Financial Analysis Report

(Meta, Apple, Disney, and Equifax)

Financial Summary

META

All Values are in Millions(Except for share amounts)

META Financial Summary	2022	2021	% Change
Revenue	$116,609	$117,929	-1.12%
EBIT	$33,555	$46,753	-28.23%
Net Income	$23,200	$39,370	-41.07%
Total Assets	$185,727	$165,987	11.89%
Total Debt	$27,132	$14,364	88.89%
Cash and cash equivalents	$14,975	$16,750	-10.60%
Cash from Operations	$50,475	$57,683	-12.50%
Cash from Investing Activities	($28,970)	($7,570)	282.69%
Cash From Financing Activities	$(22,136)	($50,758)	-56.36%
Diluted EPS	$8.59	$13.77	-37.62%

Sources:

https://www.sec.gov/Archives/edgar/data/1326801/000132680123000013/meta-20221231.htm

https://www.wsj.com/market-data/quotes/META

APPLE

All Values are in Thousands (Except for share amounts)

Apple Financial Summary	2022	2021	% Change
Revenue	$387,537,000	$365,817,000	5.6%
EBIT	$122,034,000	$111,852,000	8.34%
Net Income(billions)	$99,803,000	$94,680,000	5.13%
Total Assets	$352,755,000	$351,002,000	.50%
Total Debt	$120,069,000	$124,719,000	-3.87%
Cash and cash equivalents	$23,646,000	$34,940,000	-47.6%
Cash from Operations	$122,151,000	$104,038,000	14.83%
Cash from Investing Activities	($22,354,000)	-$14,454,000	34.93%
Cash From Financing Activities	$(110,749,000)	($93,353,000)	15.71%
Diluted EPS	$6.11	$5.61	

Sources:

https://investor.apple.com/sec-filings/sec-filings-details/default.aspx?FilingId=17028298

https://finance.yahoo.com/quote/AAPL.MI/financials/

https://finance.yahoo.com/quote/AAPL/

DISNEY

(All numbers in billions, except EPS)

Walt Disney (DIS) Financial Summary	**2022**	**2021**	**% Change**
Revenue	82.72	67.42	22.7%
EBIT	6.68	3.97	68.4%
Net Income	2.25	3.15	-28.4%
Total Assets	203.63	203.61	0.01%
Total Debt	48.37	54.41	-11.1%
Cash and Cash Equivalents	11.62	15.96	-27.2%
Cash from Operations	6.01	5.57	8.0%
Cash from Investing Activities	-5.01	-3.16	58.3%
Cash from Financing Activities	-4.74	-4.39	8.1%
Diluted EPS	1.72	1.09	57.8%

Source: https://finance.yahoo.com/quote/DIS/cash-flow?p=DIS

EQUIFAX

EQUIFAX	2022(billions)	2021(billions)	% Change
Revenue	5122.2	4923.9	+ 4.03%
EBIT	688.5	597.7	+ 15.19
Net Income	700.2	748.5	- 6.45%
Total Assets	11547.9	11040.9	+ 4.59%
Total Debt	5787.3	5294.9	+ 9.29%
Cash and Cash Equivalents	285.2	224.7	+ 26.92%
Cash from operations	757.1	1334.8	- 43.28%
Cash from Investing Opportunities	959.5	3398.2	- 71.76%
Cash from Financing Activities	273.7	617.7	- 55.69%
Diluted EPS	128.09	127.62	+ .37%

Sources:

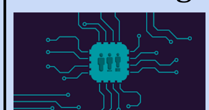
https://finance.yahoo.com/quote/EFX?p=EFX&.tsrc=fin-srch

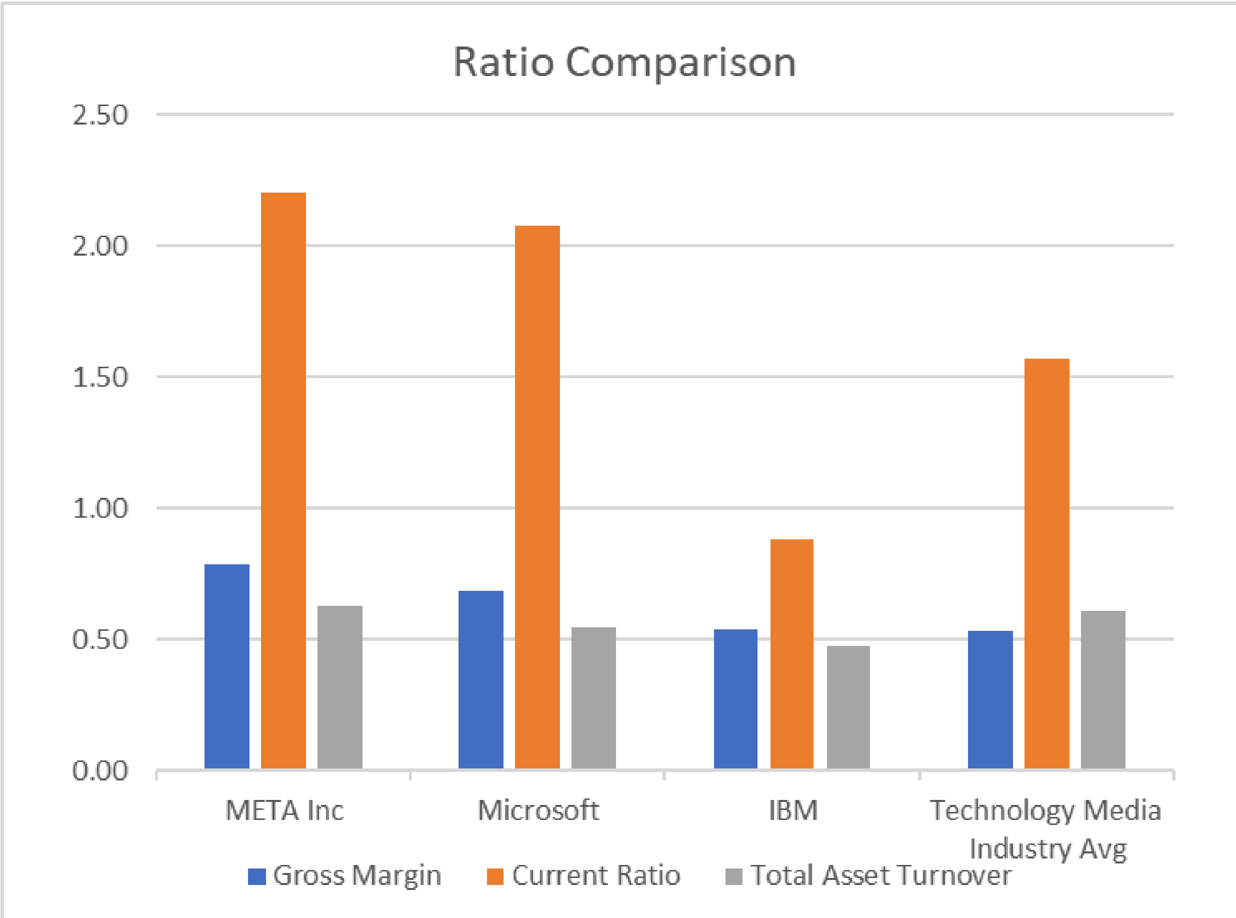
https://finance.yahoo.com/quote/HRB?p=HRB&.tsrc=fin-srch

Financial Ratio Analysis

Meta

All Values are in Thousands (Except for share amounts)

	META	IBM	Microsoft	Tech Industry Average 
Current Ratio (Current Assets/Current Liabilities)	59549/27026 = **2.20**	29539/33619 = **.88**	184406/88657 = **2.0799**	**1.57**
Gross Margin (Profitability)	91390/11660 = **.78**	32687/60530 =**.68**	135620/198270 = **.6841**	**.53**
Total Asset Turnover (Working Capital and Efficiency)	116609/185727 = **.62**	60530/127243 =**.8680**	198270/364840 = **.54344**	**.61**



Source:https://csimarket.com/Industry/industry_Profitability_Ratios.php?s=1000&hist=2

Ratio Analysis

The provided ratios for META Inc, Microsoft, IBM, and the Technology Media Industry Average offer valuable insights into the financial health and performance of these companies in the technology and media industry.

Gross Margin:

META Inc has the highest gross margin among the companies listed, indicating that it is effectively managing its production and operating costs. This suggests that META Inc may have a strong competitive advantage or a unique market position that allows it to command higher prices for its products or services.

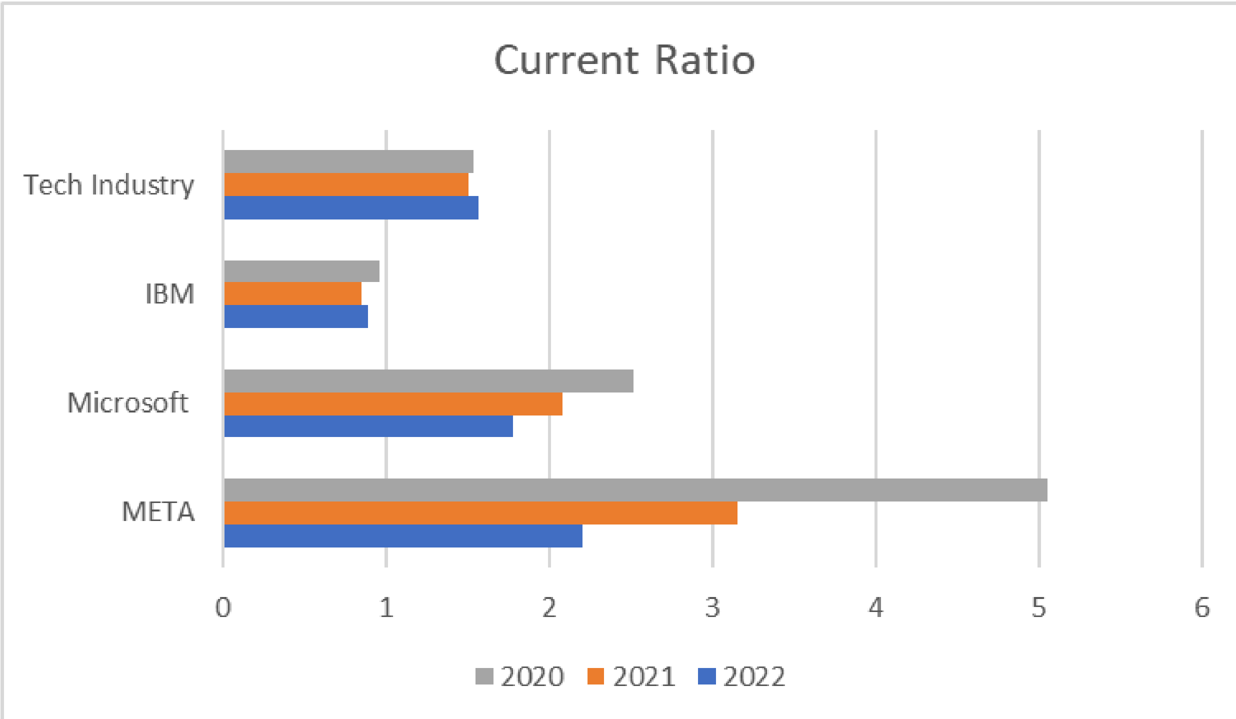
Microsoft also has a healthy gross margin, indicating efficient cost management and pricing power.

IBM's gross margin is lower than both META Inc and Microsoft, suggesting that it may face more significant cost challenges or pricing pressures in its market.
The industry average gross margin is 0.53, and all three companies exceed this benchmark, indicating a relatively profitable industry segment.

Current Ratio:
META Inc and Microsoft both have current ratios above 2, which signifies their strong liquidity positions. They have more than enough current assets to cover their short-term liabilities. This is a positive sign for their ability to meet immediate financial obligations.
IBM, on the other hand, has a current ratio of 0.88, which is below 1. This suggests that IBM may face challenges in covering its short-term obligations with its current assets, and it might need to manage its working capital more effectively.
The industry average current ratio is 1.57, indicating that, on average, companies in the industry are in a better position to meet their short-term financial obligations than IBM.

Total Asset Turnover:
META Inc has the highest total asset turnover, suggesting that it generates more revenue for every dollar of assets invested. This indicates efficient asset utilization and revenue generation.
Microsoft also has a respectable total asset turnover, showing effective use of its assets to generate revenue.
IBM lags behind both META Inc and Microsoft in this regard, indicating that it may have a less efficient use of assets in generating revenue.
The industry average for total asset turnover is 0.61, and both META Inc and Microsoft surpass this average, indicating their strong performance in this aspect.
In summary, these ratios reveal that META Inc and Microsoft have strong financial positions, with high gross margins, healthy liquidity (current ratio), and efficient use of assets (total asset turnover). IBM, on the other hand, lags behind in terms of current ratio and total asset turnover, indicating potential areas for improvement. The industry average provides a benchmark against which these companies can be compared, and in most cases, META Inc and Microsoft outperform the industry average, suggesting their competitiveness in the technology and media sector.

Ratio Over Time:

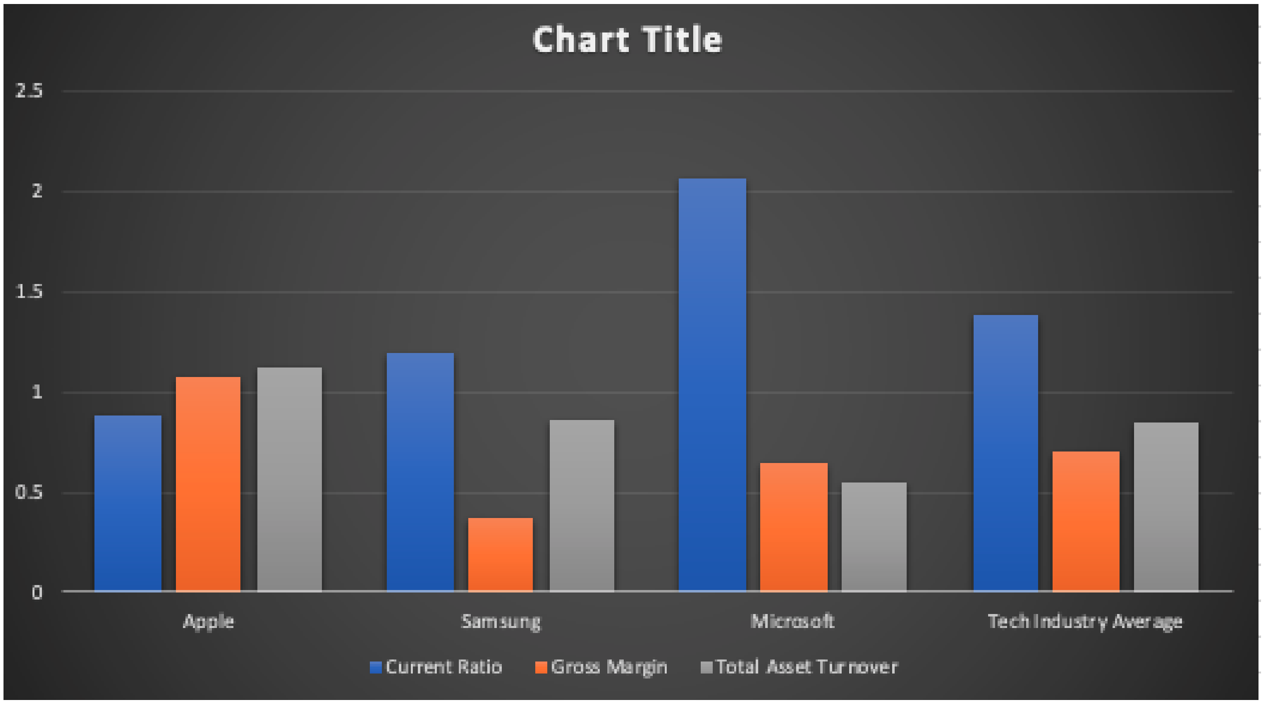


Horizontal Analysis:
The current ratio, a key liquidity indicator, measures a company's ability to cover its short-term liabilities with its short-term assets. Over the past three years, we've seen varying trends in the current ratios of META, Microsoft, IBM, and the overall tech industry. In 2020, META had a robust current ratio of 5.05, indicating a strong ability to cover its short-term obligations. However, this ratio has been on a downward trend, falling to 2.2 by 2022. This could suggest that META's short-term financial health may have weakened over this period. Microsoft's current ratio also saw a decrease from 2.52 in 2020 to 1.78 in 2022. While this is still a healthy ratio, the downward trend might indicate a slight weakening in Microsoft's short-term debt-paying ability. IBM's current ratio remained relatively stable, hovering around 0.9. This stability suggests that IBM's short-term financial position hasn't changed significantly over the past three years.The tech industry as a whole saw a slight increase in its average current ratio, from 1.54 in 2020 to 1.57 in 2022. This suggests a marginal improvement in the industry's overall ability to cover short-term liabilities. It's important to note that these trends occurred during the COVID-19 pandemic, which had significant impacts on the tech industry and their financials.

Apple Inc. (Refik)

All values are in thousands (Except for share amounts)

	Apple	Samsung	Microsoft	Tech Industry Average
Current Ratio (Current Assets/Current Liabilities)	135,405,000/153,982,000 = **0.8793**	112,189,590/93,674,903 = **1.1976**	184,406,000/88,657,000 = **2.0799**	**1.382**
Gross Margin (Profitability)	170,782,000/394,328,000 = **1.0746**	112,189,590/302,231,360 **=.3712**	135,620,000/198,270,000 = **.6841**	**.7084**
Total Asset Turnover (Working Capital and Efficiency)	394,328,000/352,755,000 = **1.11792**	112,189,590/129,243000 **=.8680**	198,270,000/364840,000 = **.54344**	**.8434**



Current Ratio: I chose to evaluate my company and the industry average using the Current Ratio for liquidity. This ratio is computed by dividing current assets by current liabilities (assets/liabilities), distinct from total assets and total liabilities.

I opted for the Current Ratio for liquidity because it assesses a company's capacity to meet short-term obligations, specifically those due within a year. This ratio holds significant importance for publicly traded companies as it demonstrates their ability to honor debts and dividends in the short term, enhancing their attractiveness to investors.

Upon analyzing this ratio, I observed that Apple Inc. ranked among the lower end of comparable companies and the industry average, with a Current Ratio of .8794. Samsung was the sole company with a lower ratio at 1.1976, while Microsoft maintained a different position in this regard with their ratio being 2.0799

Based on the current ratios of these companies, it appears that Microsoft is the most likely to meet its short-term debts, whereas Apple Inc. and Samsung are less likely, with their ratios hovering at nearly half of the industry average.

Gross Margin:

I began my analysis by focusing on the gross margin profitability ratio, which I compared across my primary company, Apple Inc., two comparable firms, Microsoft and Samsung, and the Technology Industry average. This ratio is derived by dividing the gross profit by the total sales, both of which were sourced from the companies' financial statements.

The gross margin ratio for profitability serves as a reliable gauge of the amount of money a company retains after deducting all direct costs associated with producing or acquiring the goods or services it sells. A higher gross margin indicates the company's greater capacity to cover its indirect costs.

In my ratio comparison, I discovered that Samsung Inc. actually had the lowest gross margin ratio among the three firms, standing at 0.3712, as well as below the industry average of 0.7304. In contrast, Microsoft significantly exceeded the industry average with a ratio of 0.684, while Apple was slightly above the average at 1.0476.

This ratio analysis indicates that, based on the gross margin, the two comparable firms, Samsung and Microsoft, are expected to be more profitable than Apple Inc. It suggests that both Samsung and Microsoft have more financial resources available for expenditure after covering the direct costs associated with their goods.

