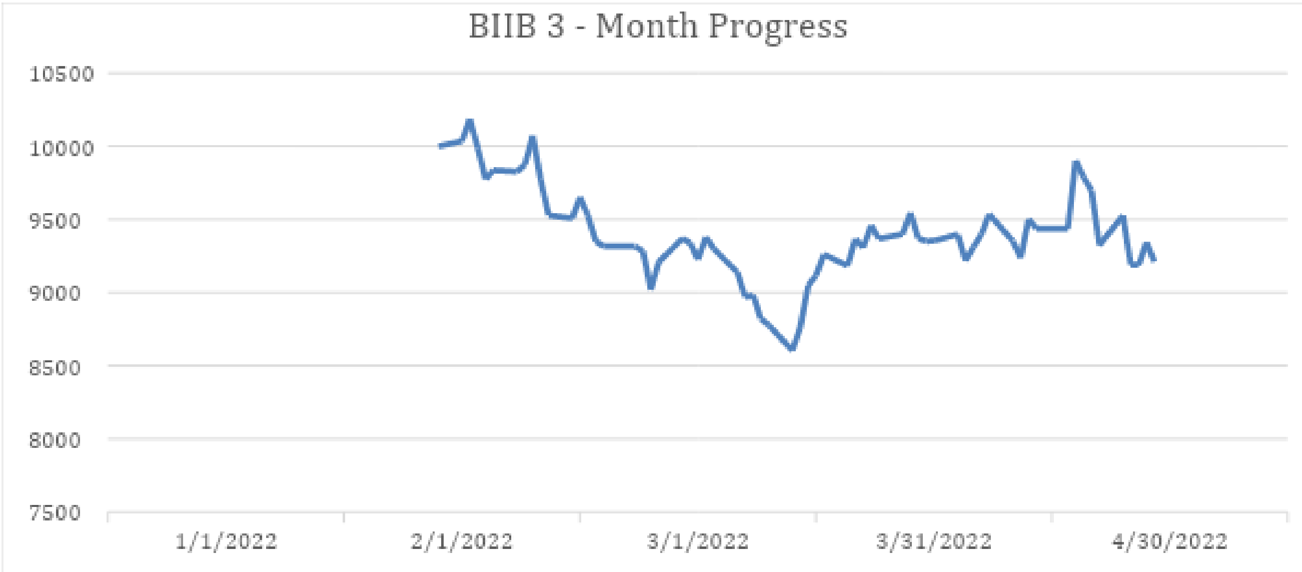
Beta Analysis:

A stock's beta informed an investor how volatile a stock is in comparison to the overall market. Since January, Biogens's beta has remained the same, at 0.44. This means that Biogen's stock is just as sensitive to the market as it was on January 28th, 2022. This is encouraging, as it means that it has remained consistent with my investment profile.

Analyst Recommendations:

The chart above shows the analyst recommendations for Biogens's price over the last two years. A variety of analysts have given their opinion on what Biogen investors should do in regards to the security. Out of 33 possible ratings, zero analysts believe that one should sell the Biogen security. Out of the other ratings, 16, or 48.5% believe that investors should buy Biogen, and 17, or 51.5% believe that current investors should hold onto the security. Based off these recommendations, this seems like encouraging information for current and potential Biogen investors.

Biogen Portfolio Value:



Purchase Price as of 1/28/2022	**225.21**
Quantity Purchased	**44.40**
Initial Investment	**10000**
Price as of 4/29/2022	**207.44**
Dividend	**-**
Dividend * Shares	**-**
Stock Appreciation Return	**9210.95866**
Dollar Return	**-789.041339**
Total Dollar Return Including Dividend	**-789.041339**
Percent Return	**-7.89%**
EAR	**-28.02%**

The table and chart listed above show the performance of my $10,000 investment in Biogen from 1/28/2022 to 4/29/2022. Adjusted closing prices from Yahoo Finance were the numbers I used to calculate these returns. On 1/28/2022, I purchased $10,000 worth of Biogen stock at $225.21 equating to 44.40 shares. As of 4/29/2022, the stock price is listed at $207.44, equating to a -7.89% return. The effective annual rate for Starbucks was -28.02%, which is much lower than my required rate of return, and my expected rate of return. If I was to hold onto Biogen shares for another three months, I am confident that the stock price would rise back up.

Final Assessment:

When I initially invested in Biogen, I calculated the expected rate of return to be 21.17%, which was significantly higher than my required rate of return of 8.36%. I originally invested into Biogen because it had a low beta that helped to average out my portfolio beta that corresponded to my investor profile. After reviewing their financial ratios over the last three months, I believe that I could have invested into one of their competitors instead of Biogen, as most of them produced significantly better returns over the three months than the pharmaceutical industry. Looking back, I regret my decision to invest my $10,000 in Biogen. In my Investor Profile, my style came out as moderately conservative, and having a three month return of -7.89% is not what I was hoping for. This stock has been disappointing to say the least, and I wish I had decided to invest into another company originally.

<u>Hartford Core Equity Fund Class R5 [HGITX]: OTC</u>
3 Year Return (Expected Rate of Return): 19.93%
Beta: 0.95
Benchmark: S&P 500 Index
Purchase Price on 1/29/2022: $46.70
Close Price on 2/11/2022: $46.40
Close Price on 4/1/2022: $46.87
Close Price on 4/29/2022: 42.79
Investment: $10,000 for 214.133 shares
Investment Valuation: Large Cap Growth
Category: Large Blend
Net Assets: $13.1 Billion
Headquarters Location: Wayne, PA