Total Asset Turnover:

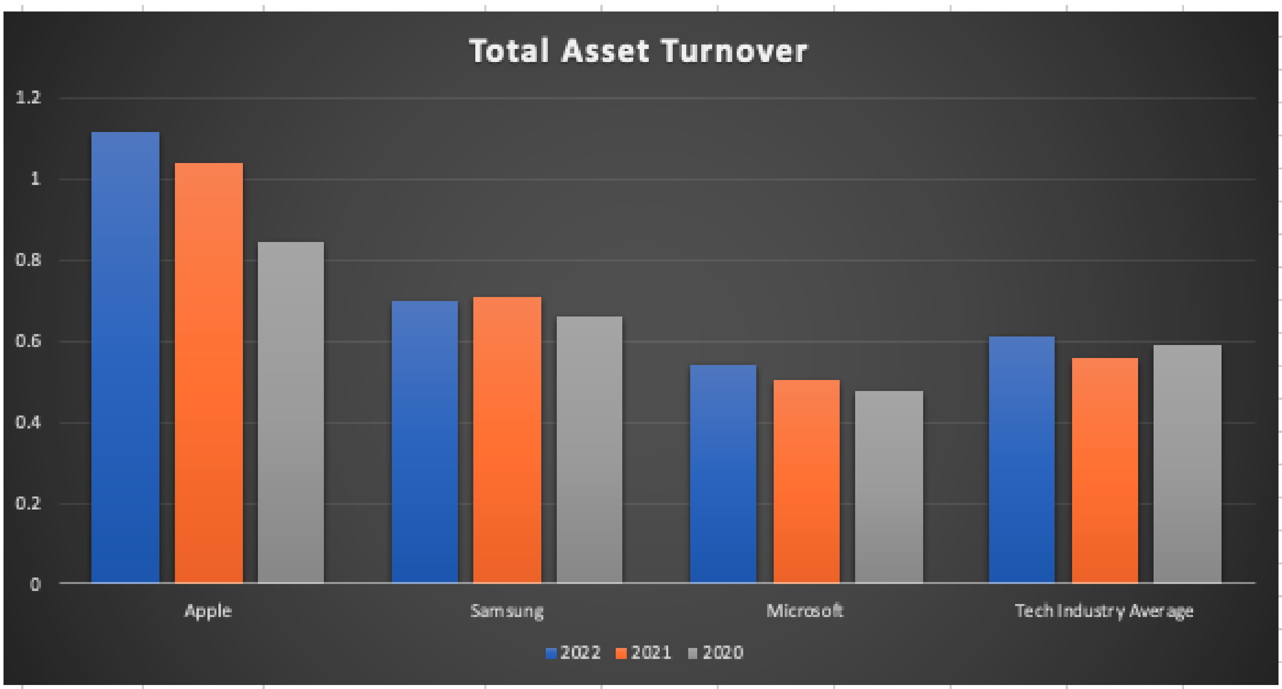
The final ratio I selected for comparison among the three firms and the industry average is the Total Asset Turnover ratio, focusing on Efficiency and Working Capital. This ratio is computed by dividing the net sales by the total assets of a company, with the data sourced from the financial statements of each firm, as referenced below.

I opted for the Total Asset Turnover ratio for Efficiency and Working Capital as it serves to assess how efficiently a company utilizes its assets to generate sales. I believe that this ratio holds particular significance for publicly traded companies, demonstrating their ability to employ provided assets to drive sales and ultimately generate profits and revenue for their shareholders.

In this ratio comparison, Apple Inc. emerged as the leader within the group, boasting a ratio of 1.1179. It was followed by the industry average of 0.8434, Microsoft with a ratio of 0.5344, and Samsung with a ratio of 0.8680. Among the three ratios I scrutinized, this was the sole instance where Apple outperformed the others, and in this case, its performance was significantly superior, nearly double the industry average.

This ratio underscores Apple's exceptional proficiency in utilizing its assets to generate sales, which aligns with the unsurprising trend, given the widespread popularity of Apple products such as the MacBook and iPhones.

Horizontal Analysis:



I chose to do a horizontal analysis of the Total Asset Turnover ratio for Apple Inc., as it had the highest ratio of all the companies and industry average.

Based on this horizontal ratio analysis, it appears that Apple experienced the most substantial increase in its ratio from 2020 to 2022, as illustrated in the graph below. Additionally, Apple consistently maintained a ratio significantly higher than the industry average. Microsoft exhibited steady growth over the three-year period, albeit at smaller increments than Apple, and consistently remained below the industry average for all three years. Samsung witnessed a decline in its ratio from 2020 to 2021, followed by an increase in the subsequent year, reaching a level comparable to its 2020 ratio. Throughout these three years, Samsung consistently lagged significantly behind the industry average.

This horizontal analysis suggests that Apple demonstrated the greatest efficiency in utilizing its assets to generate sales among the three companies. While Microsoft also experienced growth, its efficiency remained below the industry average and well below that of Apple Inc. Samsung consistently trailed both the industry average and Apple and Microsoft, indicating that it is the least efficient in generating sales from its total assets.

https://www.investopedia.com/ask/answers/021215/what-good-debt-ratio-and-what-bad-debt-ratio.asp#:~:text=In%20general%2C%20many%20investors%20look,more%20difficult%20to%20borrow%20money

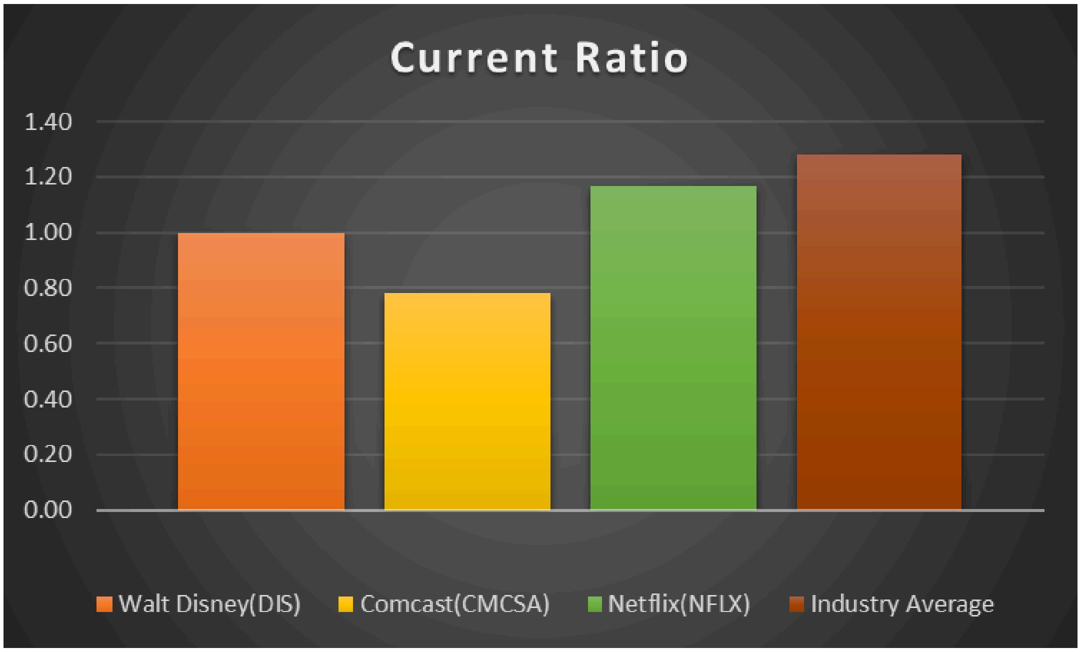
Walt Disney

1) Ratio Comparison

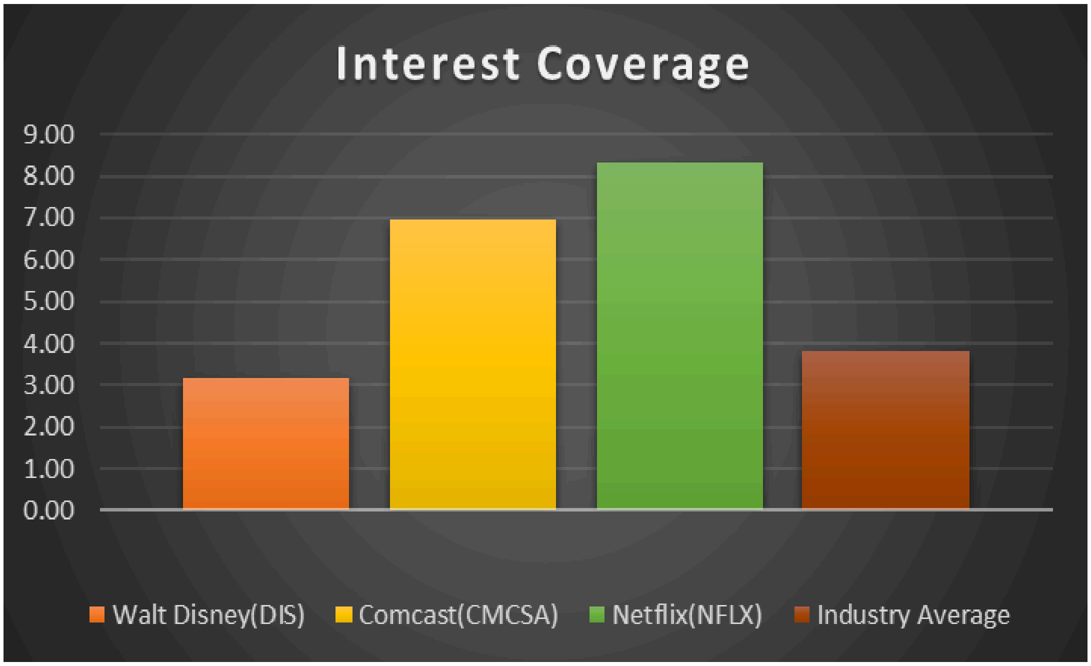
(All numbers in billions except ratios)

Financial Ratio Analysis	**Walt Disney(DIS)**	**Comcast(CMCSA)**	**Netflix(NFLX)**	**Industry Average**
Current Ratio	29.1/29.07= **1.00**	21.83/27.89 = **0.78**	9.27/7.93 = **1.17**	**1.28**
Interest Coverage	6.04/1.91 = **3.17**	21.15/3.04 = **6.95**	5.79/0.7 = **8.33**	**3.79**
Return on Equity	2.25/99.28 = **2.27%**	5.37/80.94 = **6.63%**	4.49/20.78 = **21.61%**	**1.18%**

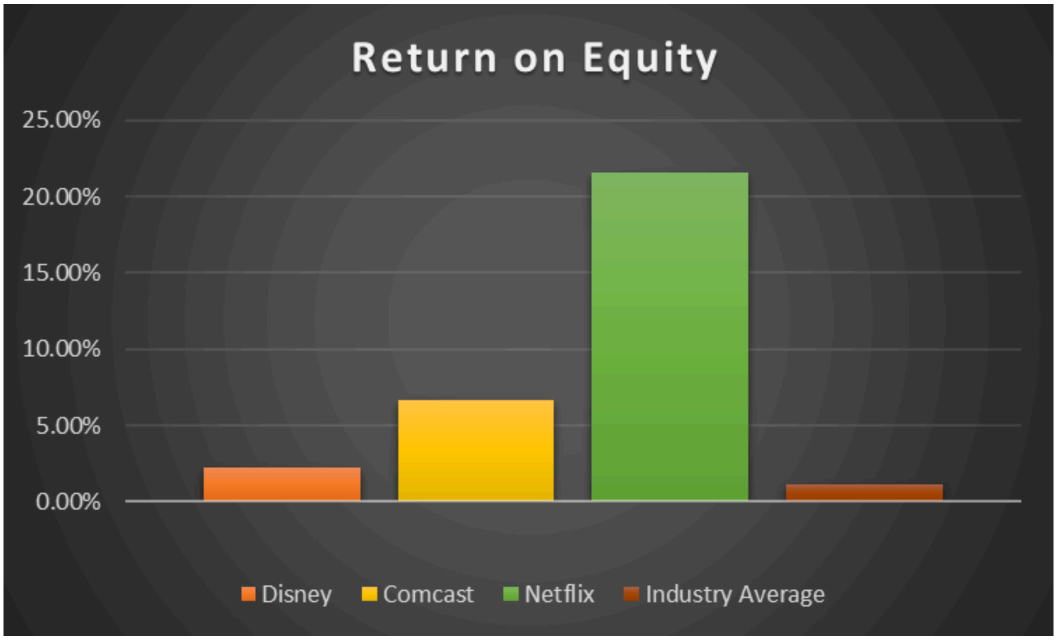
The Current Ratio measures a company's short-term financial health by comparing its current assets to current liabilities. A ratio of 1.00 or higher is considered good. Disney's Current Ratio of 1.00 is in line with the industry average, suggesting they manage their short-term finances well. Comcast's lower ratio of 0.78 indicates they might be taking more risks with short-term liquidity or facing potential challenges. Netflix's ratio of 1.17 is slightly above the industry average, indicating strong liquidity, possibly due to its subscription-based revenue mode.



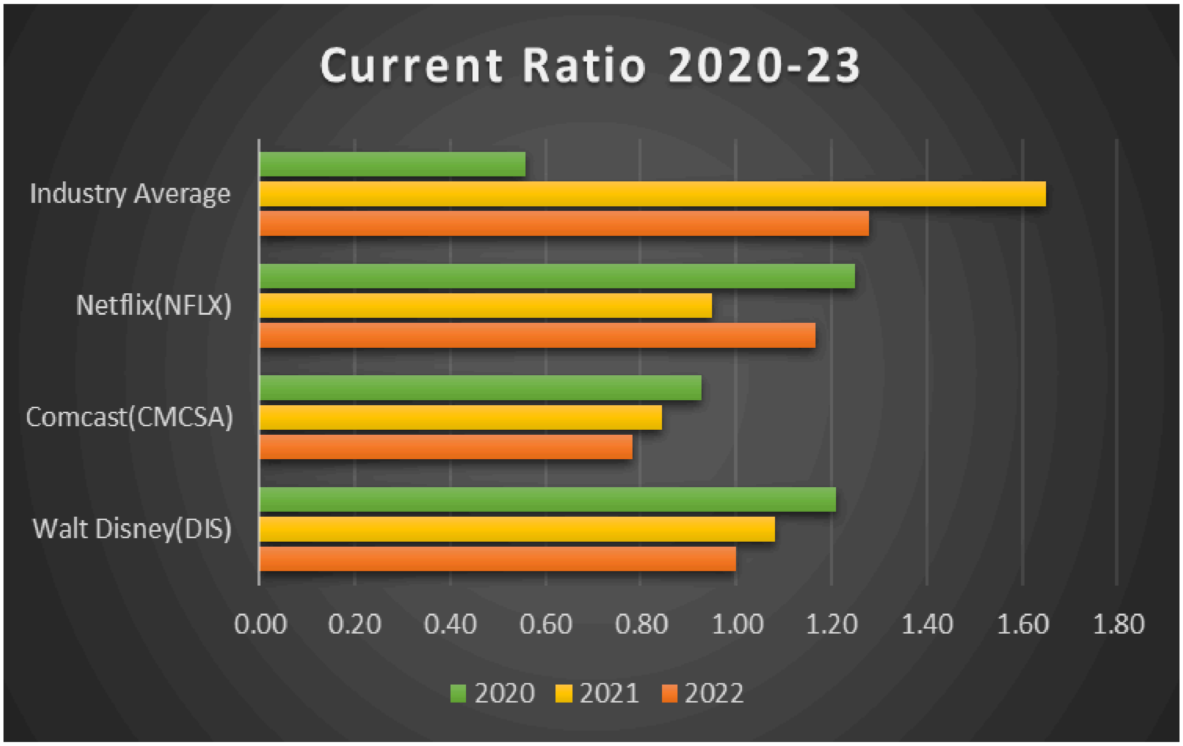
The Interest Coverage Ratio, which assesses a company's ability to cover interest expenses with its earnings before interest and taxes (EBIT), varies among Disney, Comcast, and Netflix compared to the industry average of 3.8. Disney's ratio of 3.17 falls slightly below the industry average, suggesting that it can meet interest obligations but with a relatively thinner margin of safety. Comcast, with a ratio of 6.95, stands significantly above the industry average, signifying strong financial health and a reduced risk of debt default. Meanwhile, Netflix's Interest Coverage Ratio of 8.33 is substantially higher than the industry average, indicating exceptional financial stability and an ample cushion to cover interest expenses.



Return on equity (ROE) is a key financial metric that reflects a company's ability to generate profit from shareholders' equity. In the case of Disney, its ROE of 2.27% suggests a relatively lower return compared to its industry peers. Comcast, with an ROE of 6.63%, demonstrates a stronger performance than Disney but still falls short of Netflix's impressive 21.61%. Netflix's exceptionally high ROE indicates efficient utilization of shareholder equity to generate profits, outpacing both Disney and Comcast significantly. The industry average ROE of 1.18% further emphasizes Netflix's outstanding performance. These figures imply that while Disney and Comcast may need to enhance their strategies to improve returns, Netflix is excelling in converting equity into earnings, possibly due to its dominance in the streaming industry and strong subscriber growth.



2) Horizontal Analysis



Over the past three years, Walt Disney's Current Ratio has been on a declining trend, which suggests that they might be adjusting their financial strategies. This could involve allocating more resources towards long-term assets or potentially taking on increased short-term obligations. These changes might be connected to strategic investments or acquisitions as Disney seeks to adapt to evolving market conditions. Similarly, Comcast's Current Ratio has shown a decreasing trend over the same period, indicating potential shifts in their resource allocation. This could mean they are directing more of their resources to long-term investments or experiencing an uptick in short-term liabilities. These changes in their Current Ratio might be linked to their response to market dynamics or shifts in their financial strategy. Netflix, in contrast, has seen fluctuations in its Current Ratio. In 2021, their ratio decreased, likely due to heightened investments in content production. However, in 2022, their ratio improved, which may suggest an evolving financial strategy to manage their liquidity and balance their short-term and long-term financial needs.

Sources:

https://finance.yahoo.com/quote/DIS/financials?p=DIS

https://finance.yahoo.com/quote/CMCSA/financials?p=CMCSA

https://finance.yahoo.com/quote/NFLX/financials?p=NFLX

https://www.readyratios.com/sec/industry/78/?measure=average

https://csimarket.com/Industry/industry_Financial_Strength_Ratios.php?ind=917

https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/roe.html

Equifax

	Equifax	Experian	H&R Block	"Credit Services" Industry averages
Current Ratio	1370.5/2015.= **.68**	1794/1242= **1.44**	775.86/576.35= **1.35**	**1.5**
price-to-earnings ratio	181.82/(123.22) = **32.01**	32.48/1.27= **25.57**	42.68/(551/146.2)= **11.32**	**10.7**
Debt-to-Capital Ratio	5787.3/(5787.3+3973.3+5256.5)= **38.54%**	1581/(1581+9444)= **14.34%**	1983.72/(1983.72+7706.52)= **20.47**	45%

Sources:

https://fullratio.com/pe-ratio-by-industry

https://www.readyratios.com/sec/EFX_equifax-inc

https://www.investopedia.com/ask/answers/021215/what-good-debt-ratio-and-what-bad-debt-ratio.asp#:~:text=In%20general%2C%20many%20investors%20look,more%20difficult%20to%20borrow%20money.

https://finance.yahoo.com/quote/EFX?p=EFX&.tsrc=fin-srch

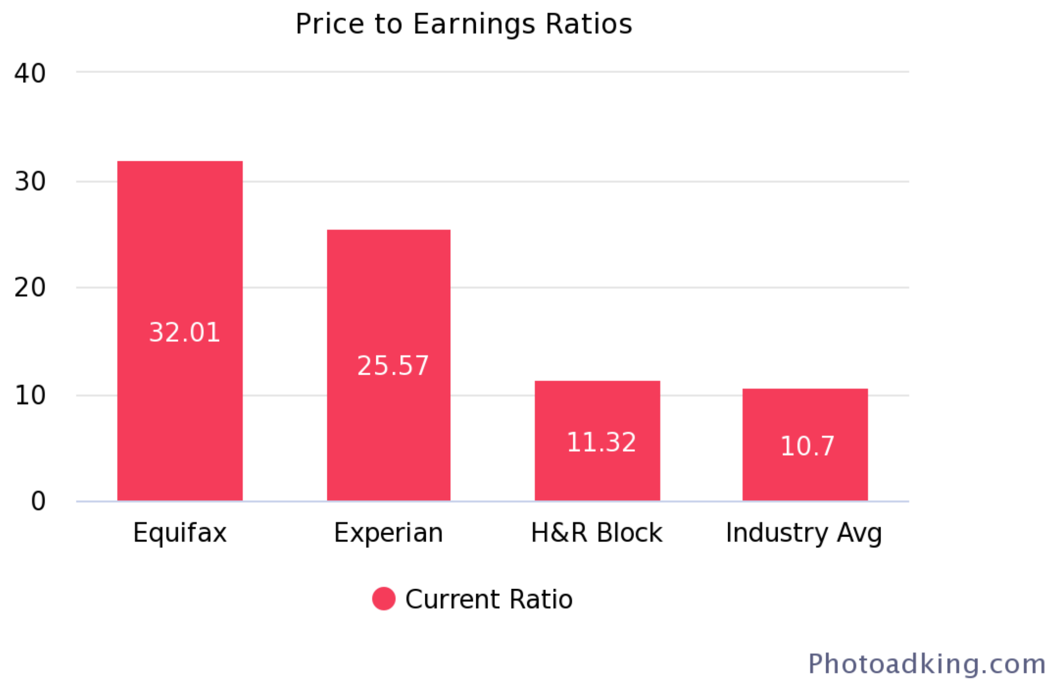
https://finance.yahoo.com/quote/HRB?p=HRB&.tsrc=fin-srch

https://finance.yahoo.com/quote/EXPGY/key-statistics?p=EXPGY

Current Ratio

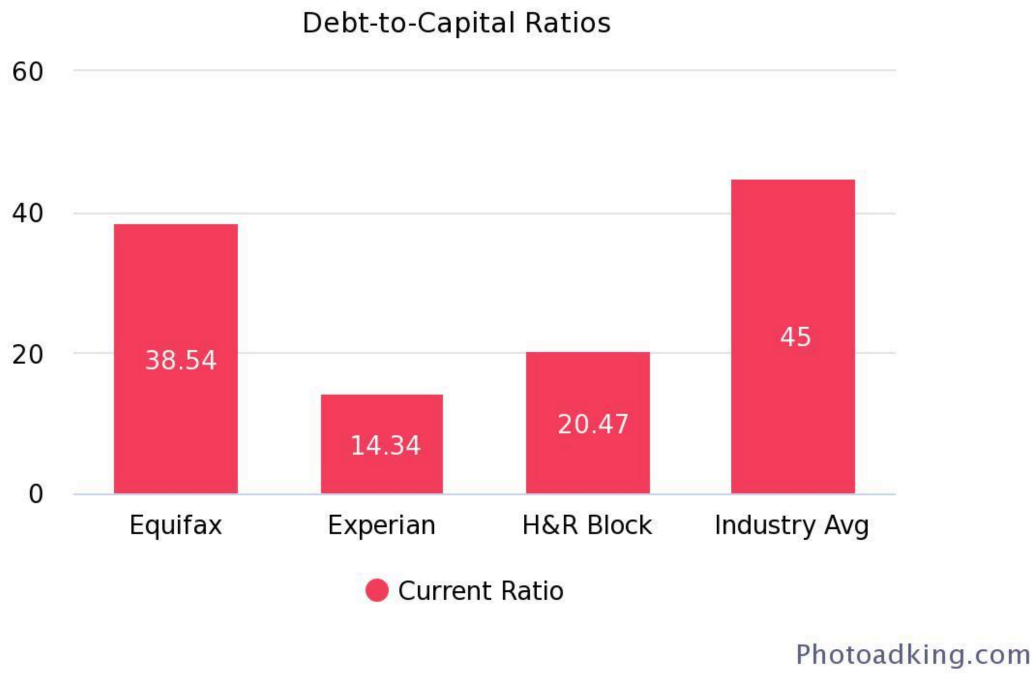
The current ratio is a liquidity ratio that measures a company's ability to meet its shorter-term obligations and is calculated by dividing the company's current assets by its current liabilities. In the tax reporting/credit services industry, the average current ratio falls at 1.5. With Equifax's current ratio of 0.68, the company falls below the industry's standard suggesting it may have issues with liquidity. This could be due to the company's high levels of debt, making it more difficult to meet certain obligations. It could also be due to the relatively low levels of cash that are on hand which can make it difficult to meet obligations, especially in the event of a sudden drop in revenue. Equifax's competitors like Experian and H&R Block, while also below the standard, are much closer to where they should be with current ratios at 1.44 and 1.35.

Price-to-Earnings Ratio



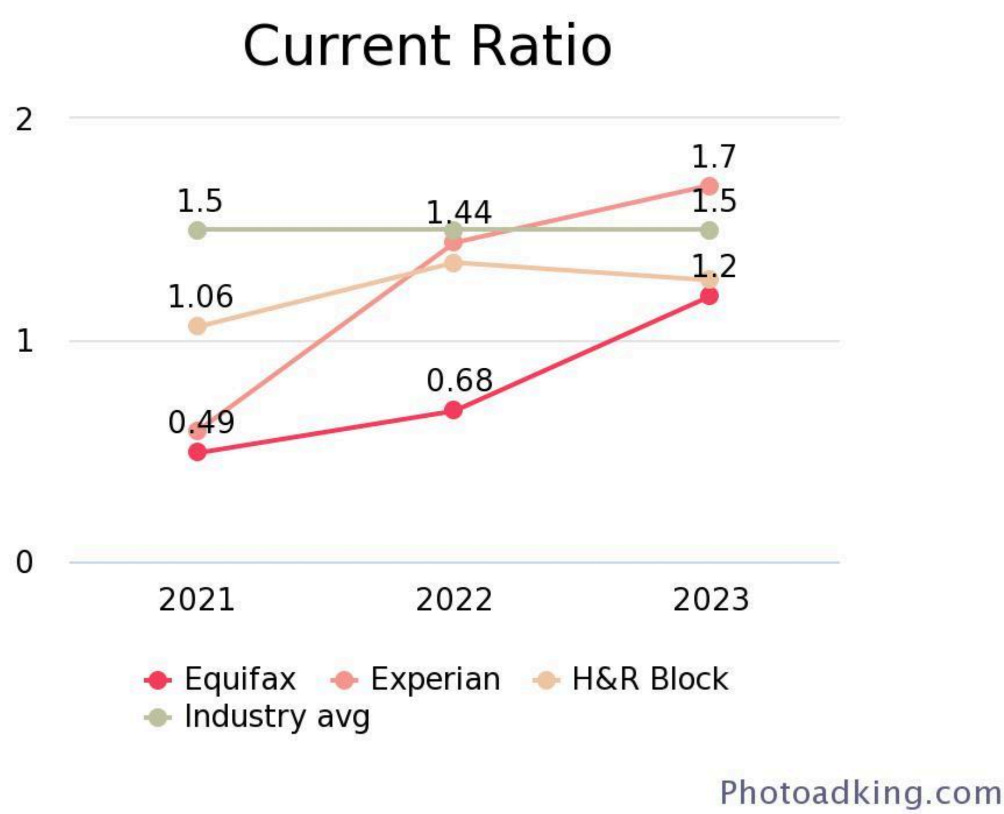
The Price to Earnings ratio(P/E Ratio) is a popular metric used by investors to assess a company's value through measuring the price of a company's stock in relation to its Earnings per Share(EPS). A company with a high P/E ratio tends to have higher predicted growth, higher earnings, and tend to be less risky compared to lower P/E ratios. The tax reporting and/or credit services industry average lands at around 10.7. Equifax's P/E Ratio sitting at 32.01 meaning for every dollar of earnings that Equifax generated in 2022 investors were willing to pay $32.01. Experian is doing similarly well with a ratio of 25.32 but H&R block is sitting at 11.07. While this is still above the industry average, it's just barely met that mark.

Debt-to-Capital Ratio



The debt to capital ratio is a measure of a company's financial leverage calculated by taking a company's total debt and dividing it by its total capital. Investors take this in conjunction with profitability and cash flow metrics in order to gain a more comprehensive picture of a company's financial health. In the tax reporting or credit services industry the average seems to land at about 45%. Equifax's Debt-to-capital ratio was 38% meaning 38% of its capital structure is financed by debt and the remaining is financed by equity. because it's below the average, it shows Equifax is using less debt to fund its operations showing a conservative and less financially risky approach

Horizontal Analysis



Equifax's current ratio has seen an exponential growth over the past three years indicating an increasing ability to pay off short term debt. Experian is experiencing a similar increase except at higher ratios showing they are consistently in a better financial position to pay off their debts than Equifax. H&R Block is seeing less drastic growth with their ratio consistently staying within the 1.00 and 1.3 range. They seem to be struggling to make that 1.5 industry average, especially with the rate they are growing. This indicates a weaker liquidity position compare to its competitors and in the industry as a whole.

Earnings Call Analysis

Meta

Oct 25, 2023

Speakers

Mark Zuckerberg - Chief Executive Officer

Susan Li - Chief Financial Officer

Summary of Key Points

Meta beat analyst expectations for both revenue and earnings in the third quarter of 2023.
The company's core advertising business grew 23% year-over-year, driven by strong growth in Reels and other ad formats.
Meta is making significant investments in the metaverse, and Zuckerberg is confident that the company is on the right track.
The company is facing a number of challenges, including increased competition from TikTok and rising privacy concerns.

Impact on Financial Statements

The strong revenue growth in the third quarter is likely to have a positive impact on Meta's financial statements. The company's investments in the metaverse could have a negative impact on its profitability in the short term, but they could also lead to new revenue streams in the long term. The increased competition from TikTok and rising privacy concerns could put pressure on Meta's advertising business.

Interesting Questions from the Q&A Session

Question 1: "What is Meta's strategy for monetizing the metaverse?" This was interesting because the metaverse is a new and rapidly evolving market. There is no one-size-fits-all approach to monetization in the metaverse, and Meta is still exploring different possibilities. This makes it an intriguing question to ask, as it gives analysts and investors a glimpse into how Meta is thinking about this important issue.

Management response: Zuckerberg said that Meta is still exploring different ways to monetize the metaverse, but he believes that advertising will be a key part of the company's strategy.

Question 2: "What is Meta doing to address privacy concerns?" This question was interesting because as we all know Meta has had privacy issues in the past and looking ahead it was interesting to hear how they plan to improve on that.

Management response: Li said that Meta is committed to protecting user privacy, and the company is investing in a number of initiatives to improve privacy protection.

Evaluation of Management Responses

The management team's responses to the Q&A questions demonstrated a high level of thoughtfulness, detail, and transparency. They addressed the key concerns raised by analysts and investors, providing specific examples of the company's plans and initiatives to address the challenges it faces. Their responses conveyed a sense of confidence in the company's ability to navigate the competitive landscape and achieve its long-term goals. For instance, in response to the question about Meta's strategy for monetizing the metaverse, Zuckerberg provided a detailed explanation of the company's approach. He outlined the potential for in-app purchases, advertising, and data monetization as revenue streams in the metaverse. Additionally, he mentioned Meta's focus on building an open and interoperable metaverse, which would attract more users and developers, ultimately leading to increased monetization opportunities.

Apple

- November 2, 2023
- Tim Cook and Luca Maestri

Summary of Keypoints:

Apple's most recent earnings call was streamed on November 2, 2023 by Tim Cook who was the key speaker. He was followed by Luca Maestri (CFO of Apple) who provided more details on the company's financial performance.

Apple's Q4 2023 earnings call was positive, with the company reporting strong growth in its services business and continued popularity of the iPhone. Services revenue hit a new all-time record of $22.3 billion, up 16% year-over-year. iPhone revenue was $43.8 billion, up 3% year-over-year, despite the global economic slowdown. Mac sales declined 34% year-over-year due to supply chain disruptions, but iPad sales grew 4% year-over-year. Wearables, Home, and Accessories revenue was $9.3 billion, up 1% year-over-year.

Overall, Cook and Maestri were positive about Apple's performance in Q4 2023 and the company's prospects for the future. They said that Apple is well-positioned to weather the global economic slowdown and continue to grow its business in the years to come.

Impact on Financial Statements:

The positive news from Apple's Q4 2023 earnings call is likely to have a positive impact on the company's financial statements in several ways. First, revenue is likely to continue to grow in the coming quarters, driven by strong demand for Apple's services and iPhone products. This will lead to higher revenue on the income statement. Second, earnings per share (EPS) are also likely to grow in the coming quarters, as the company benefits from higher revenue and cost controls. This will lead to higher net income on the income statement. Third, cash flow is also likely to remain strong in the coming quarters, as the company generates significant cash from its operations. This will lead to higher cash and cash equivalents on the balance sheet. Fourth, debt is likely to remain low in the coming quarters, as the company generates significant cash flow and uses it to repurchase its own shares. This will lead to a lower debt-to-equity ratio on the balance sheet.

Overall, the positive news from Apple's Q4 2023 earnings call is likely to have a positive impact on the company's financial statements, making it a good investment opportunity for investors.

Q&A:

Question 1:

I found the question about Apple's transition to a more subscription-based business model interesting because it is a major shift for the company. Apple has traditionally relied on hardware sales as its main source of revenue, but it is increasingly moving towards a subscription model for its services, such as the App Store, Apple Music, and iCloud.

As a customer of Apple, you have likely noticed this shift. For example, Apple now offers a subscription service called AppleOne, which bundles together several of its services for a monthly fee. This is a convenient way for customers to access all of their favorite Apple services, and it also helps Apple to lock in recurring revenue.

Apple's transition to a subscription-based business model is still in its early stages, but it is a trend that is likely to continue in the coming years. This is because subscription-based businesses offer a number of advantages, such as recurring revenue, predictable cash flow, and increased customer engagement.

Apple's management team responded to the question about the company's transition to a more subscription-based business model in a positive and optimistic way. They said that the transition is progressing well, and that they are seeing strong growth in their subscription businesses.

Specifically, Apple CFO Luca Maestri said that the company's services revenue grew 16% year-over-year in Q4 2023, and that subscription revenue accounted for the majority of that growth. He also said that the company now has over 1 billion paid subscriptions, which is up from 785 million in the same quarter a year ago.

I believe that this question was answered fairly because this subscription based business model is still fairly new to Apple and so there really aren't too many quantitative metrics to give a direct answer to.

Question 2:
Another interesting question that was asked during the Q&A portion of Apple's Q4 2023 earnings call was: "What are your thoughts on the metaverse and how it could impact Apple's business in the future?"

This question is interesting because the metaverse is a new and emerging technology with the potential to revolutionize the way we interact with the world around us. Apple is a leader in the technology industry, and its products and services are used by billions of people around the world. It is therefore important to understand how Apple is thinking about the metaverse and how it could impact its business in the future.

Apple CEO Tim Cook answered this question in a positive and optimistic way. He said that Apple is excited about the potential of the metaverse, and that the company is committed to playing a leading role in shaping its development. He also said that Apple is well-positioned to benefit from the growth of the metaverse, given its strong track record of innovation, its large and loyal customer base, and its investments in new technologies.

However, Cook did not provide any specific details about Apple's plans for the metaverse. He did not say whether Apple is developing any new products or services specifically for the metaverse, or whether the company plans to integrate the metaverse into its existing products and services.

Overall, I think that Cook's answer to the question about the metaverse was fair, but it could have been more informative. It is clear that Apple is thinking about the metaverse and its potential impact on its business. However, the company is not yet ready to share any specific details about its plans.

Disney

August 9, 2023

Speakers

Bob Iger - Chief Executive Officer

Kevin Lansberry - Interim Chief Financial Officer

Alexia Quadrani - Executive Vice President, Investor Relations

Summary

The company was "completely restructured, restoring creativity to the center of our business". They "made important management changes and efficiency improvements to create a more cost-effective, coordinated, and streamlined approach to our operations". They aggressively reduced costs across the enterprise and are on track to exceed their initial goal of $5.5 billion in savings. Avatar: The Way of Water, which is now the third highest-grossing film of all time, is also on track to be the biggest-ever electronic home video release for Disney domestically. They generated $1.6 billion of free cash flow this quarter, which is reflected in their single A credit ratings. ESPN has entered into an exclusive licensing arrangement with PENN Entertainment to further extend the ESPN brand into the growing sports betting marketplace. This licensing deal will offer a compelling new experience for sports fans that will enhance consumer engagement. Walt Disney World is still performing well above pre-COVID levels – 21% higher in revenue and 29% higher in operating income compared to fiscal 2019, adjusting for Starcruiser accelerated depreciation. Parks, Experiences, and Products portfolio of businesses continues to be an earnings and free cash flow growth driver for the company, with both revenue and operating income increasing by more than 10% versus the prior year.

Q&A

During the Q&A session, I found these to be the most interesting questions. The reason these drew me in is probably because I am a user of Disney platforms such as Disney+, ESPN, and Hulu and all the information is relevant to me and my continued use of these streaming services. Below I have included the questions and the answer from Disney's CEO.

**

Ben Swinburne – Morgan Stanley: "Bob, we've – the press is out with the price increase information for later this year tonight. I'm just wondering now that you've been through one Disney+ price increase here in the U.S. and multiple Hulu and ESPN increases sort of how you're thinking about the pricing power of the product as you go into these even more significant increases and whether you think you can hold your customer base as you raise prices."

Bob Iger – Disney CEO: "Ben, as you know, I think as we've said before, we took a pretty significant price increase at Disney+ sometime late in calendar '22. And we really didn't see significant churn or loss of subs because of that, which was actually heartening. It's important to note, though, that the price increase that we've just announced is a price increase for the premium product or the nonadvertiser-supported product. We're actually keeping the advertiser-supported product flat in terms of prices. That's being done for a reason. Obviously, as has been noted by Kevin in his remarks, the advertising marketplace for streaming is picking up. It's more healthy than the advertising marketplace for linear television. We believe in the future of advertising on our streaming platforms, both Disney+ and Hulu. And we're obviously trying with our pricing strategy to migrate more subs to the advertiser-supported tier. It also should be noted, as I think I mentioned in my remarks, that a substantial amount of new subscribers to Disney+ are signing up for the ad-supported tier, which suggests that the pricing is working for us in that regard. So we're looking at this very carefully."

***

Jessica Reif Ehrlich – Bank of America: " Bob, maybe just a follow-up on your prepared remarks and film being core strategic. Can you share with us how you plan to improve the movie performance and maybe the time frame or create more original content? Just give us more color. And then a follow-up to something you said on DTC and password crackdown, is this a fiscal '24 full year? Like will you be done by the end of the year? And is it on a global basis? How many password sharers do you think there are on your platform?"

Bob Iger – Disney CEO: "So the second part of your question, Jessica, regarding password sharing, – we already have the technical capability to monitor much of this. And I'm not going to give you a specific number, except to say that it's significant. What we don't know, of course, is as we get to work on this, how much of the password sharing as we basically eliminate it will convert to growth in subs. Obviously, we believe there will be some, but we're not speculating. What we are saying, though, is that in calendar '24, we're going to get at this issue. And so while it is likely you'll see some impact in calendar '24, it's possible that we won't be complete or the work will not be completed within the calendar year. But we certainly have established this as a real priority. And we actually think that there's an opportunity here to help us grow our business. Regarding our studio performance, let's put things in perspective a little bit. The studio has had a tremendous run over the last decade, perhaps the greatest run that any studio has ever had with multiple billion-dollar hits and including, by the way, too, that were relatively recent, were one, in particular, Avatar: The Way of Water. And we also had a pretty strong performance with Guardians of the Galaxy 3, which has done, I think, approximately $850 million in global box office. That said, the performance of some of our recent films has definitely been disappointing, and we don't take that lightly. And as you'd expect, we're very focused on improving the quality and the performance of the films that we've got coming up. It's something that I'm working closely with the studio on. I'm personally committed to spending more time and attention on that as well."

**

I feel like both of Bob Iger's responses were sufficient. In both of his answers, he dives deeply into what the thought process is in him and his peers implementing the structures and making the decisions. In the first answer regarding price increases, Iger references past successful instances as something that's driving the decision but also talked about how the customer base didn't mind for the most part. In the second answer, he confirmed that they were trying to start managing password sharing more and gave a reasonable timeline to the best of his knowledge, and addressed the successful pictures the company has put out to reassure that they have the ability to create great content, and that the recent run of mediocrity will be fixed.

Equifax

October 19, 2023

Speakers

Trevor Burns - Senior Vice President, Head of Corporate Investor Relations
Mark Begor - Chief Financial Officer
John Gamble - Chief Financial Officer

Summary of News/Events

Facing an increasingly difficult mortgage market with Mortgage rates almost reaching 8% which is a 20-year high. The Brazilian credit bureau acquired in August had revenue of 23 million. Equifax's Revenue was 1.32 billion which is up 6% on a reported basis, 6.5% on a constant currency basis, and 3.5% on an organic constant currency basis. Adjusted EPS was 1.76 which is 2% higher than the previous year. Free cash flows were 447, down 11% compared to the prior year mainly because of higher capital expenditures. Equifax is announcing the launch of a new cloud-based platform called Equifax Cloud. It's designed to help businesses of varying sizes make more informed decisions about customers and employees. Equifax's recently acquired Brazilian credit bureau BVS will expand Equifax's presence in Latin America. Overall, Equifax's 6% revenue growth shows an upward trend which could lead to more revenue in upcoming quarters and a further increase in revenue as well as net income on the company's income statement.

Interesting Questions in Q&A Portion

Q1: "On the Talent Vertical, a 20% outperformance was mentioned. What factor mainly contributed to that and how durable is it going into the next 2 quarters?" I found this question interesting because it asks directly how they performed the way they have this past quarter.