Fund Manager Background: The Hartford Core Equity Fund Class R5 has three existing managers, Mammen Chally, David Siegle, and Douglas McLane. Chally has the most experience with the specific fund, managing it for 11 years, where Siegle and McLane have managed it for 4 years each.[99] Chally received his MBA from Northeastern University in 1944 and received his Bachelor of Technology in mechanical engineering from the Indian Institute of Technology in 1989. [100] Siegle is an equity research analyst and conducts basic analysis on United States Equity investments surrounding health care, information systems and industrial sectors. Siegle earned his BA in History from Amherst College in 2001 and holds the Chartered Financial Analyst designation.[101] Similar to Siegle, McLane manages equity assets on behalf of clients and provides research from global analysts, equity portfolio managers, and team analysts. The research done is given to clients to support their portfolio investment decisions. McLane earned his MBA from the Kellogg School of Management at Northwestern University in 2003 and his BA in History

---

[99] Hartford Core Equity Fund (hartfordfunds.com), Accessed February 11, 2022
[100] Mammen Chally, CFA (hartfordfunds.com), Accessed February 11, 2022
[101] Dave A Siegle, CFA (hartfordfunds.com), Accessed February 11, 2022

from Princeton University in 1996. [102]Like Siegle, McLane was also able to inherit his Chartered Financial Analyst designation.

Fund's Investment Strategy:

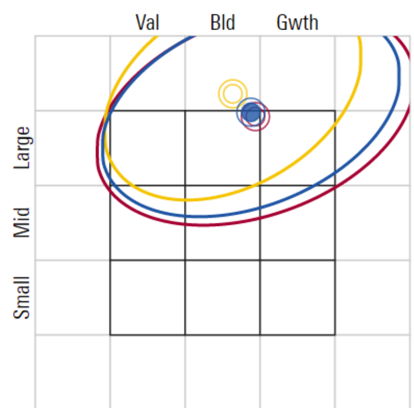
The Hartford Core Equity Fund follows three guidelines in their investments. They believe in focusing on the fundamentals, inheriting a long- term approach, and stronger performance with low fees. [103] The funds management team relies on large-cap companies, and the research from Wellington Management to provide customers with a portfolio with United States businesses that have attractive valuations.[104] Some portfolio managers believe that they should seek to find companies that will skyrocket within the next 6-12 months, but instead, Hartford Fund focuses on finding companies that look attractive three to five years from now. Lastly, the Hartford Fund prides itself on two numbers, it's performance and fees.[105] In the last ten years, the fund has outperformed the S&P 500 Index, and the fee level in comparison to their peers, is in the bottom 50% quantile, beating out the peer group median. [106]

Morningstar's Style Box:

[102] Doug W. McLane, CFA (hartfordfunds.com), Accessed February 11, 2022
[103] MF7351.pdf (hartfordfunds.com), Accessed February 10, 2022

[104] IBID
[105] IBID
[106] IBID

The Morningstar Graph for HGITX funds is shown below. Based on the graph you can determine that the fund is a large-cap blend fund. The blend style is described as portfolios where value and growth are not predominant indicators.[107]



108

Category and Ranking:

The Hartford Core Equity Fund Class R5 is ranked in the 74th percentile at year end (12/31/21).[109] The total amount of investments within that category is 1,363, which would mean that it would rank 605th in the category. Over that period, my company had a -7.22% return over that time.[110]

Top 10 Security Holdings:

Top Ten Holdings (%)	
as of 12/31/21	
Alphabet, Inc.	5.60
Microsoft Corp.	5.59
Apple, Inc.	4.80
Amazon.com, Inc.	3.67
UnitedHealth Group, Inc.	2.61
Meta Platforms, Inc.	2.34
JP Morgan Chase & Co.	2.27
Bank of America Corp.	2.23
Procter & Gamble Co.	2.10
Thermo Fisher Scientific, Inc.	1.69
Percentage Of Portfolio	**32.90**

111

[107] Hartford Core Equity R5 (HGITX) Performance | Morningstar, Accessed February 10, 2022
[108] IBID
[109] IBID
[110] IBID
[111] INSFS_DSCEQ.pdf (hartfordfunds.com), Accessed February 10, 2022

The chart above shows the top ten holdings found with the Hartford Core Equity Fund Class R5 (HGITX). A few of the companies in the fund include Amazon, JPMorgan & Chase Co. UnitedHealth Group Inc, and Microsoft. After doing the Morningstar report, we were able to determine that the fund mostly uses large cap companies for their funds. The Top Ten Holdings hold 32.90% part of the entire fund. [112] The entire fund has a total of 74 equity holdings.

Sector Holdings:

	Sectors	Investment %	Cat %
Cyclical	Basic Materials	1.11	2.73
	Consumer Cyclical	12.98	11.31
	Financial Services	13.35	14.10
	Real Estate	1.68	2.44
Sensitive	Communication Services	11.95	9.80
	Energy	1.26	2.39
	Industrials	8.06	9.87
	Technology	26.74	24.78
Defensive	Consumer Defensive	6.34	6.59
	Healthcare	14.55	13.77
	Utilities	1.98	2.22

113

The chart above refers to the holdings by sector for the Hartford Core Equity Fund Class R5. The majority of the holdings fall within the Healthcare, Financial Services, Technology, and Consumer Cyclical sectors. These sectors hold onto 14.55%, 13.35%, 26.74%, and 12.98% of the holdings, respectively. [114]The sectors with the lowest holdings include Basic Materials, Energy, and Utilities. I like how this fund has chosen to have holdings in every sector, as it diversifies the portfolio a lot more. Regarding the defensive, sensitive, and cyclical subsectors, the sensitive sector has the largest percentage of holdings, as they hold 48.01% of the holdings. The defensive and the cyclical hold onto 22.87% and 29.12% respectively.[115] Because my fund is looking for long term growth, it is smart of them to have almost half of their money invested into the sensitive sector in comparison to the defensive and cyclical sectors. Overall, I believe that the fund has diversifications, but I also believe that it could spread out into even more sectors.