Answer 1: business is up 6%, the BLS market was down 10%, the white collar market was down "close to double that" which is how they got their measurement of 20 points of outperformance. There isn't really a single factor that drove that but one thing they've been uniquely able to do is drive penetration, there's a lot of customers still doing manual verifications of employment history that are very valuable. Product is another factor that has really helped as they are always making new products almost every quarter tailored to specific job categories like hourly solutions for hourly workers. The addition of record keeping has also helped as over 75 million people change jobs every year, having new jobs from record additions drives higher hit rates and in turn increases revenue.

How management explained their '20 points of outperformance' metric wasn't very clear/precise but they made up for that by discussing in detail how they drive more business through innovation and market penetration so I do feel their response was fairly sufficient.

Q2: "You(management) had characterized a couple of businesses that you let go of as 'manual' and 'low margin', Can you reiterate your thinking in mortgage verifiers in terms of the competitiveness of your solution?" I found this question interesting because the person who asked it prefaced it with how it's an obligatory competitive question in EWS

Answer 2: No change since July, we tried to talk about the manual work we were doing when we didn't have records and I think that got somewhat misconstrued in the marketplace. We're not seeing an impact from competition in our mortgage business or in our other businesses. Tried to be clear about that in July and will be clear again today. We're well aware of what our competitors have and don't have and a big proof point about our competitiveness is our ability to add new partnerships. We added 4 in the quarter and 27 over the last couple of years. growing our records, etc. all showing our ability to deliver to our partners and they want to be partnered with Equifax.

I feel the way management answered was sufficient considering they had already gone over it in the last earnings call and no changes had occurred in that regard. Management effectively reiterated, with proof points, their ability to compete well with companies in the same industry

Portfolio Comparison

	Meta		Disney	EQUIFAX
Market Capitalization	$814.134 billion	2.066 trillion	$154.62 billion	23.79 billion
Stock Price (9/1/2023)	$299.37	$189.49	$81.64	185.04
Shares Outstanding	2.22 billion	15.78 billion	1.83 billion	123.22 million
Revenue	$116,609 billion	387.53 billion	82.72 billion	5122.2
Net Income	$23,200 billion	99.8 billion	2.52 billion	700.2
Cash and Cash Equivalents	$14,681 billion	23.646 billion	11.62 billion	285.2
Total Assets	$185,727 billion	352.75 billion	203.63 billion	11547.9
Total Debt	$60,014 billion	$109.28 billion	48.37 billion	5787.3
Diluted EPS	$8.59	6.11	1.72	128.09

Pt 2: Security Analysis and Portfolio Performance Analysis

Section 1: Security Analysis

META

Sector Overview

The tech industry is a dynamic and transformative force, driving innovation, economic growth, and societal progress. Its strengths lie in its ability to innovate, disrupt, and connect people and businesses globally. However, the industry faces challenges in bridging the digital divide, addressing ethical concerns, and ensuring sustainable practices. Recent changes, such as the rise of AI, cloud computing, and mobile technologies, have reshaped the industry landscape. Looking ahead, AI-powered automation, edge computing, the IoT, and emerging technologies will further transform industries and redefine the future of technology.

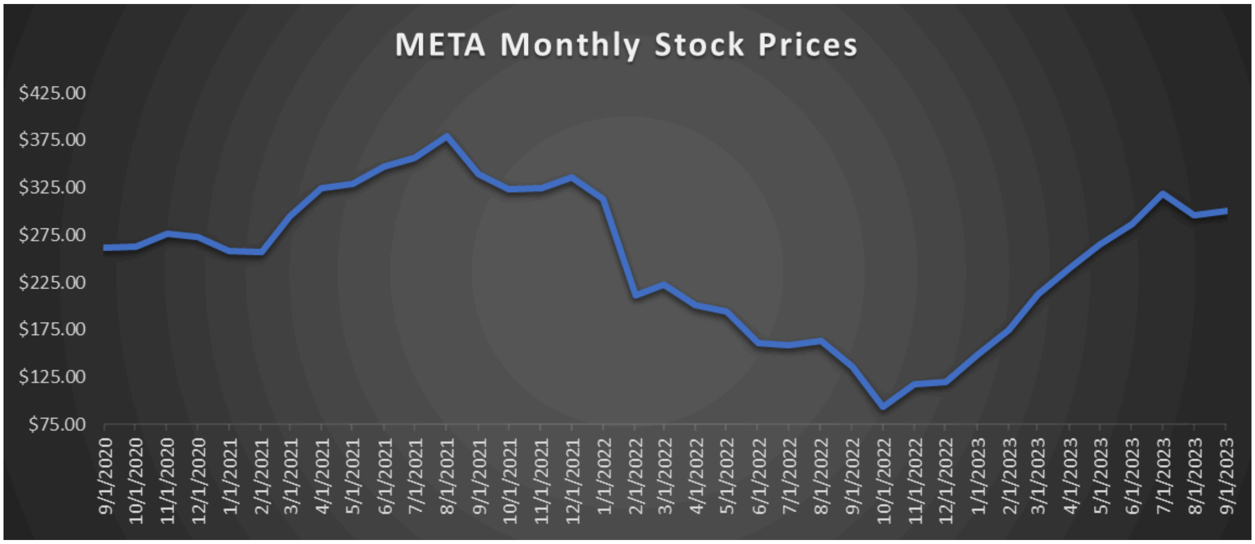
The tech industry's strengths include its ability to innovate and disrupt, its global reach, its economic impact, its problem-solving capabilities, and its versatility and adaptability. However, the industry also faces weaknesses such as the digital divide, ethical concerns, overreliance on technology, environmental impact, and cybersecurity threats. Major challenges facing the tech industry include bridging the digital divide, addressing ethical dilemmas, upskilling and reskilling the workforce, developing sustainable technology practices, and enhancing cybersecurity resilience. Recent changes in the tech industry include the rise of artificial intelligence, the growth of cloud computing, the emergence of mobile technologies, data monetization and analytics, and cybersecurity threats and responses. Upcoming changes in the tech industry include AI-powered automation and robotics, edge computing, the Internet of Things and connected devices, virtual reality and augmented reality, and emerging technologies. The tech industry is constantly evolving, and these strengths, weaknesses, challenges, and recent and upcoming changes highlight the dynamic nature of this transformative sector. As technology continues to advance, its impact on society, economies, and individuals will undoubtedly be profound and far-reaching.

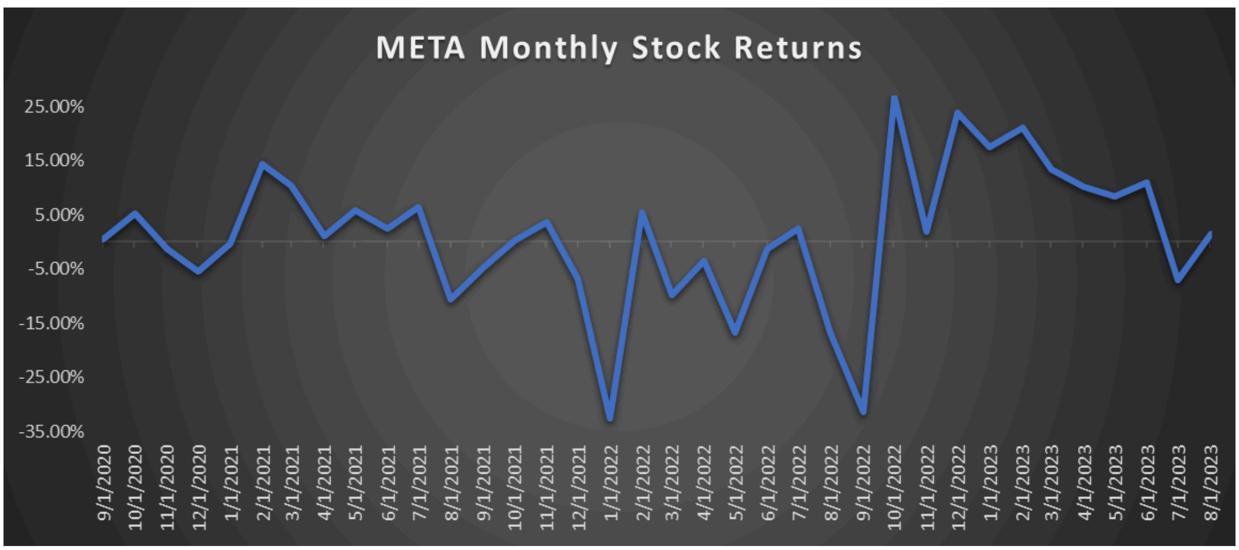
META News (September 2020 - Sept 2023)

Between 2020 and 2023, Meta, formerly known as Facebook, has been in the news for several reasons. In 2020, 48 states and territories sued the company on antitrust grounds, alongside a separate complaint from the Federal Trade Commission. The attorneys general alleged that Meta designed its Facebook and Instagram products to keep young users on them for longer and repeatedly coming back.

In 2022, Meta reportedly introduced a policy allowing Facebook and Instagram ads that question the outcome of the 2020 presidential election. This decision was met with criticism, as it was seen as a way for Meta to profit from ads that promote misinformation. These events highlight some of the challenges that Meta has faced in recent years, including legal issues, public backlash, and the ongoing struggle to balance freedom of speech with the prevention of misinformation.

Stock Prices and Monthly Returns





<u>Highest Returns</u>

November 1, 2022 (26.77% Increase):

In November 2022, Meta announced a strategic restructuring, involving the layoffs of over 11,000 employees, as part of an initiative to streamline operations and concentrate on key growth areas. However, this move was overshadowed by a €265m fine related to a data protection breach.

January 1, 2023 (23.79% Increase):
In January 2023, Meta's stock surged nearly 20% after CEO Mark Zuckerberg declared the year as a 'year of efficiency.' Despite facing a third consecutive quarterly decline in revenue and a significant drop in profit for the final three months of 2022, the company exceeded Wall Street analysts' sales expectations.

Lowest Returns:

February 1, 2022 (-32.63% Decrease):
February 2022 witnessed a notable 32.6% decline in Meta's stock, triggered by disappointing financials and a cautious annual forecast, raising concerns about the company's growth trajectory.

October 1, 2022 (-31.34% Decrease):
In October 2022, Meta's stock dipped by 24.5%, marking its second consecutive quarterly revenue decline and a sharp profit decrease for the final three months of 2022.

It's crucial to contextualize these events within the broader tech industry and global economic landscape. The tech sector grappled with widespread layoffs in 2022 amid economic uncertainty. Simultaneously, global economic fluctuations, fueled by factors such as inflation and the ongoing impact of the COVID-19 pandemic, likely influenced Meta's stock performance.

Credit Ratings

Company	S&P Rating	Investment Grade
META	AA-	YES
GOOGLE	AA+	YES

MSFT	AAA	YES

The table I created provides a snapshot of the most recent credit ratings for META, Google, and Microsoft based on S&P Global.

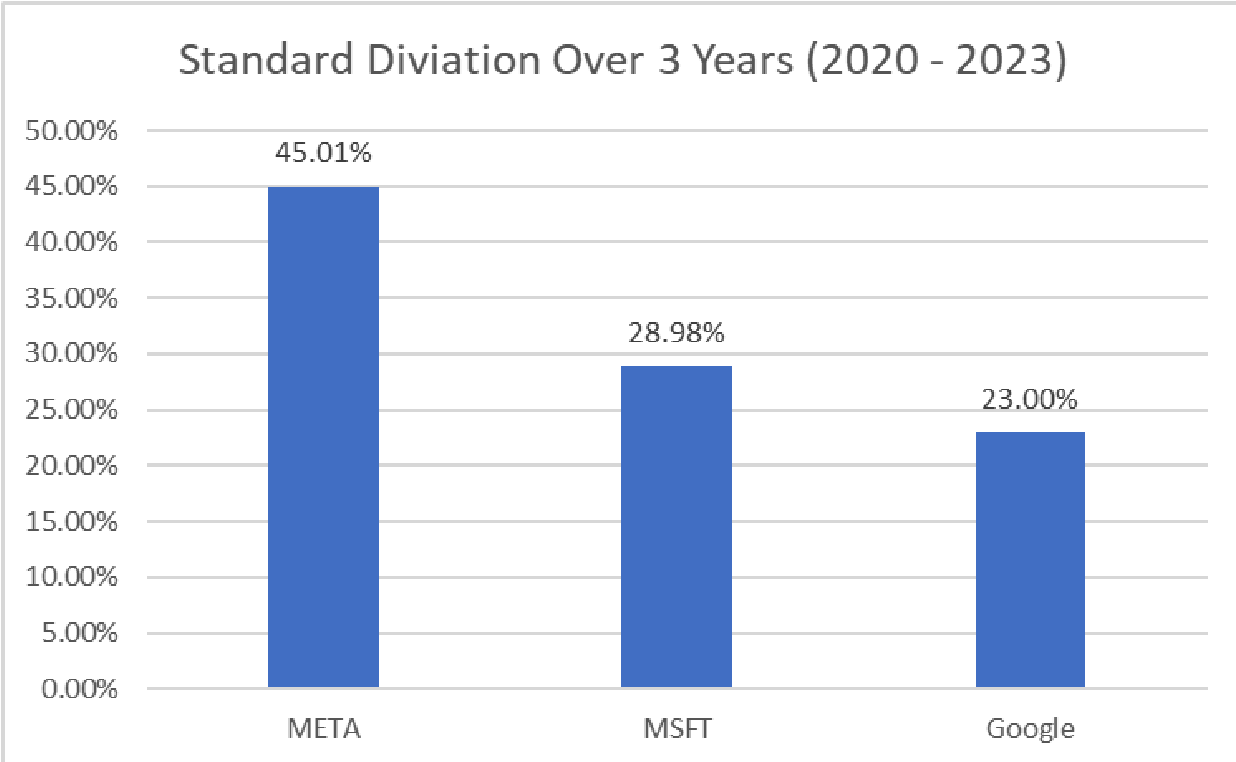
Microsoft has the highest credit rating of AAA, indicating an extremely strong capacity to meet its financial commitments. This is the highest issuer credit rating assigned by S&P Global Ratings.

Google follows closely with a credit rating of AA+, which also signifies a very strong capacity to meet financial commitments. The “+” in the rating shows that Google’s standing is relatively high within the AA category.

META, on the other hand, has a slightly lower credit rating of AA-, which still represents a very strong capacity to meet financial commitments. The “-” in the rating indicates that META’s standing is relatively low within the AA category.

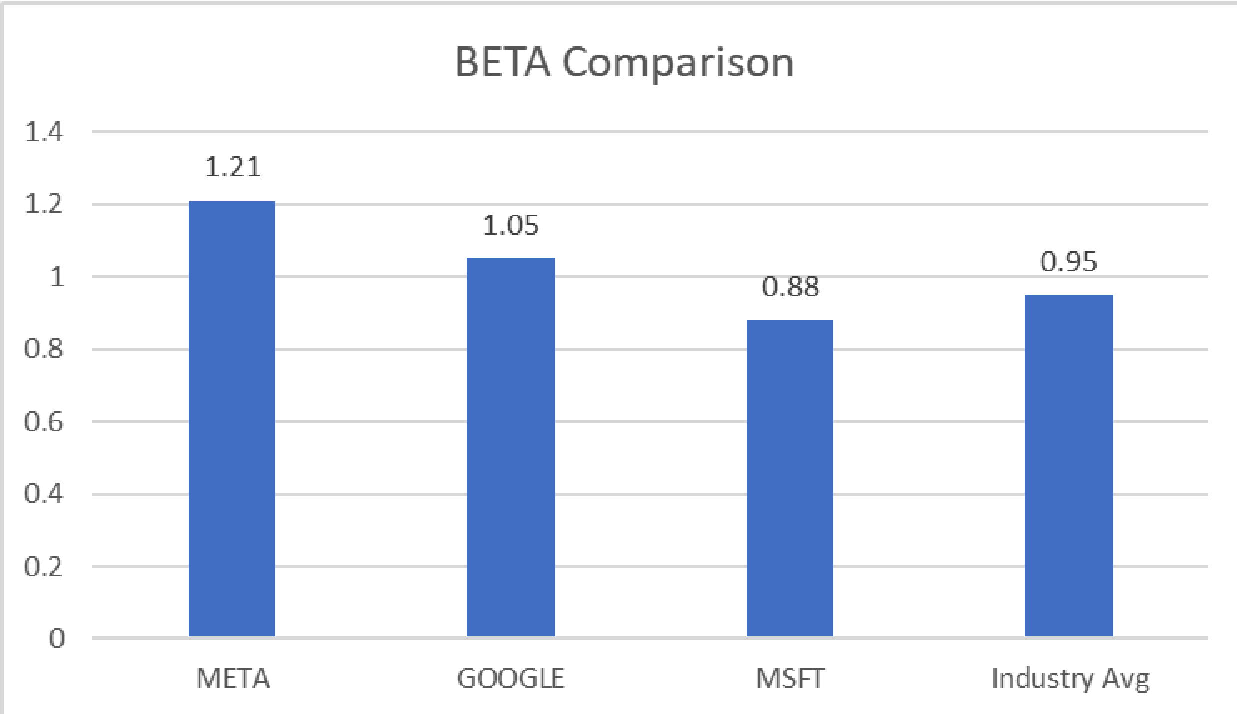
All three companies - META, Google, and Microsoft - have credit ratings that are considered investment grade. This means that they are deemed to have a low risk of default and are generally considered safe for investment

Standard Deviation



*** Calculated by using the STDEV.S(array) formula on Excel which estimates Standard Deviation Based on a given sample in this case being the monthly returns for each of the stocks over 2020 - 2023. Then I used the SQRT(12) function to get the annualized standard deviation.**

Beta Analysis



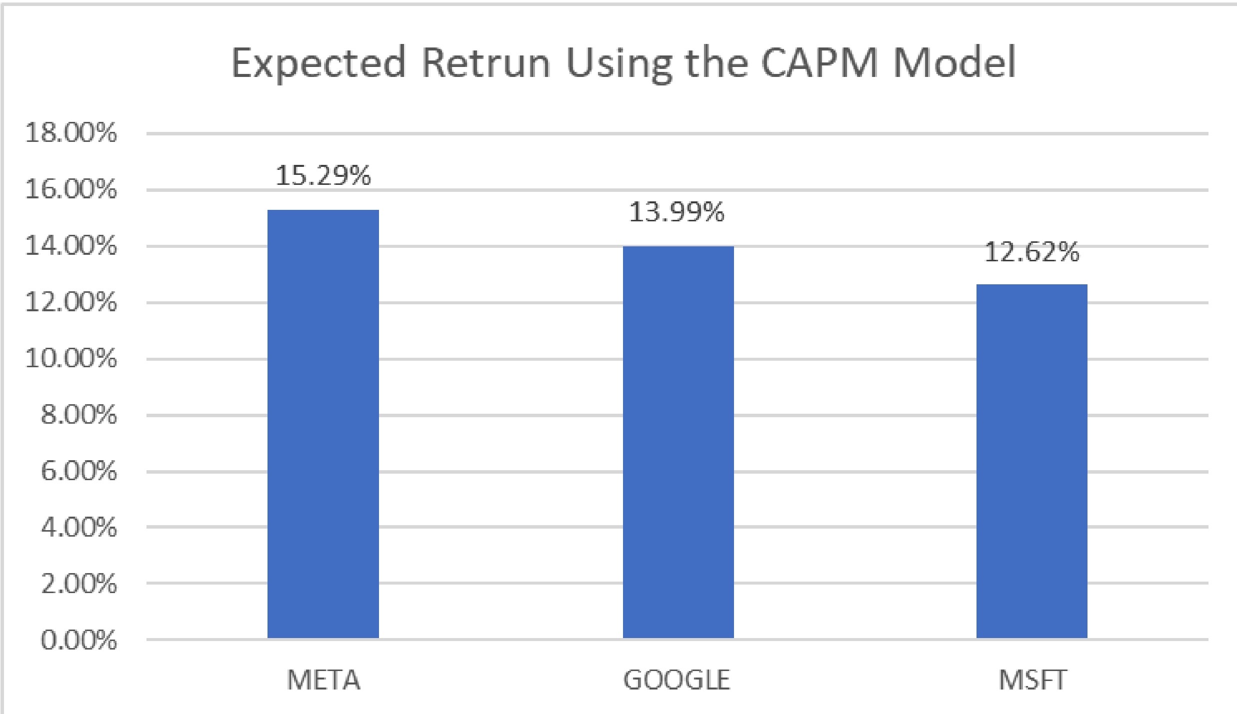
*** The formula to calculate beta is as follows:**
β=Variance(index returns)Covariance(stock returns, index returns)

Beta is a key concept in finance, representing a measure of a stock's risk in relation to the market. In other words, it's a measure of a stock's sensitivity to market movements. This measure is used in the Capital Asset Pricing Model (CAPM), a model that calculates the expected return of an asset based on its beta and expected market returns.

- **META** has a beta of 1.21, indicating that it is more volatile than the market. In practical terms, this means that META's price tends to move more than the market when the market goes up or down.
- **Google**, with a beta of 1.05, is slightly more volatile than the market. This suggests that Google's price will move slightly more than the market in response to market changes.
- **MSFT** has a beta of 0.88, making it less volatile than the market. This means that MSFT's price tends to move less than the market when the market goes up or down.

The Industry Average beta of 0.95 suggests that, on average, stocks in this industry are slightly less volatile than the market.

CAPM Analysis



META: 5.5%+1.21*(13.59%-5.5%)
GOOGLE: 5.5%+1.05*(13.59%-5.5%)
MSFT: 5.5%+.88*(13.59%-5.5%)

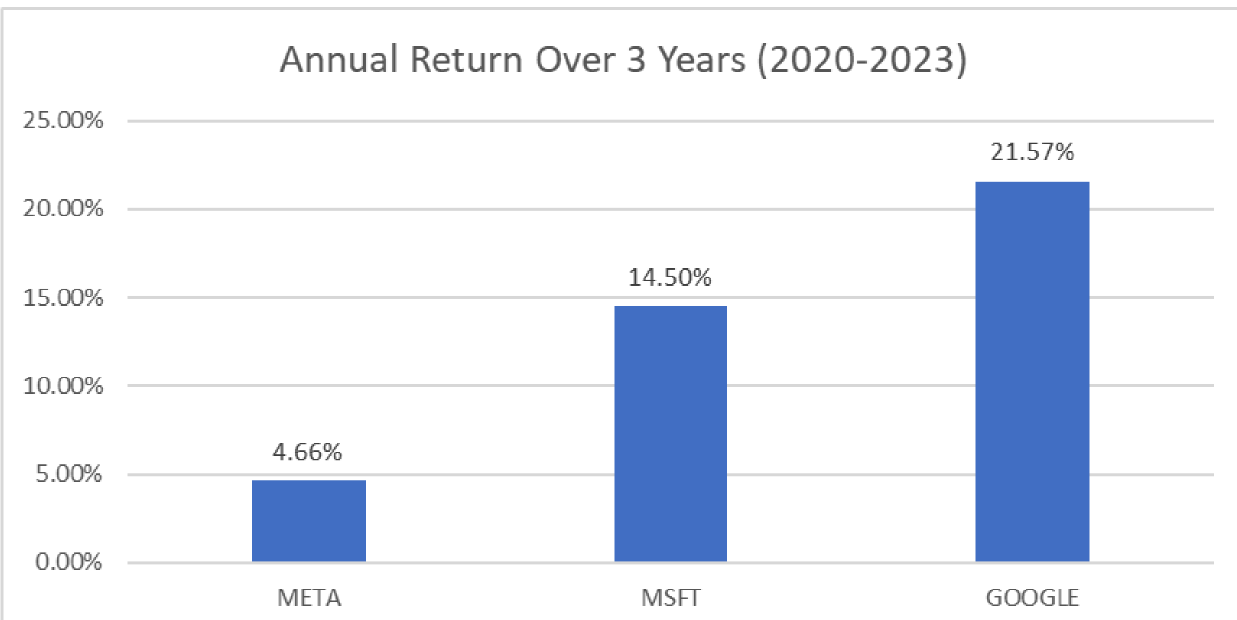
The CAPM data suggests that Meta is expected to have the highest return among the three companies, with an expected return of 15.29%. Google is expected to have the second-highest return, with an expected return of 13.99%. MSFT is expected to have the lowest return, with an expected return of 12.62%.

This is because Meta has the highest beta of the three companies, which means that it is more volatile than the market. However, it also means that Meta has the potential to earn higher returns than the market if the market goes up. Google has a beta that is slightly lower than Meta's, but it is still higher than the market. This means that Google is also expected to have a higher return than the market, but not as high as Meta. MSFT has the lowest beta of the three companies, which means that it is less volatile than the market. This also means that MSFT is expected to have a lower return than the market.

Sources:

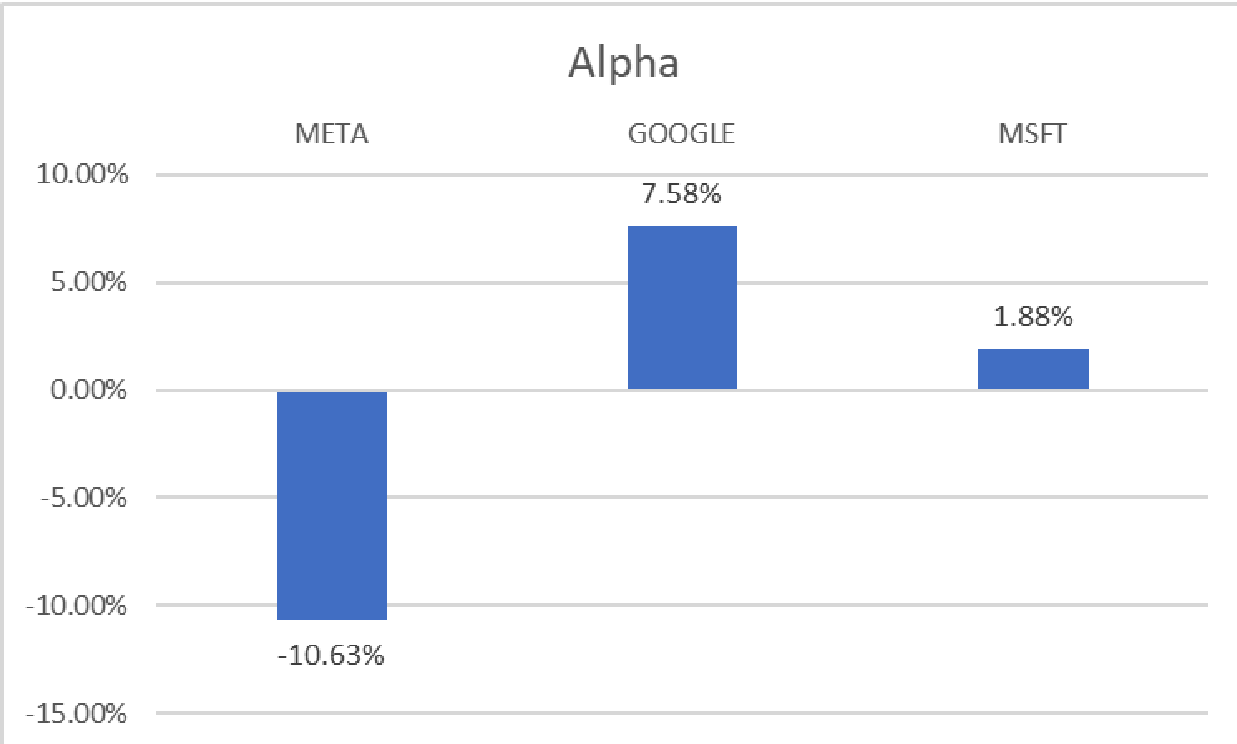
https://finance.yahoo.com/quote/META/
https://finance.yahoo.com/quote/GOOGL?p=GOOGL&.tsrc=fin-srch
https://finance.yahoo.com/quote/MSFT?p=MSFT&.tsrc=fin-srch
https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_yield_curve&field_tdr_date_value_month=202311

Annual Returns



***This was Calculated By using this formula: CAGR = (Ending Value / Beginning Value)^(1/3) - 1**

Alpha Analysis



*** This was calculated by using the alpha formula: alpha = Portfolio Return - Expected Return Using the CAPM Model**

- Meta's alpha of -10.63% suggests that the company's stock underperformed the market over the period of time being considered
- Google's alpha of 7.58% suggests that the company's stock outperformed the market over the period of time being considered
- Microsoft's alpha of 1.88% suggests that the company's stock performed slightly below the market over the period of time being considered

Overall, the alpha data suggests that Meta is facing some challenges, while Google and Microsoft are both performing well. However, it is important to note that alpha is just one measure of a company's performance, and there are many other factors that investors should consider before making a decision.

Equifax

Sector Overview

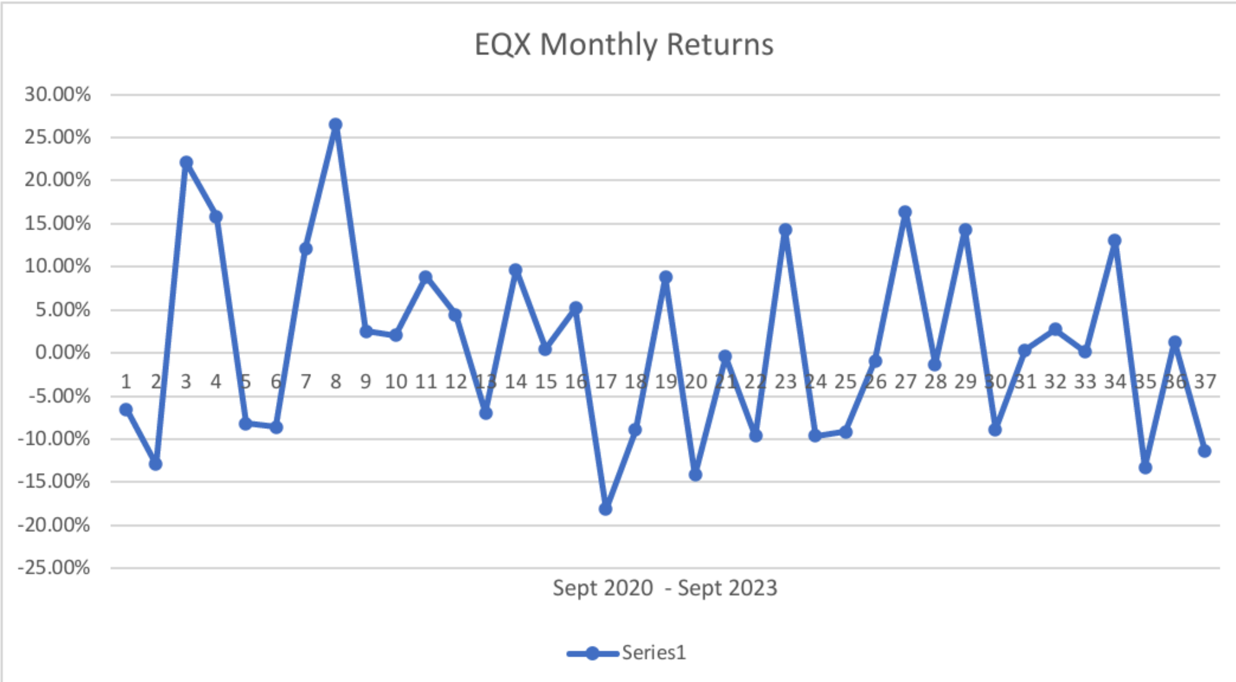
The financial data and analytics industry is a broad sector that includes a wide variety of businesses that analyze, collect, and sell financial information. They collect important financial data like credit reports and market and transaction data. They then employ their sophisticated analytics techniques in order to gain insight from the collected data and make more informed decisions concerning creditworthiness and risk management. This industry plays a pivotal role in the modern economy due to the essential information it provides to businesses, consumers, and government agencies. Financial data and analytics are important in mediating risk, preventing fraud and loss, and providing overall stability to financial markets.

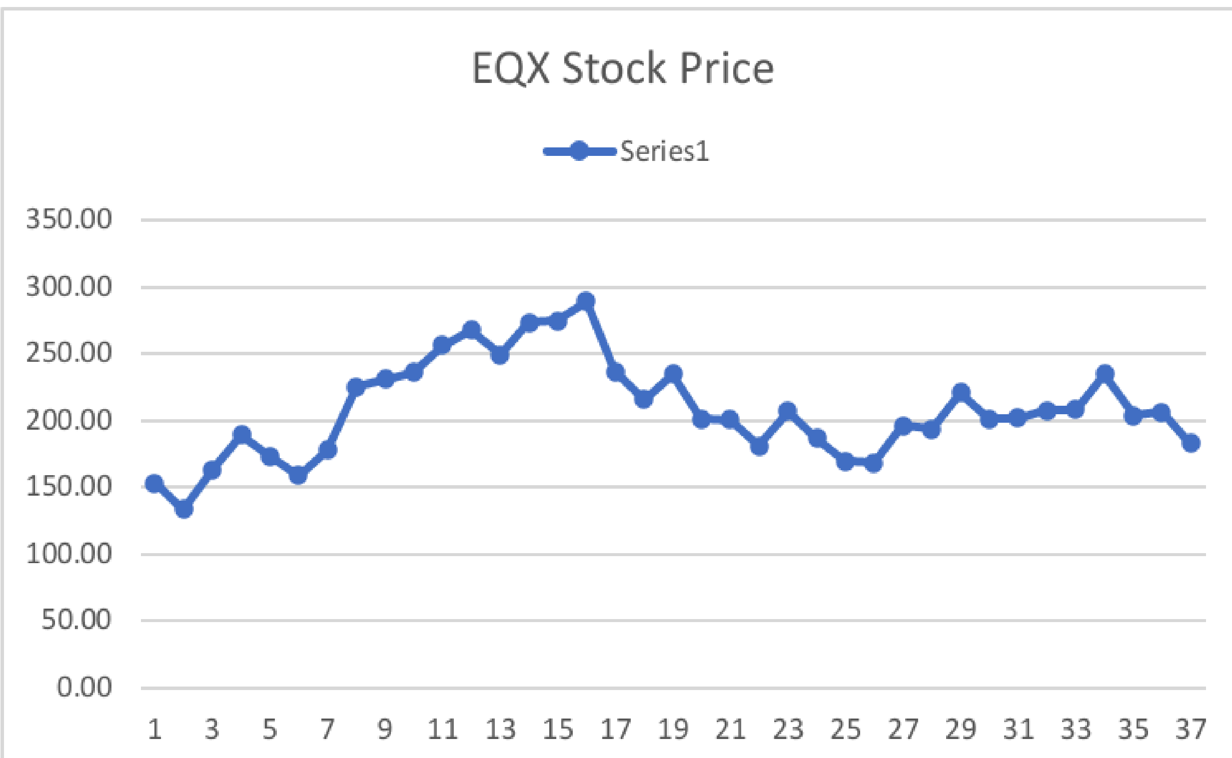
The financial data and analytics industry has four major segments: credit reporting, data analytics, fraud prevention, and market data and research. Credit reporting companies handle the collection, analysis, and sale of credit reports that provide information about an individual's creditworthiness and history. Data analytics companies provide analytics and decision support services to businesses that need assistance making informed decisions about credit risk, marketing strategies, etc. Fraud prevention companies focus on detecting and potentially preventing financial fraud such as payment fraud or identity theft. Market data and research companies provide insight into the trends and patterns in financial markets.

Equifax News (Sept 2020 - Sept 2023)

During the provided time period, September 2020 to September 2023, many important developments were made. Equifax had decided to expand its presence in Latin America by acquiring a Brazilian Credit Bureau. This opened up a new stream of revenue for the company and overall strengthened its position in that region. Equifax enhanced its data and analytics capabilities by partnering with large companies like Microsoft and Plaid. In terms of regulation and data privacy, Equifax began implementing more measures in order to protect consumer's data. Equifax also continued investing in things like cybersecurity to protect their systems from potential cyber threats.

Monthly Returns and Stock Prices





Highest Returns

- During **April of 2021** Equifax reached its highest return of 26.56%, this was because Equifax was investing a lot of resources into EFX Cloud data and was on a regular basis delivering many new products and services to meet the evolving needs of their customers. One example is the launch of the Equifax Decision Catalyst which was designed to assist businesses in making better customer-related decisions about creditworthiness and risk. During this month they also announced their partnership with Microsoft to create a cloud-based solution for managing consumer data called Equifax Data Fabric on Microsoft Azure. This was designed to help businesses comply with regulations related to data privacy and the protection of consumer data from fraud.
- During November 2020 Equifax reached its second-highest return of 22.18%, During this time Equifax focused on mediating the challenges related to their 2017 data breach while continuing to strengthen its cybersecurity position. They had also extended the deadline for their customers to file claims for the data breach class action settlement and as a result, reported strong third-quarter financials.

Lowest Returns

- During **January of 2022** Equifax's return reached its lowest return of -18.11, During this time Equifax was focusing its resources on addressing the fallout of its 2017 data breach. They had reached a settlement and began giving out payments to the consumers affected, overall causing a low return for that period

- During April of 2022 Equifax's return reached its second lowest return of -14.16%, During this time Equifax had had a significant coding error in their online model platform, OMS. This caused many miscalculations of certain credit attributes for consumers and impacted their credit scores as well as lending decisions

Credit Ratings

Company	S&P Rating	Investment Grade
EQUIFAX	BBB	YES
EXPERIAN	BBB	YES
TRANSUNION	BB+	NO

Equifax's Credit Rating is a BBB, This rating is considered to be Investment grade meaning Equifax is a relatively low credit risk. They are also considered stable, rating agencies do not expect this rating to change in the near future

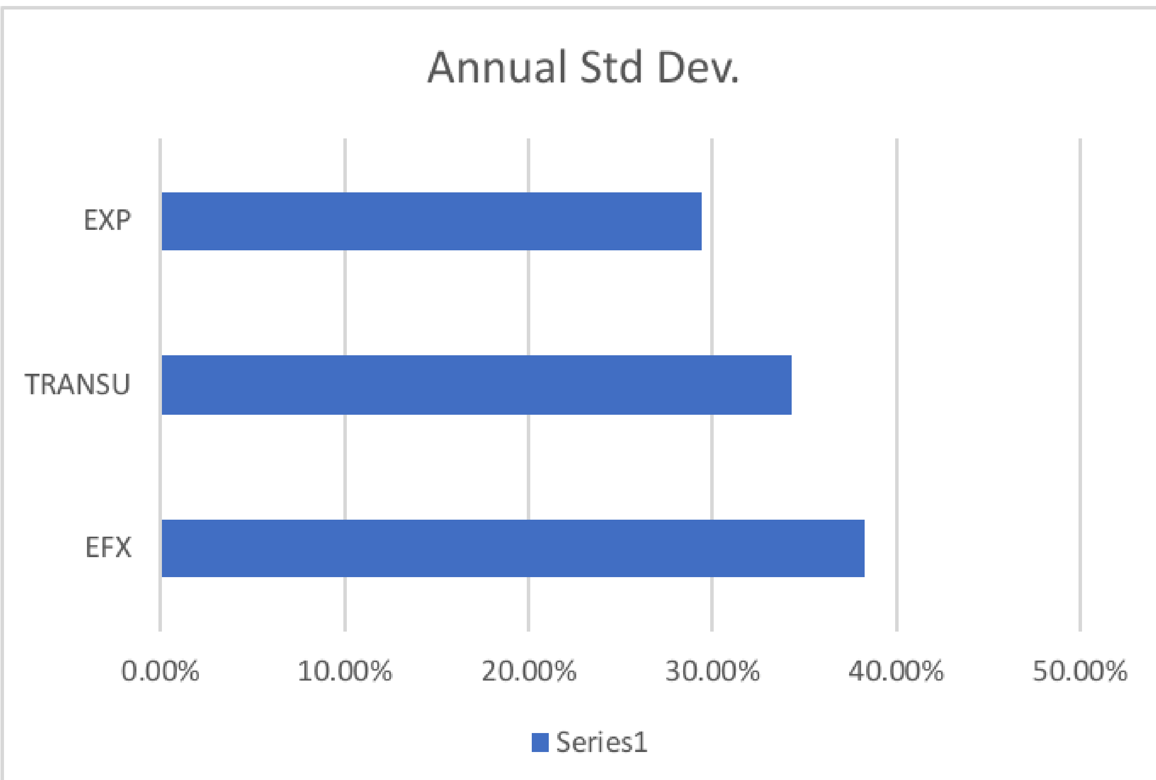
TransUnion's Credit Rating is a BB+ according to the S&P Global Ratings, This rating indicates they are considered to be a higher credit risk and therefore are not Investment-grade. Credit rating agencies do not expect this to change in the near future

Experian's Credit rating is a BBB so they are in a similar position as Equifax where they are considered stable and a low credit risk. Rating agencies do not expect this to change in the near future.