[112] IBID
[113] Hartford Core Equity R5 (HGITX) Portfolio | Morningstar, Accessed February 12, 2022
[114] IBID
[115] IBID

Peers:

One equity fund that is also a Large Blend fund that is considered a peer to the Hartford Core Equity Fund Class R5 the T. Rowe Price Spectrum Diversified EQ (PRSGX). PRSGX is ranked in the 42nd percentile within the category of 1,409 total investments, which would rank it around 817th.[116] On the Morningstar rating, the fund is ranked as a 2-star fund, which is less favorable to the 5-stars that Morningstar has given the Hartford Core Equity Fund Class R5.[117] Another Fund that is found within the Large Blend Category and is considered a peer to HGITX is the Fidelity Total Market Index (FSKAX). This fund is ranked in the 72nd percentile which would rank this fund 395th out of the 1409 in total.[118] The Morningstar Analyst rating gives this index fund a 4-star rating, which is much more favorable in comparison to PRSGX, but not as favorable as the HGITX fund.[119] Within the last YTD, the fund has returned -7.65% to its investors.

Benchmark Graph:

[120]

[116] T. Rowe Price Spectrum Diversified Eq (PRSGX) Performance | Morningstar, Accessed February 12, 2022

[117] IBID

[118] Fidelity® Total Market Index (FSKAX) Performance | Morningstar, Accessed February 12, 2022

[119] IBID

[120] Hartford Core Equity Fund Class R% (HGITX). 3-Month performance compared to the S&P 500 Index. Source Bloomberg, COMP Function

The graph above represents the Hartford Core Equity Fund Class R5 (HGITX) in comparison to the S&P 500 Index over the last three months, beginning on 11/11/2021 to 2/11/2022. Based on the chart, the Hartford Core Equity Fund Class R5 returned -5.23% and the S&P 500 Index returned -4.64% over the same period. Based on the line chart, the two charts trend together, as they are together. [121]

Investment Thesis:

Knowing that I had already selected Starbucks and Biogen, I knew that I would have to find an Equity Fund that would help to average out my average beta closer to the 0.8 that I had anticipated. I was looking for a fund that primarily invests into large cap companies and has a beta that is lower than 1. When I found the Hartford Core Equity Fund Class R5, I was encouraged due to the fact that the fund produced a 19.93% return over the last three years, and some of its top holdings include large cap companies like Apple, Microsoft, JP Morgan & Chase Co, and UnitedHealth Group. The category of Large Blend matches my investment profile, which also gave me reasoning to believe that it would be a great investment.

Peer Analysis:

Peer Group:

Two funds that are like the Hartford Core Equity Fund Class R5 (HGITX) and the Fidelity Total Market Index (FSKAX), and the JHancock Fundamental Large Cap Core A. These funds are similar because they both are invested into Large-Cap companies and are categorized as Large Blend Funds.

The first fund that is like the Hartford Core Equity Fund Class R5 is the Fidelity Total Market Index. According to Morningstar, analyst have given the fund a 4- star rating out of five and ranks in the 59th percentile out of 1,409 funds and 3rd quartile within the last year to date as of 3/31/2022.[122] Some of the top holdings in the fund include Apple Inc, Amazon, Microsoft, and Tesla. The top sector weights for the fund include technology, financial services, and healthcare.

The second fund that is like the Hartford Core Equity Fund Class R5 is the JHancock Fundamental Large Cap Core A. According to Morningstar, analyst have given the fund a 3- star rating out of five and ranks in the 74th percentile out of 1,409 funds and 3rd quartile within the last year to date as of 3/31/2022.[123] Some of the top holdings in the fund include Apple Inc, Morgan Stanley, Alphabet Inc, and Amazon. The top sector weights for the fund include technology, consumer cyclical, and financial services.

Peer Top 10 Holdings and Sector Breakdown:

[121] IBID
[122] Fidelity® Total Market Index (FSKAX) Performance | Morningstar
[123] JHancock Fundamental Large Cap Core A (TAGRX) Quote | Morningstar

TAGRX:

Holdings	% Portfolio Weight	First Bought	Market Value USD as of Jan 31, 2022	Share Change %	1-Year Return
Apple Inc	7.52	Apr 30, 2012	449,354,486	0.00	49.00
Amazon.com Inc	7.45	Oct 31, 2011	445,229,455	0.00	8.86
Alphabet Inc Class A	6.43	Mar 31, 2009	384,232,173	0.00	38.72
Meta Platforms Inc Class A	5.23	Feb 28, 2014	312,790,110	0.00	-20.89
Cheniere Energy Inc	4.98	Dec 31, 2017	297,659,371	↓ 10.83	96.59
Lennar Corp Class A	4.90	Dec 31, 2011	292,990,951	0.00	-16.22
Morgan Stanley	4.83	Aug 31, 2012	288,773,148	↑ 12.11	17.23
Anheuser-Busch InBev SA/NV ADR	4.56	Jun 30, 2016	272,849,713	↑ 1.64	-3.34
CarMax Inc	4.04	Apr 30, 2020	241,411,658	↑ 32.05	-25.25
Workday Inc Class A	3.82	Dec 31, 2017	228,110,274	↑ 1.54	-0.69

[124]

	Sectors	Investment %	Cat %
Cyclical	Basic Materials	0.78	2.77
	Consumer Cyclical	17.83	11.13
	Financial Services	14.61	14.10
	Real Estate	3.18	2.46
Sensitive	Communication Services	17.29	9.27
	Energy	5.01	2.69
	Industrials	7.51	9.84
	Technology	18.72	24.70
Defensive	Consumer Defensive	7.37	6.84
	Healthcare	7.70	13.89
	Utilities	0.00	2.31

[125]

Technology, Consumer Cyclical, Communication Services, and Financial Services are the top four sectors that the fund is invested into. These four sectors hold 68.45% of the weight in the portfolio, and the rest of the sectors hold the remaining weight in the portfolio. This fund is very similar to HGITX fund, as this fund is also a majority of this fund is invested into the same sectors. The diversification chooses by these fund managers will most likely lead to these funds moving up and down in a similar pattern as time goes on.

---

[124] *TAGRX Morningstar Top 10 Holdings*
[125] *TAGRX Morningstar Sector Exposure*

The HGITX fund and the TAGRX fund have similar companies within their Top 10 Holdings. Within each, both companies are invested in Apple Inc, Amazon.com Inc, Alphabet Inc Class A, and Meta Platforms Inc Class A. These companies consist of TAGRX's top four holdings and hold a weight of 26.63% of the portfolio.

Within the last year, the some of the companies within the fund that have produced the highest return include Cheniere Energy, Alphabet Inc, Apple and Morgan Stanley. The companies that have had negative returns include CarMax Inc, Meta Platforms Inc, and Lennar Corp Class A.

FSKAX:

Holdings	% Portfolio Weight	First Bought	Market Value USD as of Jan 31, 2022	Share Change %	1-Year Return
Apple Inc	5.96	Feb 28, 1998	4,361,551,355	↑ 0.56	49.00
Microsoft Corp	5.11	Feb 28, 1998	3,738,224,652	↑ 0.56	36.39
Amazon.com Inc	2.85	Feb 28, 1998	2,089,030,254	↑ 0.56	8.86
Alphabet Inc Class A	1.78	Nov 30, 2004	1,302,244,772	↑ 0.24	38.72
Tesla Inc	1.67	Jun 30, 2010	1,220,104,028	↑ 0.56	72.11
Alphabet Inc Class C	1.66	Oct 31, 2015	1,216,026,826	↑ 0.91	38.79
Meta Platforms Inc Class A	1.62	May 31, 2012	1,186,887,946	↑ 0.57	-20.89
NVIDIA Corp	1.34	Feb 29, 2000	980,202,249	↑ 0.57	115.25
Berkshire Hathaway Inc Class B	1.25	Feb 28, 2010	917,102,899	↑ 0.54	38.51
Johnson & Johnson	0.99	Feb 28, 1998	726,270,060	↑ 0.55	11.41

126

[126] *FSKAX Morningstar Top 10 Holdings*

	Sectors	Investment %	Cat %
Cyclical	Basic Materials	2.39	2.77
	Consumer Cyclical	11.79	11.13
	Financial Services	13.81	14.10
	Real Estate	3.67	2.46
Sensitive	Communication Services	9.21	9.27
	Energy	3.33	2.69
	Industrials	8.70	9.84
	Technology	25.62	24.70
Defensive	Consumer Defensive	5.97	6.84
	Healthcare	13.02	13.89
	Utilities	2.46	2.31

[127]

Technology, Financial Services, Healthcare, and Consumer Cyclical are the top four sectors that the fund is invested into. These four sectors hold 64.24 % of the weight in the portfolio, and the rest of the sectors hold the remaining weight in the portfolio. This fund is very similar to HGITX fund, as this fund is also a majority of this fund is invested into the same sectors. This fund is very concentrated into the technology sector, as this sector weighs for 25.62% of the fund. The HGITX fund also is highly concentrated into this sector, as technology weighs for 26.74% of that fund.

The HGITX fund and the FSKAX fund have similar companies within their Top 10 Holdings. Within each, both companies are invested in Apple Inc, Amazon.com Inc, Alphabet Inc Class A, and Microsoft Corp. These companies consist of FSKAX's top four holdings and hold a weight of 20.54% of the portfolio.

Within the last year, the some of the companies within the fund that have produced the highest return include NVIDIA Corp, Alphabet Inc Class A, Tesla, and Berkshire Hathaway Inc Class B. One company that had a negative return within the last year is Meta Platform Inc.

---

[127] *FSKAX Morningstar Sector Exposure*

Performance of Peer Group:

Total Return	1Y	3Y	5Y	10Y
HGITX	13.52%	18.16%	16.14%	15.17%
TAGRX	13.03%	19.67%	14.35%	13.18%
FSKAX	14%	18.73%	15.64%	14.39%

[128]

In terms of total return for 1Y, 3Y, 5Y, and 10Y, the funds were all within the same ballpark of each other. For the returns for 1Y FSKAX had the highest return, and for 3Y TAGRX had the highest return. For the 5Y and 10Y returns, HGITX was able to return the highest output in comparison to the peers. Over the 5Y period HGITX returned 16.14% and 15.17% in the 10Y period. After analyzing the sector distribution by each fund, it would make sense that these funds have produced similar returns in these time periods.

[128] *Peer Group Performance. Source: Bloomberg, Comp Function*

Ratio Analysis:

HGITX:

	3 Years		5 Years		10 Years	
	HGITX	Category Average	HGITX	Category Average	HGITX	Category Average
Alpha	1.08	-0.02	0.34	-0.01	1.14	-0.02
Beta	0.95	0.01	0.95	0.01	0.95	0.01
Mean Annual Return	1.6	0.01	1.42	0.01	1.27	0.01
R-squared	99.09	0.95	98.27	0.95	97.34	0.95
Standard Deviation	17.73	0.19	14.4	0.15	13.09	0.14
Sharpe Ratio	1.01	0.01	1.1	0.01	1.12	0.01
Treynor Ratio	18.78	0.16	16.9	0.15	15.57	0.12

[129]

TAGRX:

	3 Years		5 Years		10 Years	
	TAGRX	Category Average	TAGRX	Category Average	TAGRX	Category Average
Alpha	-2.94	-0.02	-3.52	-0.01	-3.47	-0.02
Beta	1.25	0.01	1.23	0.01	1.21	0.01
Mean Annual Return	1.65	0.01	1.5	0.01	1.33	0.01
R-squared	96.61	0.95	95.76	0.95	94.04	0.95
Standard Deviation	23.47	0.19	18.75	0.15	16.75	0.14
Sharpe Ratio	0.79	0.01	0.9	0.01	0.91	0.01
Treynor Ratio	13.89	0.16	13.4	0.15	12.33	0.12

[130]

FSKAX:

[129] *HGITX Risk Statistics. Source: Yahoo! Finance*
[130] *TAGRX Risk Statistics. Source: Yahoo! Finance*

	3 Years		5 Years		10 Years	
	FSKAX	Category Average	FSKAX	Category Average	FSKAX	Category Average
Alpha	-0.65	-0.02	-0.38	-0.01	-0.63	-0.02
Beta	1.05	0.01	1.04	0.01	1.04	0.01
Mean Annual Return	1.59	0.01	1.48	0.01	1.23	0.01
R-squared	99.44	0.95	99.3	0.95	99.25	0.95
Standard Deviation	19.45	0.19	15.67	0.15	14.17	0.14
Sharpe Ratio	0.92	0.01	1.06	0.01	1	0.01
Treynor Ratio	16.67	0.16	16.06	0.15	13.53	0.12

[131]

Alpha Ratio:

HGITX has the highest alpha of its peers for the 3Y average at 1.08 while TAGRX's alpha is -2.94 and FSKAX's alpha is -0.65. HGITX is the only fund of the three peers that outperformed the category average of -0.06. For the 5Y average, HGITX produced the highest alpha at 0.34, with TAGRX having -3.52 and FSKAX having -0.38. Like the 3Y average, HGITX was the only fund able to outperform the category average at -0.01. For the 10Y average, HGITX produced the highest alpha at 1.14, with TAGRX having -3.47 and FSKAX having -0.63. Like the 3Y and 5Y average, HGITX was the only fund able to outperform the category average at -0.02 over the 10-year period. The alpha is an investment term used to describe the investment's ability to "edge" the market.

Sharpe Ratio: Out of the three peers, HGITX has able to produce the highest Sharpe ratio in the 3Y, 5Y, and 10Y span, with values of 1.01, 1.1 and 1.12, respectively. The fund with the next highest was FSKAX, which had ratios of 0.92, 1.06, and 1, respectively. Lastly. The TAGRX had the lowest ratio of the three funds, as they outputted ratios of 0.79, 0.9, and 0.91, respectively. The average for the category was 0.01 for the 3Y, 5Y, and 10Y period. Though TAGRX had the lowest of the ratios, their ratio numbers are noticeably higher than the other companies within the category. You can calculate the Sharpe ratio by taking the average return, minus the risk-free return and dividing it by the standard deviation of the return.

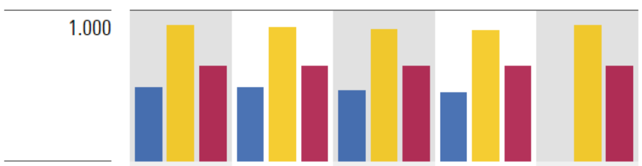
Treynor Ratio: When comparing the three peers, HGITX has able to produce the highest Treynor ratio in the 3Y, 5Y, and 10Y span, with values of 18.78, 16.9 and 15.57, respectively. The fund with the next highest Treynor ratio was FSKAX, which had ratios of 16.67, 16.06, and 13.53, respectively. Lastly. The TAGRX had the lowest ratio of the three funds, as they outputted ratios of 13.89,16.06, and 13.53 respectively. The average for the category was for the 3Y, 5Y, and 10Y period were 0.16, 0.15, and 0.12, respectively. Though TAGRX had the lowest of the ratios, their ratio numbers are noticeably higher than the other companies within the category. The Treynor ratio is calculated by taking the average return, minus the risk- free return, and dividing by the beta of the investment.

[131] *FSKAX Risk Statistics. Source: Yahoo! Finance*

Expense Analysis:

HGITX:

Historical Expense Ratio %



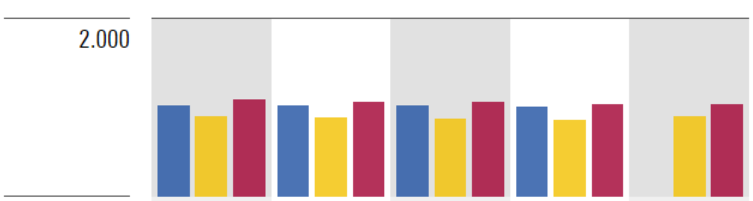
	2018	2019	2020	2021	2022
Investment	0.490	0.490	0.470	0.460	—
Category Average	0.905	0.888	0.878	0.867	0.900
Comparison Group	0.630	0.630	0.630	0.630	0.630

[132]

HGITX has an average fee level. The fund has no front load, no deferred load, no redemption load, and no minimum investment. The fund's net expense ratio is 0.46, 0.17 less than large cap no load funds. It has a management actual fee of 0.33%, a management maximum fee of 0.45%, no administrative maximum fee, no 12b-1 fee, and no expense waivers fee. The 3Y tax cost ratio is 0.62 for HGITX while the category's is 1.59.

TAGRX:

Historical Expense Ratio %



	2018	2019	2020	2021	2022
Investment	1.020	1.020	1.030	1.010	—
Category Average	0.905	0.888	0.878	0.867	0.900
Comparison Group	1.090	1.070	1.060	1.040	1.040

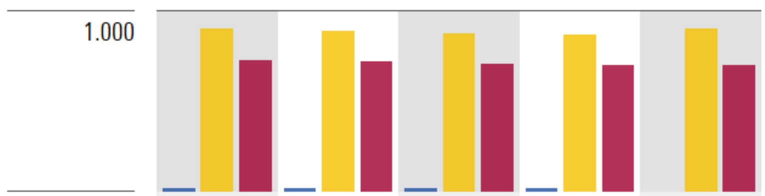
[132] *HGITX Historical Expense Ratio % - Price. Source: Morningstar*

[133]

TAGRX has an average fee level. The fund has a front load of 10%, but has no deferred load, no redemption load, and a minimum initial investment of $1,000. According to Morningstar, the fund’s net expense ratio is 1.030, just .01 less than the average Large Cap fund with a front load. TAGRX has a management actual fee of 0.62%, a management maximum fee of 0.63%, a 0.25% 12b-1 fee, but has no administrative maximum fee. The 3Y tax cost ratio is 0.68 for TAGRX, which is less than the category average of 1.59.