Sources:

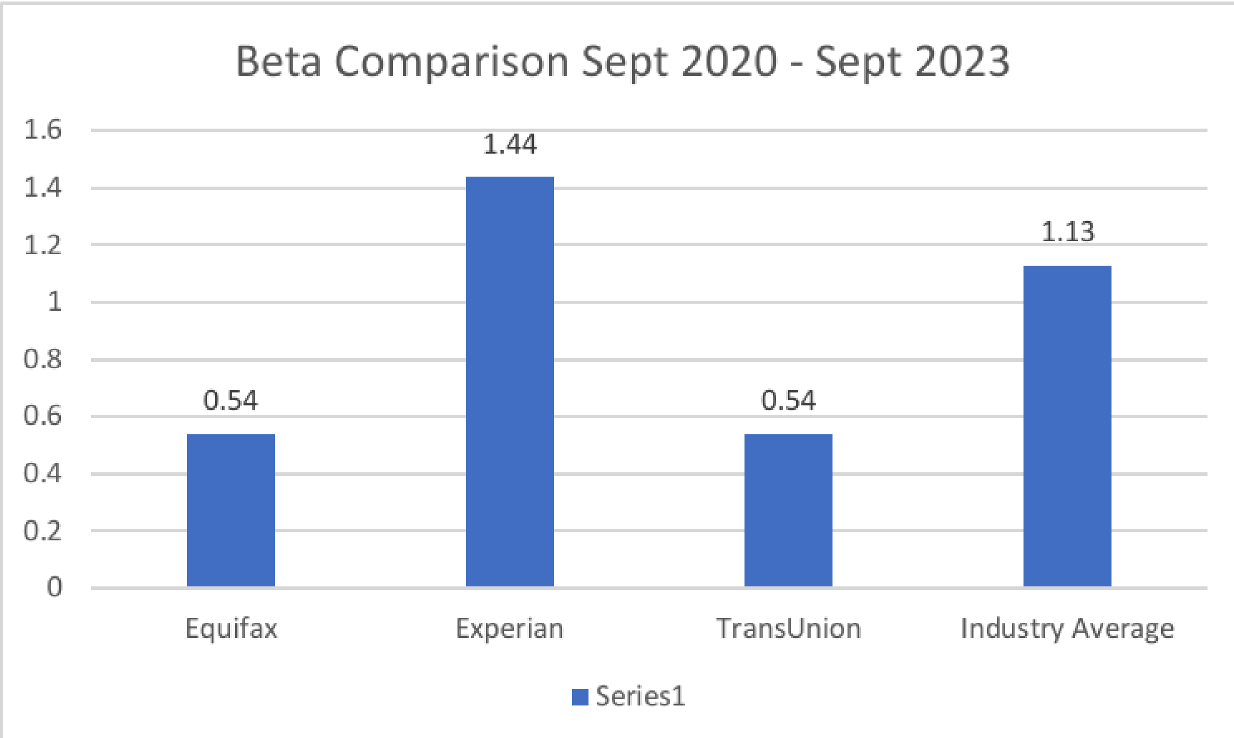
Equifax Inc. - Ratings Actions | S&P Global Ratings; (Disclosure.spglobal.com)
TransUnion LLC Credit Rating | S&P Global Ratings (Disclosure.spglobal.com)
Disclosure.spglobal.com

Annual Standard Deviation



***Found by taking the monthly returns for each company from September 1, 2020 through September 1, 2023, finding the Standard Deviation of each using Excel, and multiplying those values by the square root of 12.**

Beta Analysis



Beta is a measure of a stock's volatility in relation to the overall market, Equifax and Transunion have a Beta of 0.54 which is below the industry average of 1.13. This indicates a lower volatility and therefore a less risky stock than what the industry is used to. This also indicates a lower sensitivity in general meaning the stock does not experience drastic changes from one year to the next, rather they change slowly over time.

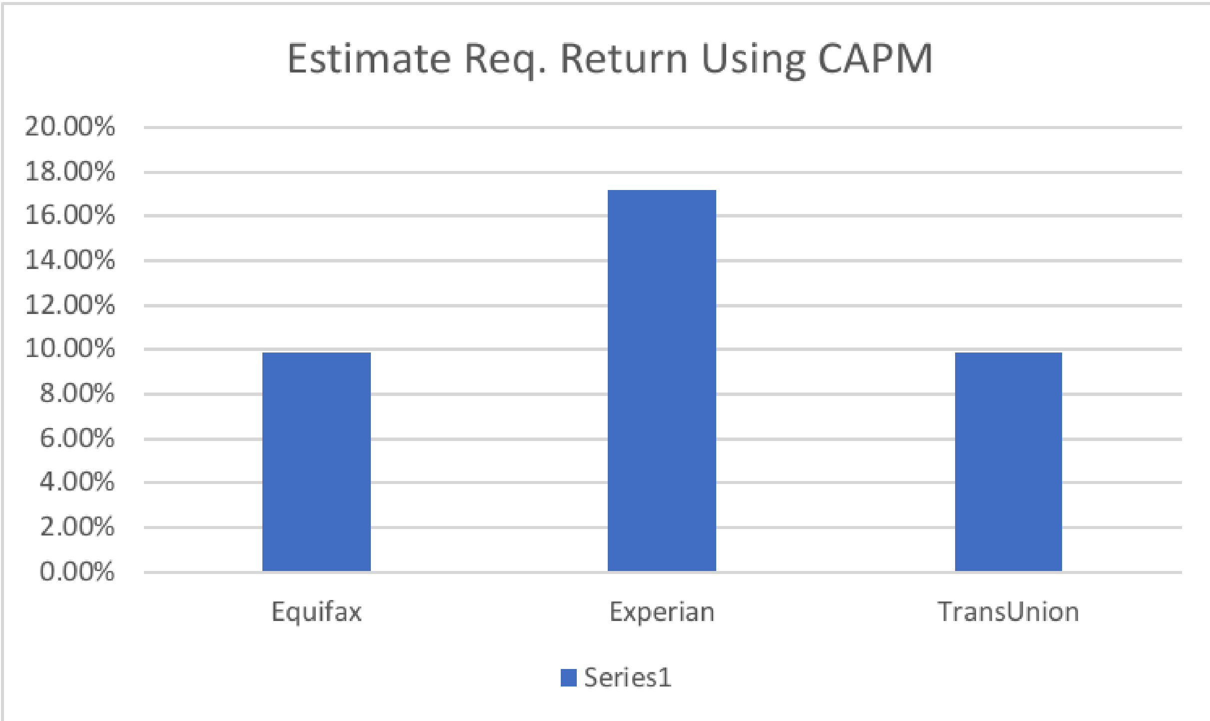
The Beta for Experian is 1.44 showing they have more non-diversifiable risk compared to Equifax, TransUnion, and the credit reporting / financial data and analytics industry as a whole. This means consumers need more compensation from Experian to be satisfied because they are stuck with more non-diversifiable risk and the higher the beta, the more risky it is.

Sources:

https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html

https://finance.yahoo.com/quote/EXPGY?p=EXPGY&.tsrc=fin-srch
https://finance.yahoo.com/quote/EFX/history?period1=1541289600&period2=1699056000&interval=1mo&filter=history&frequency=1mo&includeAdjustedClose=true
https://finance.yahoo.com/quote/TRU/

CAPM Analysis



The Estimated Required Return using the CAPM model tells us how much return we expect given a stock's riskiness. It tells us how much we should get rather than what we actually get so this percentage return is not guaranteed. It was calculated by taking the risk-free rate(Rf), and adding it to the Beta(B) multiplied by the expected return of the market(Rm) subtracted by the risk-free rate(Rf).

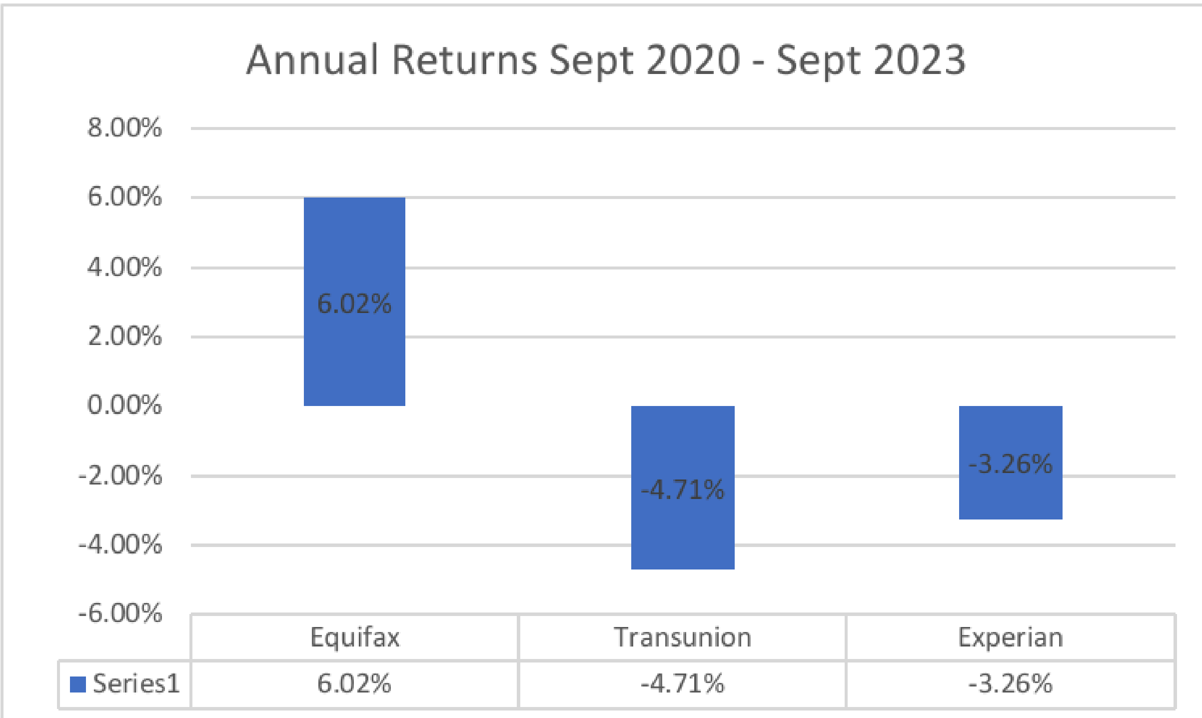
Expected Required Return = Rf + B (Rm - Rf)

Equifax = .055 + 0.54 (.1359 - .055) = 9.87%
TransUnion = .055 + 0.54 (.1359 - .055) = 9.87%
Experian = .055 + 1.44 (.1359 - .055) = 17.15%

Equifax and TransUnion both had a CAPM of 9.87% which compared to the markets expected return of 5.5% shows that the stock of these two companies may be underpriced

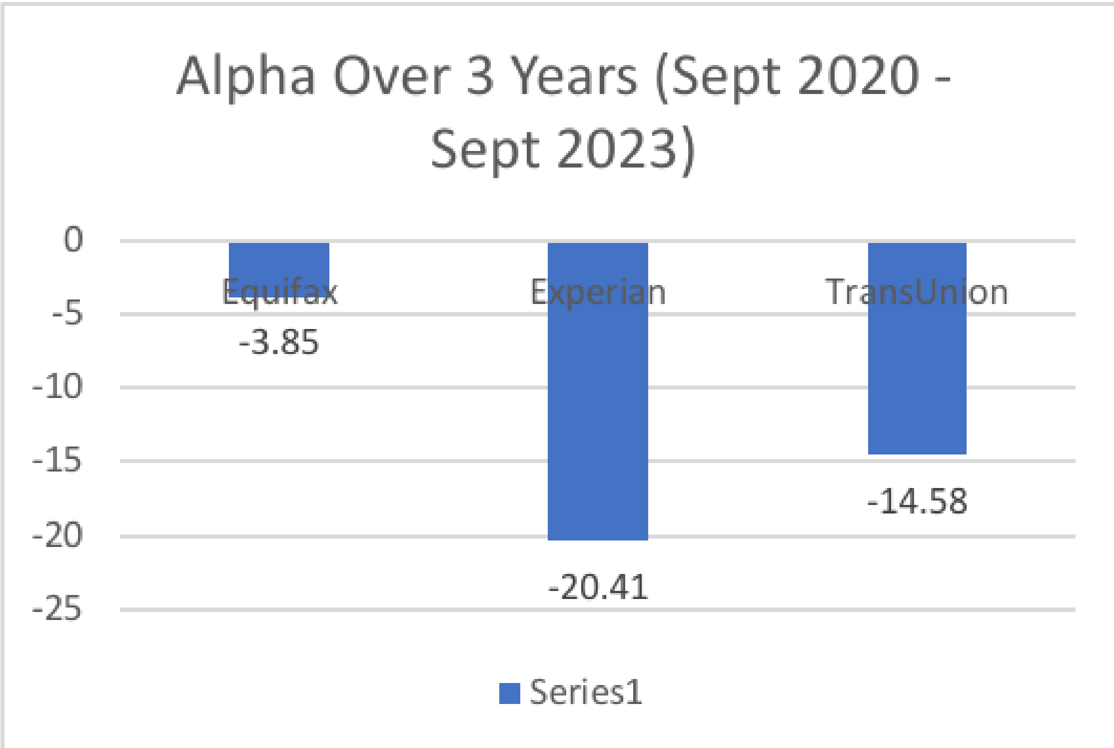
Experian has a CAPM of 17.15% which is much more than the expected return of the market of 5.5%, this shows that Experian's stock is overpriced.

Annual Returns



***This was Calculated By using this formula: CAGR = (Ending Value / Beginning Value)^(1/3) - 1**

Alpha Analysis



*** This was calculated by using the alpha formula: alpha = Portfolio Return - Expected Return Using the CAPM Model**

- Equifax's alpha of -3.85% suggests that the company's stock underperformed the market over the given time period
- Experian's alpha of -20.41% is the lowest of all three company's suggesting that the company's stock performed way below the market
- TransUnion's alpha of -14.58% suggests that the company's stock also performed way below the market over the given time period

Overall, The alpha's of these three company's have all been negative meaning the stock has not been able to provide the returns that correspond to the level of risk. This would be cause for concern for investors as it shows they have not been able to meet certain investment goals.

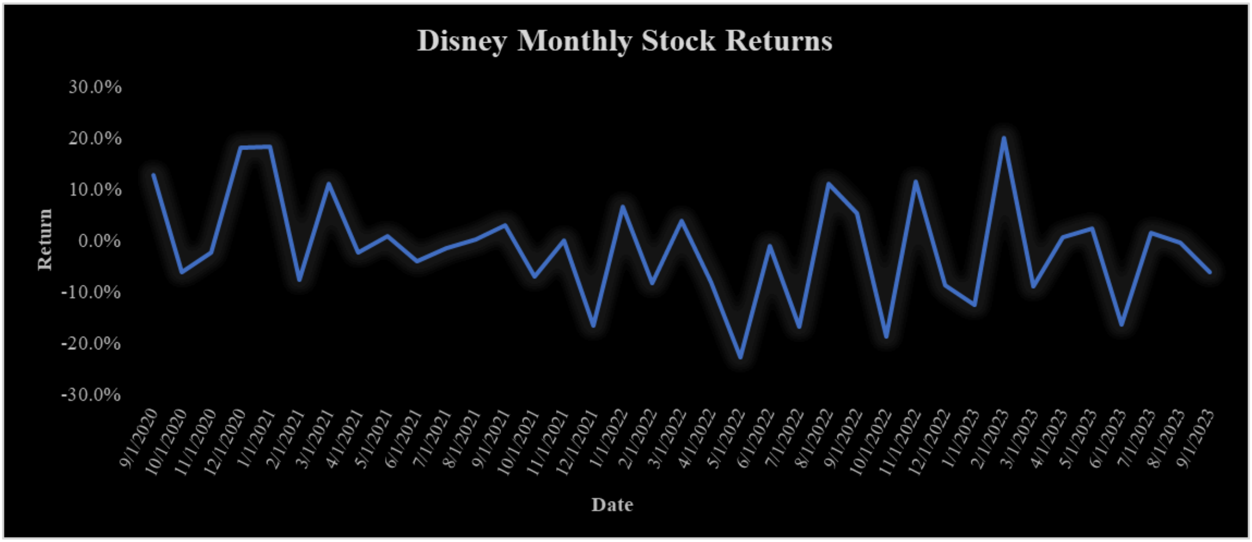
Disney

Overview

The U.S. Media and Entertainment industry is the largest in the world at $660 billion (of the $2 trillion global market). The industry is a dynamic and influential sector that encompasses a wide range of activities, including film, television, music, gaming, live performances, and digital media. Along with Disney, some of the biggest names include Netflix, Comcast, Paramount, and Universal.

Disney is a global entertainment giant founded on October 16, 1923, by Walt Disney and Roy O. Disney. Disney's influence spans television networks, theme parks, film studios, and streaming services. Media Networks, including ABC, ESPN, and Disney Channel, are significant in the television and cable industry. The Parks, Experiences, and Products division encompasses iconic theme parks worldwide. Through Pixar and Marvel Studios, they produce blockbuster films that have become cultural landmarks and they have a big presence in the streaming industry with Hulu and Disney+.

In September 2020, Disney was recovering from the effects of the COVID-19 Pandemic. As the world reopened, their stock climbed back up to pre-pandemic levels and it hit an all-time high in March 2021, driven by the huge success of Disney+ as streaming was more relevant than ever. This surge continued until the last quarter of 2021 when subscriptions to Disney+ slowed down and the success of the content they were putting out started to decrease. This trend of a lack of blockbuster films and decreasing subscriptions continued all throughout 2022 and 2023 with Disney stock eventually plummeting to pandemic levels as of Q3-Q4 2023.



Largest Increases
2/1/2023(+19.9%)
1/1/2021(+18.3%)
The biggest jump came during a period when Disney stock kept tumbling and their former CEO Bob Iger un-retired to try and turn things around. One of the things he did was cut 7,000 jobs in a plan to cut $5.5 billion in costs. The second biggest came during a period when Disney stock was soaring to all-time highs as they were recovering from the pandemic and Disney+ was taking off.
Largest Decreases
5/1/2022(-22.9%)
10/1/2022(-18.8%)

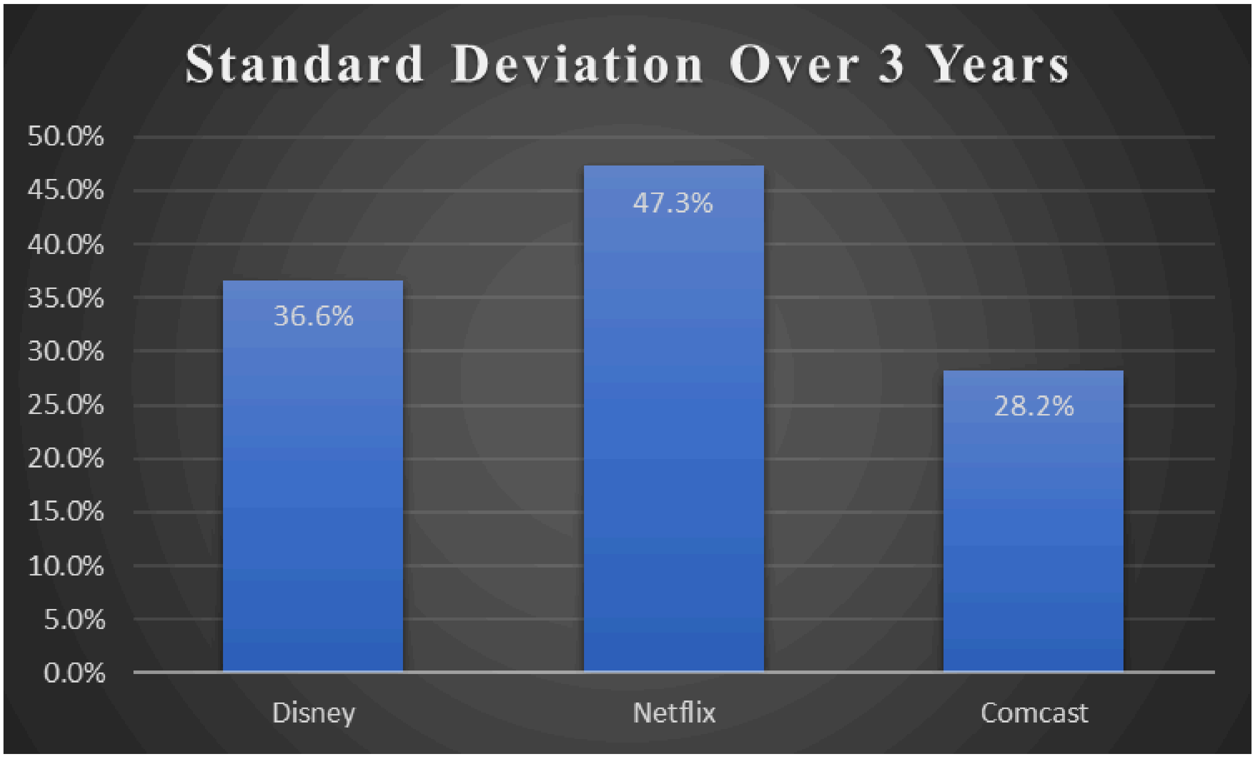
Both decreases happened in the same year, and this is because inflation was heavily impacting the economy, with increased costs and decreasing subscriptions playing a big part. During its largest decrease in May 2022, Disney was involved in a public social controversy with the governor of Florida leading to him threatening to strip the company of special tax privileges they receive in the state and causing a political debate over a law being passed in Florida.