FSKAX:

Historical Expense Ratio %



	2018	2019	2020	2021	2022
Investment	0.020	0.020	0.020	0.020	—
Category Average	0.905	0.888	0.878	0.867	0.900
Comparison Group	0.730	0.720	0.710	0.700	0.700

[134]

FSKAX has a very low fee level in comparison to its peers. The fund has but has no loads and has no minimum investment. According to Morningstar, the fund’s net expense ratio is 0.015, which is low in comparison to the 0.700 average for Large Cap Institutional funds. FSKAX has a management actual fee of 0.02%, a management maximum fee of 0.02%, but has no administrative maximum fee, 12b-1 maximum fee, or expense waivers. The 3Y tax cost ratio is 0.37 for FSKAX, which is less than the category average of 1.59.

Conclusion of Expenses Analysis:

Based on the information and charts provided above, the fund with the lowest amount of fees is the FSKAX fund. The fund has no minimum investment value, and has a low amount of expenses that come with the fund. The next lowest expenses out of the three is the HGITX fund, which also doesn’t have a minimum investment, and has lower expenses than TAGRX, which

[133] *TAGRX Historical Expense Ratio % - Price. Source: Morningstar*
[134] *FSKAX Historical Expense Ratio % - Price. Source: Morningstar*

has the most expenses. Out of the three funds, TAGRX is the only fund to have a front load, which they list theirs at 10%. A front load is a fee that investors will pay at the time they purchase a mutual fund. The TAGRX fund has reasonable fees but has the most in comparison to the other peers.

Best Peer:

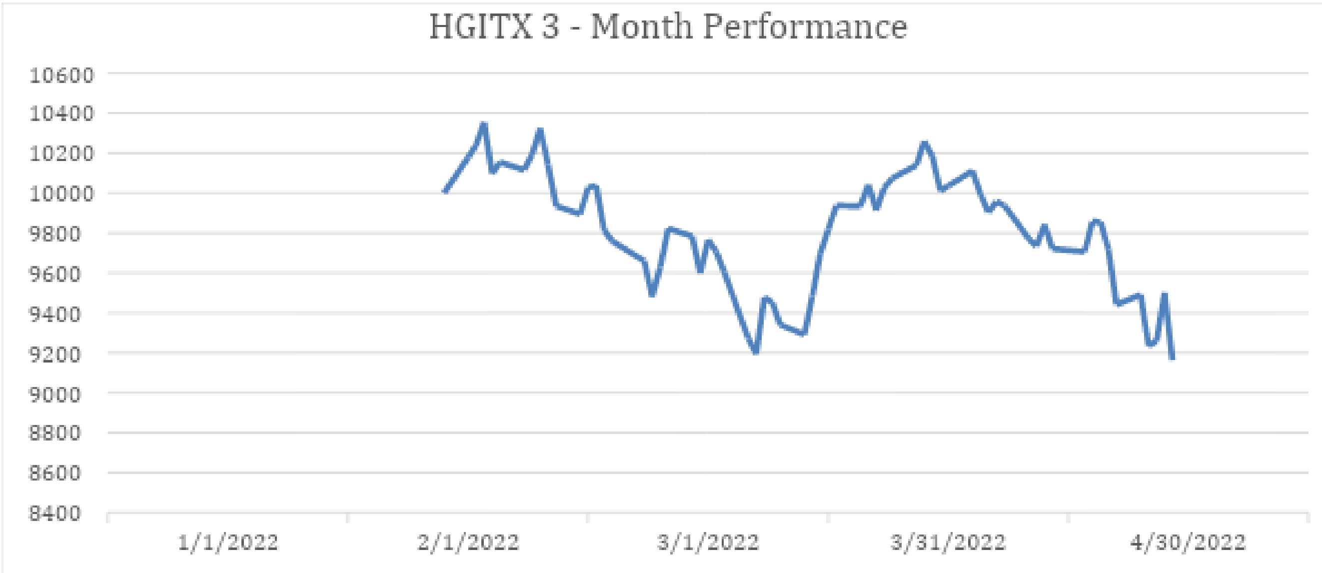
Based on the information gather on the three funds, HGITX, TAGRX, and FSKAX, the fund that is the most favorable is HGITX. In comparison to the peers, HGITX has able to produce the highest return over 5Y and 10Y spans. This means that the fund has been able to produce solid returns over long periods of time. In comparison to the peers, HGITX has fair fees and expenses that their investors would have to pay. They have no minimum investment fee, which allows all types of investors to determine the amount they would like to invest. Given the chances that you will produce a solid return over a long period of time, and having low fees and expenses, The HGITX fund seems like the best choice at this time.

Company News:
There is no recent company news for the HGITX fund.

Beta Analysis:

A stock's beta informed an investor how volatile a stock is in comparison to the overall market. Since January HGITX's beta has increased from 0.95 to 0.96. This means that HGITX fund is just slightly more sensitive to the market than it was on January 28th, 2022. This is encouraging, as it means that it has remained consistent with my investment profile. The slight change in beta is sometime that I am willing to take on.