Credit Rating Analysis

Company	S&P	Moody's	Investment Grade
Disney	A-	A2	Yes
Netflix	BBB+	Baa3	Yes
Comcast	A-	A3	Yes

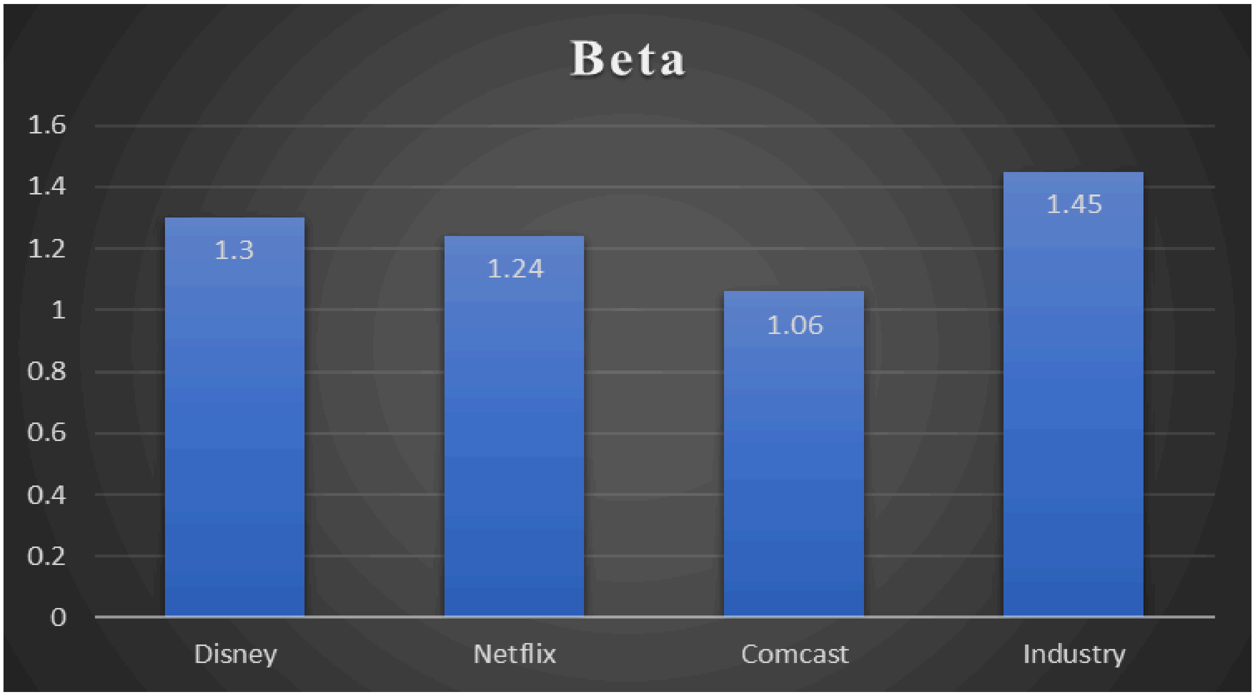
Disney and Comcast are tied for the highest rating from S&P with an A- while Netflix is the lowest with a BBB+. Moody's has Disney as the highest with an A2, followed by Comcast with an A3, and Netflix again being last with a Baa3, which is the lowest possible rating to be considered investment grade. Both Disney and Comcast have grades that are considered to be of medium quality while Netflix's grade is lower quality. The grades for Disney and Comcast show that they are considered stable companies that have decent capacity to repay all loans, but they may struggle in times of declining economic conditions. The grade for Netflix shows that they are able to at least meet the bare minimum in terms of their financial commitments, but they are not as stable as companies in the A range. Overall, all of these companies are investment grade.

Standard Deviation



The standard deviation over three years was calculated by first finding the monthly returns for Disney as well as two comparable firms (Netflix and Comcast). Then the standard deviation for each was calculated using Excel, and then the monthly deviation was multiplied by the square root of 12 to get the annual standard deviation.

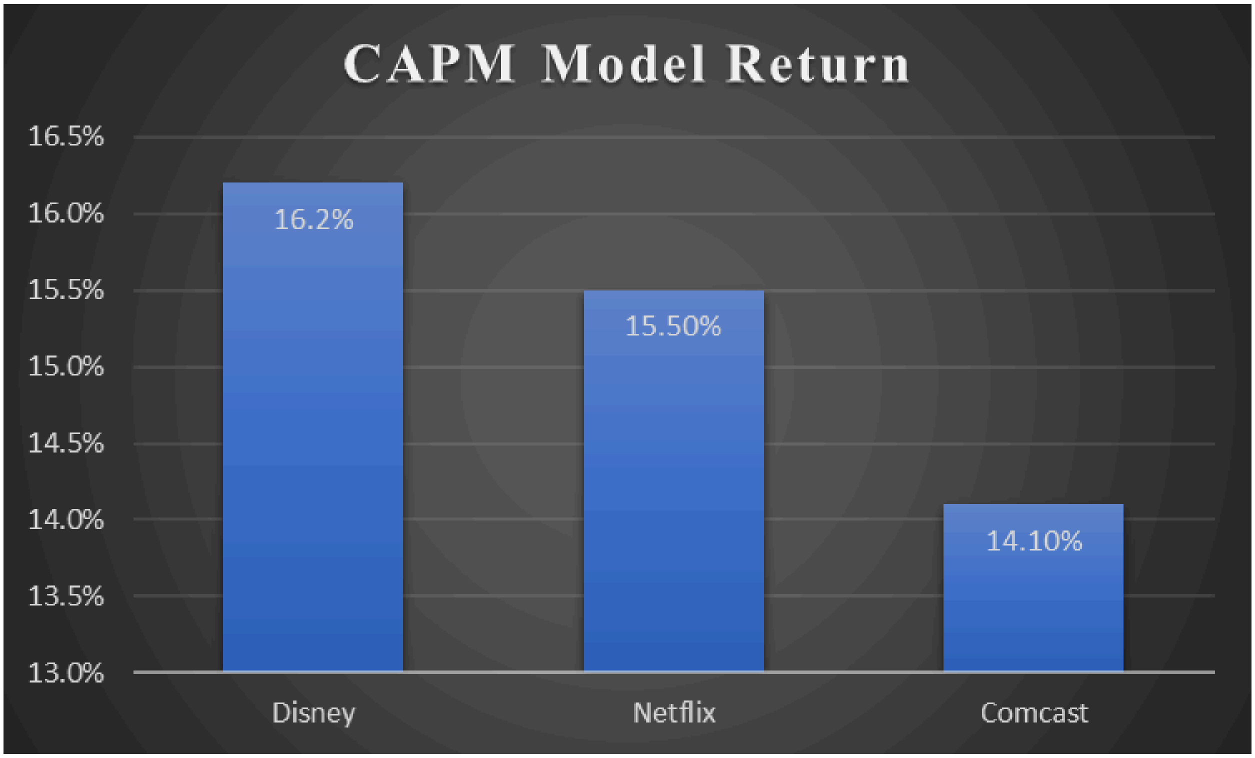
Beta Comparison



Beta is a tool used to measure how volatile a stock is. It's used to evaluate the expected risks and returns of a portfolio or to see whether a specific investment would be a good fit for a portfolio in terms of expected risks and returns. Per NerdWallet, a stock's beta is equal to the covariance of the stock's returns and its benchmark index's returns over a particular time period, divided by the variance of the index's returns over that period. The formula is β = covariance(stock returns, index returns) / variance(index returns).

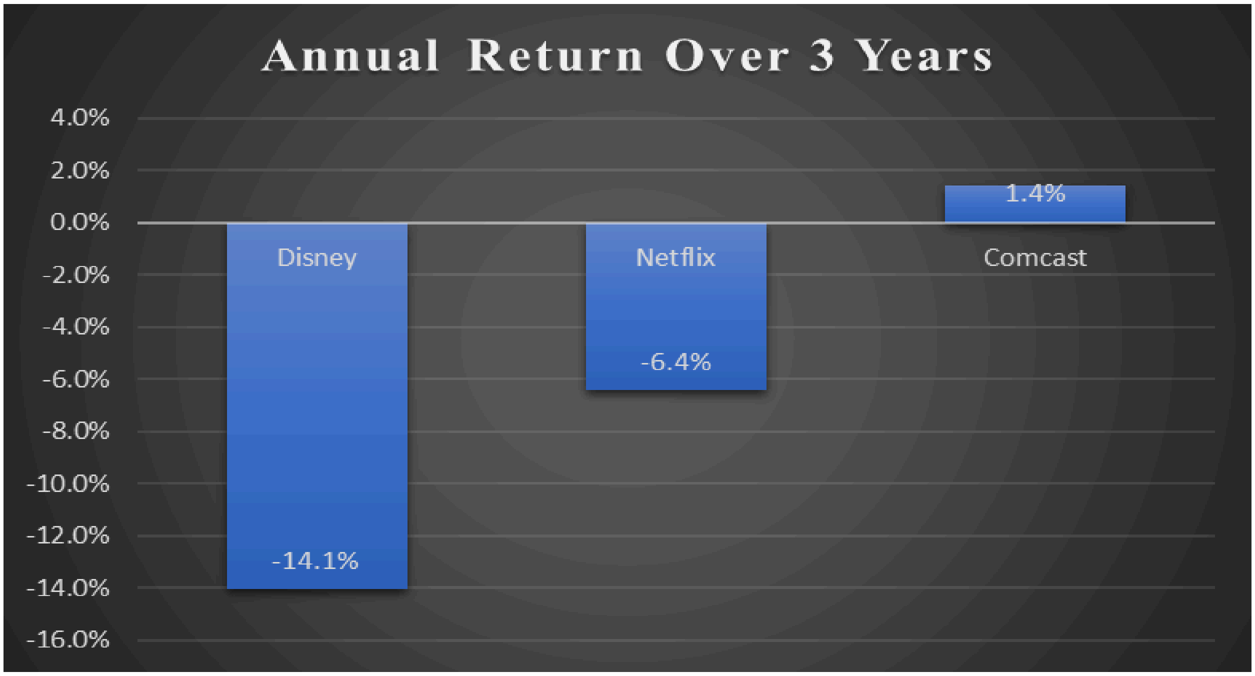
The beta for Disney is 1.3, Netflix is 1.24, and Comcast is 1.06. The industry average is 1.45 per a study from NYU. Typically, a Beta over 1 indicates that a stock is more volatile than the market, and all three of these companies and the entertainment industry as a whole meet that criteria. However, Comcast's is very close to 1, meaning that compared to the other two companies, it is closer to being in line with the market's volatility. Disney, Netflix, and the industry average are all at least 24% more volatile than the market.

CAPM Model Return



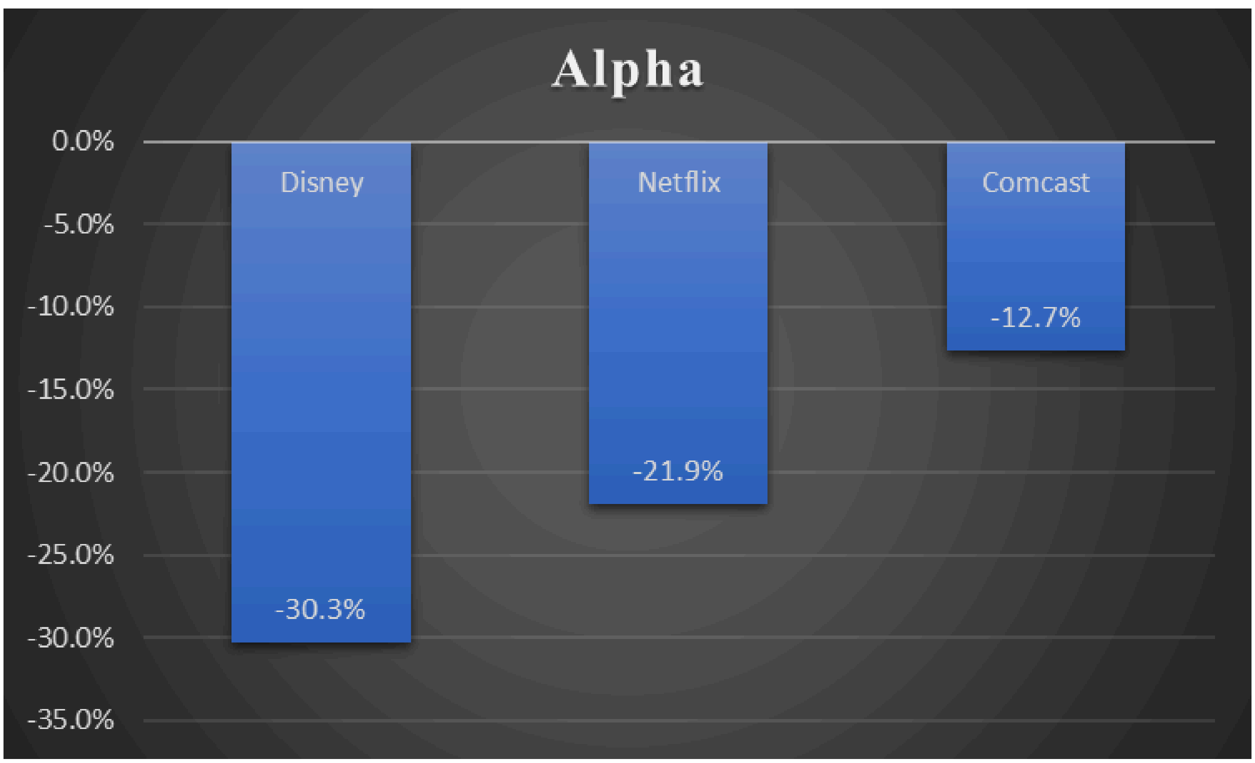
The risk-free rate was derived from the US Treasury website and as of 11/29/2023, the three-month rate was 5.5. Then I used the 'Historical Returns on Stocks' chart to calculate the 10-year average annual return of the S&P 500 from 2013-2022 to get 13.59%.
The formula is Rf + B (Rm - Rf), so for Disney, it would be (5.5 + 1.3(13.59-5.5)) = **16.02**, for Netflix, it's (5.5 + 1.24(13.59-5.5)) = **15.53**,
and for Comcast, it would be (5.5 + 1.06(13.59-5.5)) = **14.08.**
These numbers suggest that Disney expects the most compensation for their risk, followed closely by Netflix and Comcast.

Annual Return



The annual return over 3 years was calculated by dividing the stock price for each company at the end of the portfolio period by the price at the beginning of the portfolio period and then raising it to the power of one over the number of years the period was, which would be three in this case, and then finally subtracting one from that number.

Alpha



The alpha was calculated by subtracting the annual value over 3 years and the return expected by the CAPM model. The alphas of these three company's have all been negative meaning the stock has not been able to provide the returns that correspond to the level of risk. This would be cause for concern for investors as it shows they have not been able to meet certain investment goals.

APPLE

Sector Overview

The technology industry has undergone a remarkable evolution, becoming a central force in shaping the modern world. From the emergence of personal computers to the advent of smartphones, artificial intelligence, and the Internet of Things, technological advancements have revolutionized the way we live and do business. Companies within this dynamic sector continually strive to stay ahead of the curve by fostering innovation, creating cutting-edge products, and adapting to ever-changing consumer demands. The competitive landscape is characterized by a rapid pace of development, with breakthroughs in software, hardware, and connectivity driving progress. As we explore the landscape of the technology industry, it is crucial to recognize how companies navigate this environment, leveraging their strengths and embracing innovation to maintain a competitive edge. One such company that exemplifies adaptability and innovation in the face of industry evolution is Apple, a stalwart in the tech sector. Understanding its strategies and responses to industry shifts provides valuable insights into the broader dynamics of technology-driven progress.

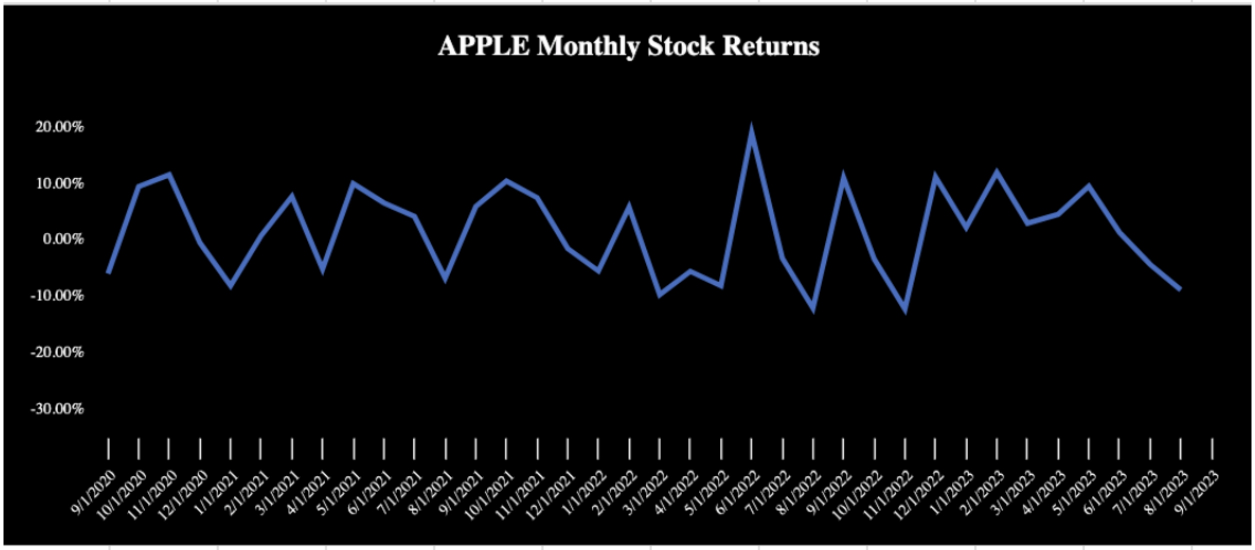
The emergence of the COVID-19 pandemic in early 2020 brought about unprecedented challenges and opportunities for the technology industry. Apple, like many other companies, faced supply chain disruptions, manufacturing delays, and shifts in consumer behavior due to lockdowns and social distancing measures. However, the company demonstrated resilience and adaptability, leveraging its strong brand reputation, robust ecosystem, and focus on innovation to navigate these challenges.