HGITX Fund Portfolio Value:



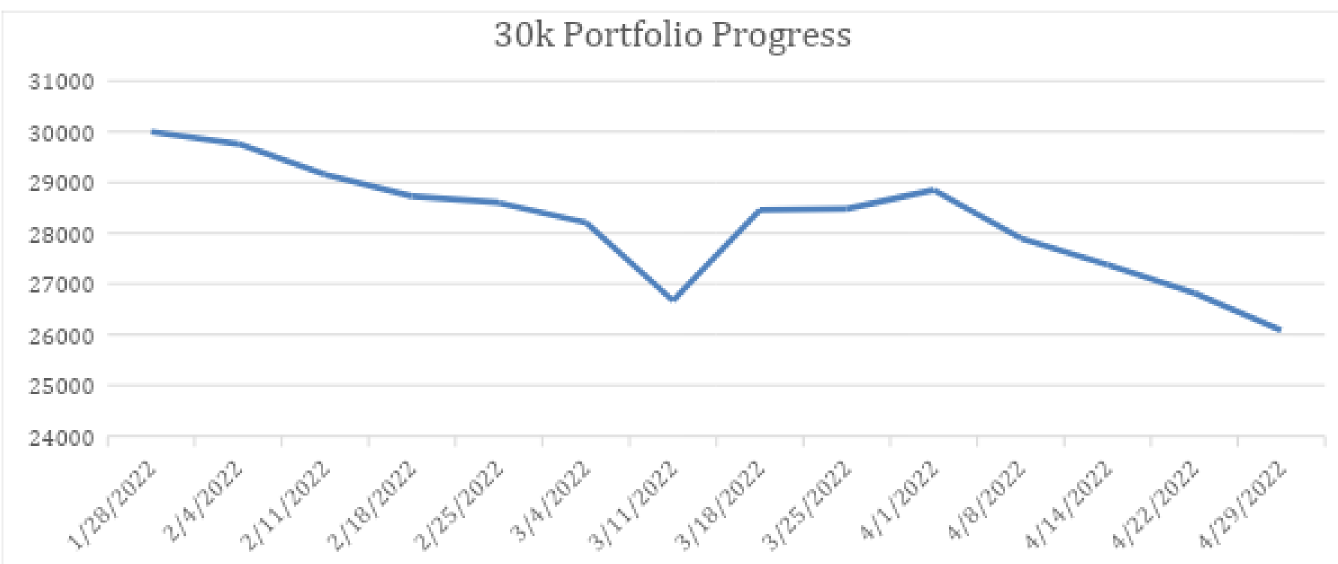
Purchase Price as of 1/28/2022	**46.7**
Quantity Purchased	**214.13**
Initial Investment	**10000**
Price as of 4/29/2022	**42.79**
Dividend on 2/10/2022	**-**
Dividend * Shares	**-**
Stock Appreciation Return	**9162.7409**
Dollar Return	**-837.259101**
Total Dollar Return Including Dividend	**-837.259101**
Percent Return	**-8.37%**
EAR	**-29.51%**

The table and chart listed above show the performance of my $10,000 investment in HGITX fund from 1/28/2022 to 4/29/2022. Adjusted closing prices from Yahoo Finance were the numbers I used to calculate these returns. On 1/28/2022, I purchased $10,000 worth of the fund at $46.70 equating to 214.13 shares. As of 4/29/2022, the price is listed at $42.79, equating to a -8.37% return. The effective annual rate for the fund was -29.51%, which is much lower than my required rate of return, and my expected rate of return. If I was to hold onto the fund shares for another three months, I am confident that the stock price would rise back up, as most of the market is currently down.

Final Assessment:

When I initially invested in the Hartford Core Equity Fund Class R5, I calculated the expected rate of return to be 19.93%, which was significantly higher than my required rate of return of 8.36%. I originally invested in this fund because its beta matched perfectly with my investor profile. Based on the three-month graph, you can see that the fund price hovered around $46.70 for the first two months, and then consistently dropped from March 25th and on. It was disappointing that that this fund was unable to match it's expected rate of return of 19.93%. Looking back, I wish I had invested into another fund. Clearly, the holdings that the Hartford Core Equity Fund Class R5 underperformed over the course of the last three months. The entire stock market over that time has underperformed, so it is expected that this fund would match it. If I were to have purchased $10000 worth of shares on 4/29/2022, I believe we would have seen a higher return than the previous three-month span.

Portfolio



Portfolio	
Initial Investment	30,000

Value on 4/29/2022	**26090.8211**
Percent Return	**-13.03%**
EAR	**-34.22%**

This above is the graph and chart of the progression of my three-security portfolio of Starbucks stock, Biogen stock, the Hartford Core Equity Fund Class R5. I initially invested 10,000 into each security and watched the progress of the three over the course of one fiscal quarter. Based on the graph you can see that the stocks never increased above the $30,000 mark after I purchased them. On 4/29/2022, the value of my portfolio equated to $26,090.82 which equates to a -13.03% return over the three months, and an effective annual return of -34.22%. These returns are significantly lower than my expected rate and required rate of return, meaning that these were bad investments. Looking back, I wish I found three different securities that still would have matched my investor profile.

Beta Changes

Portfolio Beta			
	1/28/2022	4/29/2022	Difference
SBUX	0.89	0.90	0.01
BIIB	0.44	0.44	0
HGITX	0.95	0.96	0.01
Beta Average	**0.76**	**0.766666**	

Original Return Projection

Starbucks: E_R = ($1.96 + $116.42 - $96.72) / $96.72 = 22.39%

Biogen: E_R = ($272.90 - $225.21) / $225.21 = 21.17%

HGITX: 19.93% (Three- Year Return)

Current Return Projection:

Starbucks: E_R = ($1.96 + $105.06 - $74.64) / $74.64 = 43.38%

Biogen: E_R = ($244.08 - $207.44) / $207.44 = 17.66%

HGITX: 12.54% (Three- Year Return)

10- Year T-Bond Rate:

Rate on 1/28/2022: 1.78%

Rate on 4/29/2022: 2.885%

Over the three-month span, the T-Bond rate increased by over 1%. This is increasing because investors feel that they can find other higher returning investments elsewhere. This is encouraging information, as the market struggled in the last quarter, and investors believe that the market will recover in the next quarter.

Final Performance Thoughts

Entering the three-month period where I was going to watch my securities progress, I had the expectation that all my securities would meet their expected returns. I was confident that the securities that I chose could meet their expectations, or even higher. As the quarter went forward, I was quickly losing confidence in my securities, as all of them almost never progressed upward after I purchased them. There are lots of reasons to why the stock market has struggled recently. The United States has been dealing with the highest inflation they've seen in 40 years, and the war in Ukraine and Russia has caused uncertainty within the market. These events are something investors and businesses can't predict and can be viewed as examples of unsystematic risk. Over the three months I learned about how the investment process works. I am glad that I was able to make investment with fictitious money, instead of my actual money. This is great practice for me as I have experience under my belt now, and I can learn from my mistakes, and change my strategy in the future. If I were to have picked different securities, I'm not sure I would have done much better than how my securities performed. I am excited to have the opportunity to use the knowledge I gained from this assignment to use in the real-world market.

Citations

TAGRX Historical Expense Ratio % - Price. Source: Morningstar
FSKAX Historical Expense Ratio % - Price. Source: Morningstar

HGITX Historical Expense Ratio % - Price. Source: Morningstar

FSKAX Risk Statistics. Source: Yahoo! Finance

HGITX Risk Statistics. Source: Yahoo! Finance
TAGRX Risk Statistics. Source: Yahoo! Finance

Peer Group Performance. Source: Bloomberg, Comp Function

FSKAX Morningstar Sector Exposure

FSKAX Morningstar Top 10 Holdings

TAGRX Morningstar Top 10 Holdings
TAGRX Morningstar Sector Exposure

Hartford Core Equity Fund Class R% (HGITX). 3-Month performance compared to the S&P 500 Index. Source Bloomberg, COMP Function

Fidelity® Total Market Index (FSKAX) Performance | Morningstar

JHancock Fundamental Large Cap Core A (TAGRX) Quote | Morningstar

T. Rowe Price Spectrum Diversified Eq (PRSGX) Performance | Morningstar, Accessed February 12, 2022

Fidelity® Total Market Index (FSKAX) Performance | Morningstar

Hartford Core Equity R5 (HGITX) Portfolio | Morningstar

Hartford Core Equity R5 (HGITX) Performance | Morningstar

INSFS_DSCEQ.pdf (hartfordfunds.com)

Doug W. McLane, CFA (hartfordfunds.com),

MF7351.pdf (hartfordfunds.com)

Hartford Core Equity Fund (hartfordfunds.com), Accessed February 11, 2022
Mammen Chally, CFA (hartfordfunds.com), Accessed February 11, 2022
Dave A Siegle, CFA (hartfordfunds.com), Accessed February 11, 2022

Biogen. Short Interest. Source: Bloomberg, SI Function (Updated 3/25/2022)

Biogen. Insider Transactions. Source: Bloomberg, HDS Function (Updated 3/25/2022)

Inline XBRL Viewer (sec.gov)

Starbucks Co. Security Ownership. Source Bloomberg HDS function
Schedules 13D and 13G | Investor.gov, Accessed February 11, 2022

Section 16 Reporting Requirements as Amended by the Sarbanes-Oxley Act: Olshan Frome Wolosky (olshanlaw.com), Accessed February 11, 2022
Starbucks Co. Security Ownership. Source Bloomberg HDS function

Biogen Inc. 3-Month performance compared to S&P 500 Healthcare Sector Index and S&P 500 Index. Source Bloomberg, COMP Function

Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022
Board of Directors Bio (biogen.com), Accessed February 10, 2022

Inline XBRL Viewer (sec.gov)

Board of Directors Bio (biogen.com)

Biogen Inc. Peer Group. Source Bloomberg, RV Function

Biogen Inc. Porter Five (5) Forces & Industry Analysis [Strategy] (fernfortuniversity.com), Accessed February 11, 2022

S&P 500 Map (finviz.com)

About Biogen

Starbucks. Option Interest. Source: Bloomberg, MOSO Function (Updated 3/25/2022)

Inline XBRL Viewer (sec.gov)

Inline XBRL Viewer (sec.gov)

Starbucks Co. Security Ownership. Source Bloomberg HDS function.

Schedules 13D and 13G | Investor.gov, Accessed February 10, 2022

Starbucks Co. Security Ownership. Source Bloomberg HDS function.

Section 16 Reporting Requirements as Amended by the Sarbanes-Oxley Act: Olshan Frome Wolosky (olshanlaw.com), Accessed February 10, 2022

Starbucks Co. 3-Month performance compared to S&P 500 Consumer Discretionary Sector Index and S&P 500 Index. Source Bloomberg, COMP Function

Joshua Cooper Ramo - Biography (marketscreener.com), Accessed February 10, 2022

Clara Shih, CEO and founder of Hearsay Systems – PCMA.org, Accessed February 10, 2022

Javier Teruel | Directors and BoardsJavier Teruel | Directors and Boards

Richard Allison, Jr. | Board Member | Domino's Pizza (dominos.com), Accessed February 10, 2022
Andrew Campion - Biography (marketscreener.com), Accessed February 10, 2022

Mary Dillon - Biography (marketscreener.com), Accessed February 10, 2022

https://www.apple.com/leadership/isabel-ge-mahe/, Accessed February 10, 2022

Jorgen Vig Knudstorp | IMD Business School, Accessed February 10, 2022

Satya Nadella - Stories (microsoft.com), Accessed February 10, 2022

Leadership - Starbucks Stories , Accessed February 11, 2022

Ariel Investments - Mellody Hobson , Accessed February 11, 2022

Starbucks Coffee Five Forces Analysis (Porter's Model) & Recommendations - Panmore Institute, Accessed February 10,2022

Kevin Johnson (starbucks.com), Accessed Februay 11, 2022

Starbucks Co. Peer Group. Source Bloomberg, RV Function

Porter's Five Forces Analysis of Starbucks - notesmatic, Accessed February 10,2022

Company Profile - Starbucks Stories , Accessed February 10, 2022

S&P 500 Map (finviz.com), Accessed, May 1 2022

Starbucks | Description, History, & Facts | Britannica , Accessed February 10, 2022