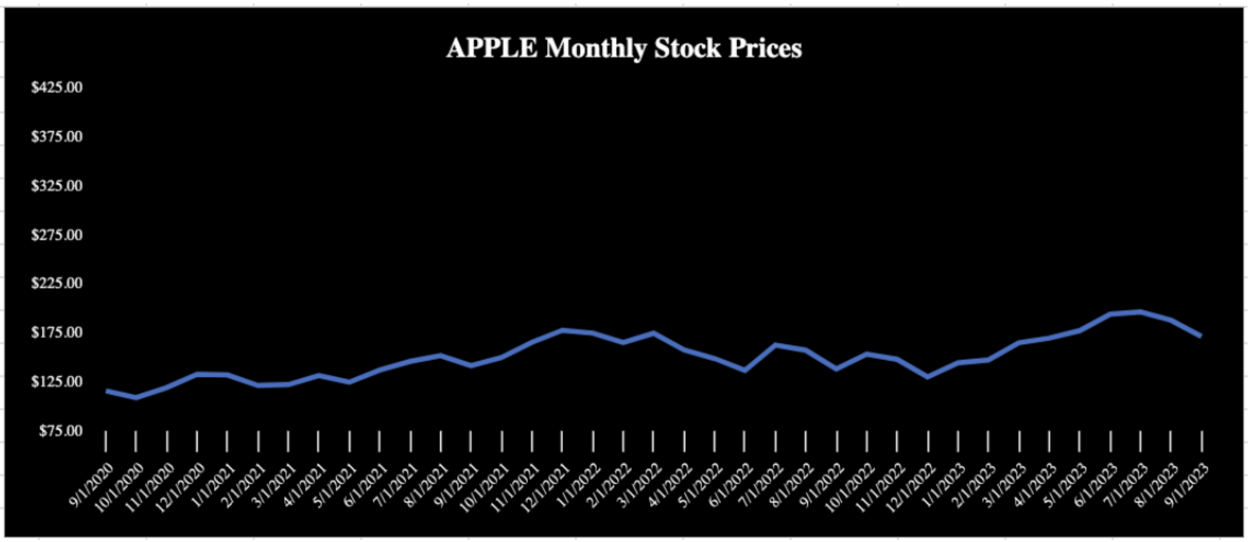
APPLE News (September 2020 - Sept 2023)

In the span of three years from 2020 to 2023, Apple has released three new iPhone trims. Apple has also made significant strides in other areas, such as introducing the M1 chip, which has revolutionized its Mac line of computers, and launching the AirPods Pro, which have become the gold standard for wireless earbuds.

Recently, Apple has shown a keen interest in venturing into new areas like metaverse technology. The company has been actively hiring engineers and software developers with expertise in augmented reality and virtual reality, suggesting that it is planning to develop hardware and software for the metaverse. Apple's entry into the metaverse could have a significant impact on the industry, as its vast resources and experience in developing consumer electronics could help to bring the metaverse to a wider audience. Only time will tell what Apple has in store for the metaverse, but it is clear that the company is well-positioned to play a leading role in this emerging technology.

Stock Prices and Monthly Returns





Highest and Lowest Returns and the News Behind it:

Apple Inc.'s stock experienced significant fluctuations between September 1st, 2020, and September 1st, 2023, reflecting the company's performance and broader market conditions. The highest returns were driven by several factors, including strong iPhone sales, positive investor sentiment, and overall market optimism. Conversely, the lowest returns were primarily attributed to concerns about supply chain disruptions, potential economic headwinds, and a broader market downturn.

Largest Increases:

July 1,2022 (18.86% Increase)
March 1,2023 (11.86% Increase)

During the period of highest returns, Apple's iPhone sales were robust, driven by strong demand for the iPhone 14 series and the introduction of the iPhone 15 set to come out later that September.

Positive investor sentiment was also high, fueled by the company's strong financial performance and continued innovation. Additionally, the overall market was experiencing an upswing, providing a favorable backdrop for Apple's stock performance.

Largest Decreases:
December 1, 2022 (12.23% Decrease)
September 1, 2022 (12.10% Decrease)

In contrast, the period of lowest returns was marked by a combination of factors that weighed on Apple's stock price. Supply chain disruptions, caused by the ongoing COVID-19 pandemic and geopolitical tensions, led to concerns about product availability and potential revenue shortfalls. Economic headwinds, such as rising inflation and interest rates, also contributed to investor uncertainty. Moreover, the broader market experienced a downturn, further exacerbating the decline in Apple's stock price.

Credit Ratings Analysis

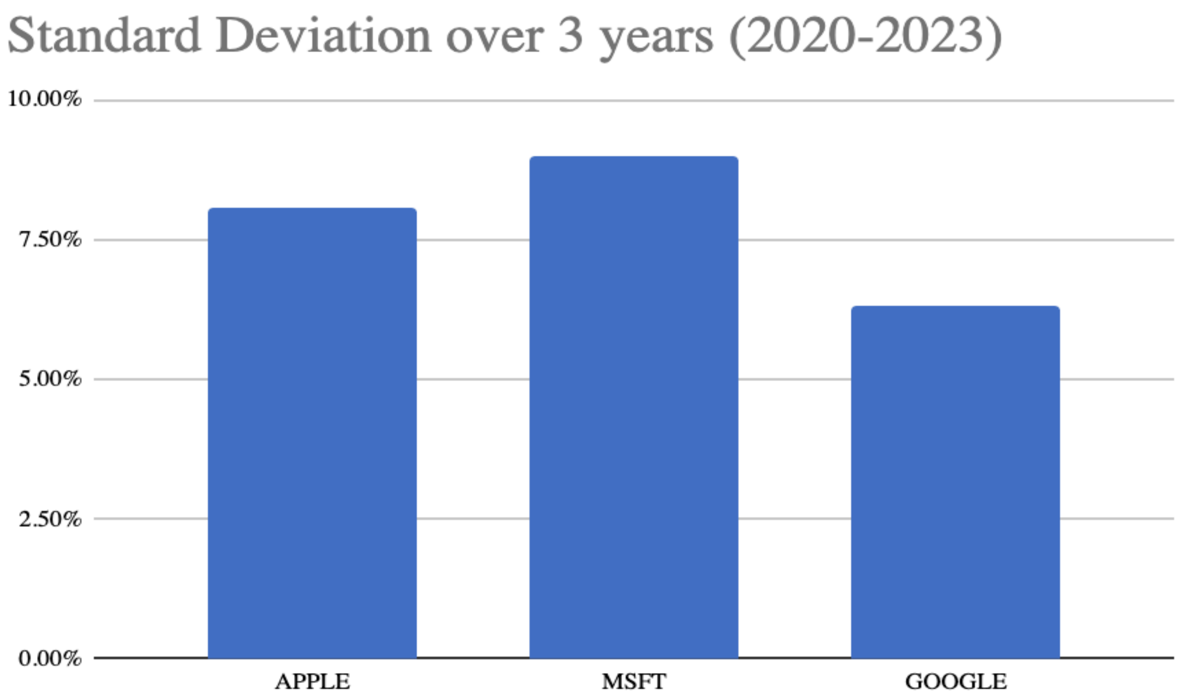
Apple’s long-term credit rating was recently upgraded to AAA by Moody’s Investors Service, which is the highest possible credit score. This rating puts Apple in an exclusive club with Microsoft Corp. and Johnson & Johnson as the only U.S. corporations in the S&P 500 with the highest possible credit score.

Another comparable firm is Google, with a credit rating of AA+, which is slightly lower than Apple, Microsoft and Johnson & Johnson who sit at the highest tier.

Overall, All three companies - Apple, Google, and Microsoft - have credit ratings that are considered investment grade. These ratings suggest that they are deemed to have a low risk of default and are generally considered safe for investment

	S&P Rating	**Investment Grade**
Apple Inc	AAA	YES
Google Inc	AA+	YES
Microsoft	AAA	YES

Standard Deviation

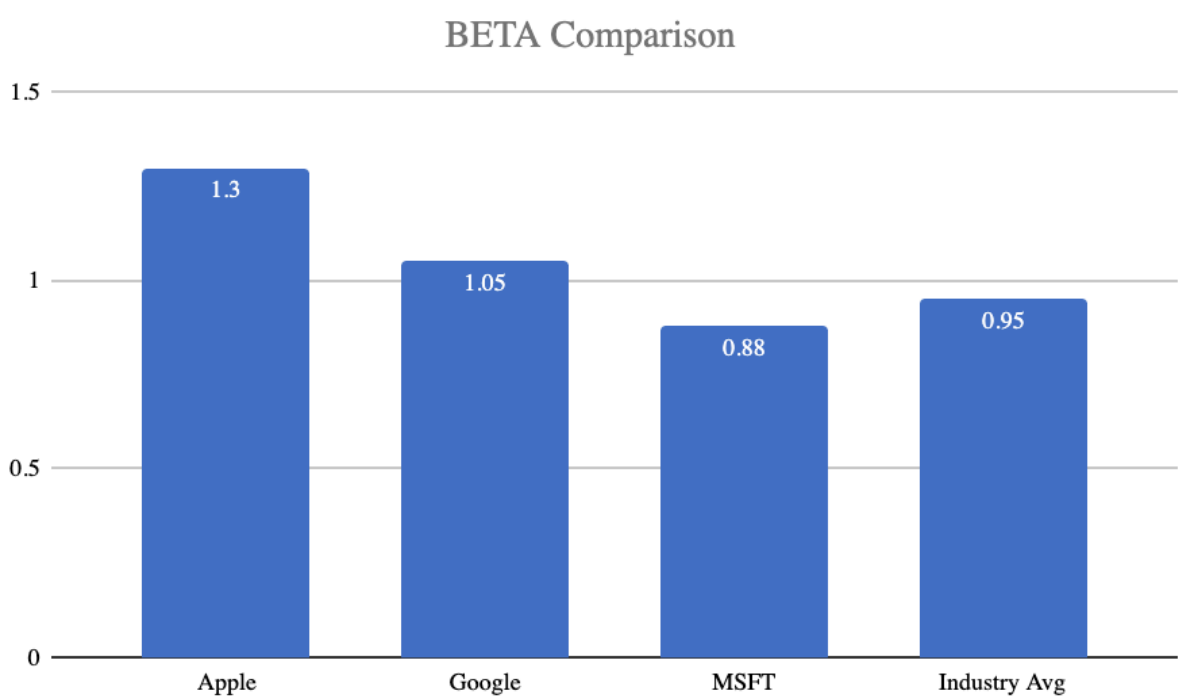


* Calculated by using the STDEV.S(array) formula on Excel which estimates Standard Deviation Based on a given sample in this case being the monthly returns for each of the stocks over 2020 - 2023. Then I used the SQRT(12) function to get the annualized standard deviation.

Beta Analysis

Beta is a fundamental concept in finance that measures the volatility of a stock in relation to the market. In other words, it quantifies a stock's sensitivity to market movements 1. This measure is used in the Capital Asset Pricing Model (CAPM), which calculates the expected return of an asset based on its beta and expected market returns.

- **APPLE** has a beta of **1.3,** this suggests that it is more volatile than the market. In practical terms, this means that Apple's price tends to move more than the market when the market goes up or down.
- **GOOGLE** has a beta of 1.05, which is slightly better than Apple's but it is still more volatile than the market.
- **MICROSOFT** has a Beta of .88 which is below the market so it's not as volatile. This means that Microsoft's price tends to move less than the market when the market goes up or goes down.
- The **Industry Average** beta of 0.95 suggests that, on average, stocks in this industry are slightly less volatile than the market.

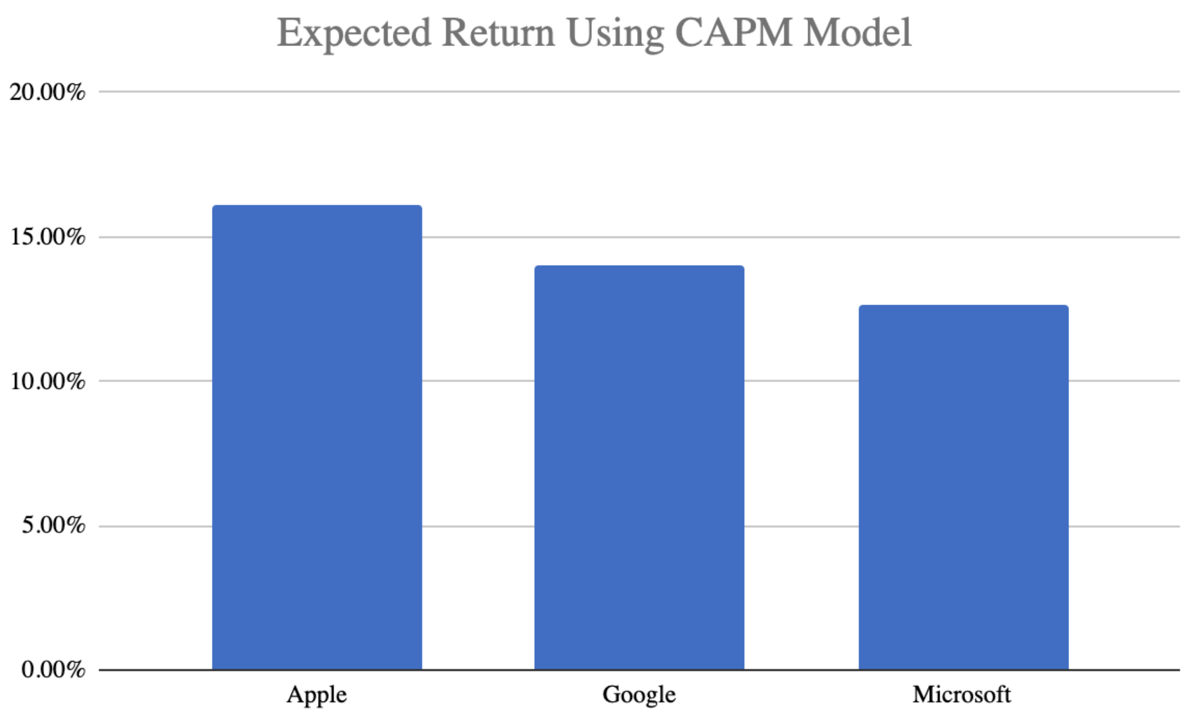


*** The formula to calculate beta is as follows:**

β=Variance(index returns)Covariance(stock returns, index returns)

CAPM Analysis

APPLE - 5.5%+1.3*(13.59%-5.5%) = 16.07%
GOOGLE - 5.5%+1.05*(13.59%-5.5%) = 13.99%
MSFT - 5.5%+0.88*(13.59%-5.5%) = 12.62%



The CAPM data suggests that Apple is expected to have the highest returns among the three companies, with an expected return of 16.07%. Google is expected to have the second highest returns with 13.99%. Microsoft is expected to have the lowest return with an expected return of 12.62%.

The reason why Apple has the highest expected return is because Apple’s beta score of (1.3) is higher than both Google and Microsoft’s which are at 1.05 and .88 respectively. Nonetheless, it implies that APPLE has the opportunity to achieve superior returns compared to the market in an upward market scenario. While Google's beta is slightly lower than Apple's, it still exceeds the market's, indicating an anticipated higher return for Google, though not as substantial as Apple's. In contrast, MSFT boasts the lowest beta among the three companies, signifying lower volatility than the market. Consequently, MSFT is projected to yield a return below that of the market.

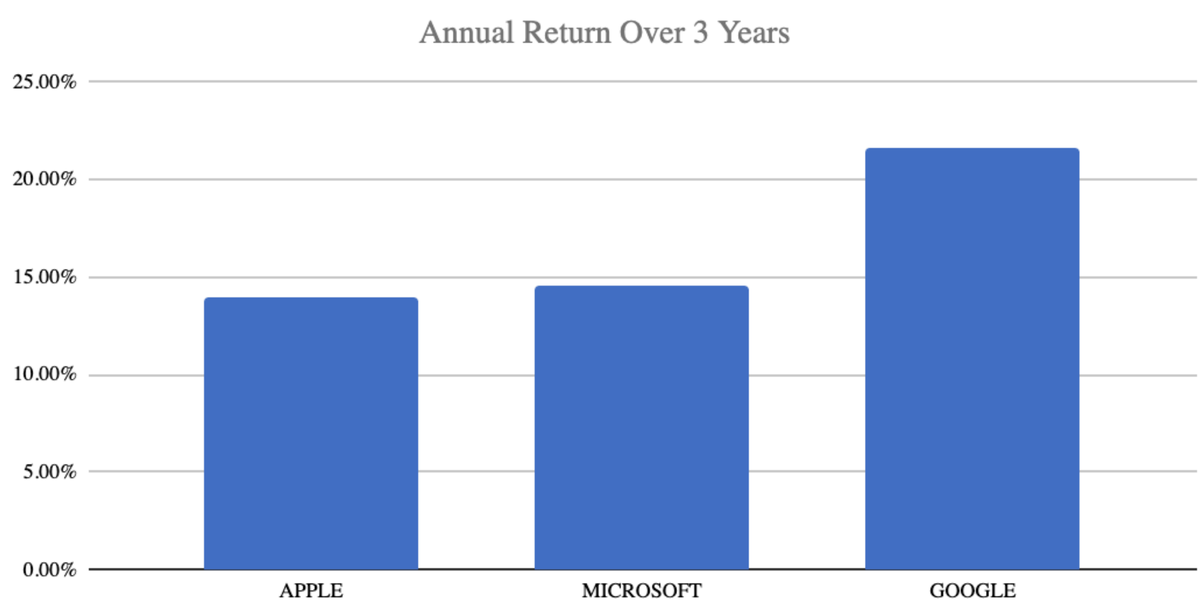
Sources:

https://finance.yahoo.com/quote/aapl/
https://finance.yahoo.com/quote/GOOGL/
https://finance.yahoo.com/quote/MSFT?p=MSFT

Market Rate - https://www.investopedia.com/ask/answers/042415/what-average-annual-return-sp-500.asp

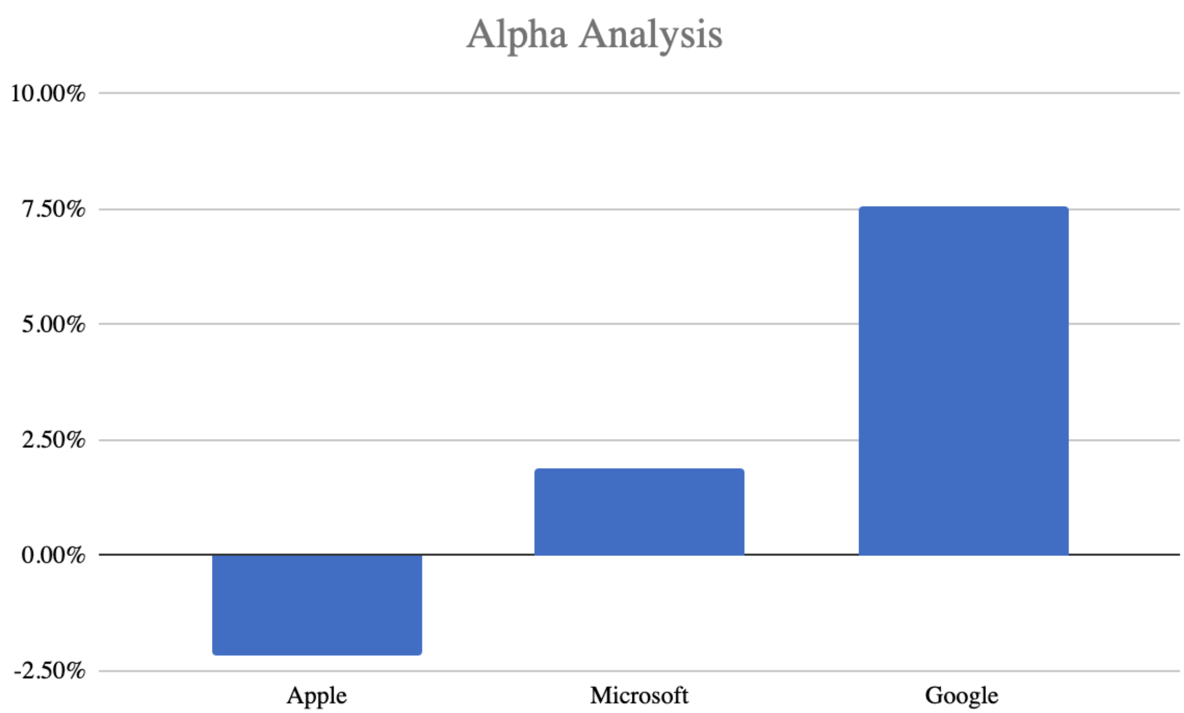
Risk Free Rate - https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_yield_curve&field_tdr_date_value_month=202311

Annual Returns



***This was Calculated By using this formula: CAGR = (Ending Value / Beginning Value)^(1/3) - 1**

<u>Alpha Analysis</u>



*** This was calculated by using the alpha formula: alpha = Portfolio Return - Expected Return Using the CAPM Model**

- Apple's alpha of -2.16% indicates that the company's stock demonstrated a performance below that of the market during the specified period.
- Microsoft's alpha of 1.88% suggests that the company's stock performed slightly below the market during the specified period.
- Google's alpha of 7.58% indicates that the company's stock exhibited a performance surpassing that of the market during the specified period.

In summary, the alpha data implies that Apple is encountering challenges, whereas Google and Microsoft are exhibiting positive performance. Nonetheless, it's crucial to acknowledge that alpha is just one metric among various factors that investors should take into account when making decisions.

Section 2: Portfolio Analysis

On September 1st, 2020, we had $10,000 to devote to an equally weighted stock portfolio. In other words, we invested $2,500 into each of the following 4 companies: Apple Inc., Meta, Disney, and Equifax.

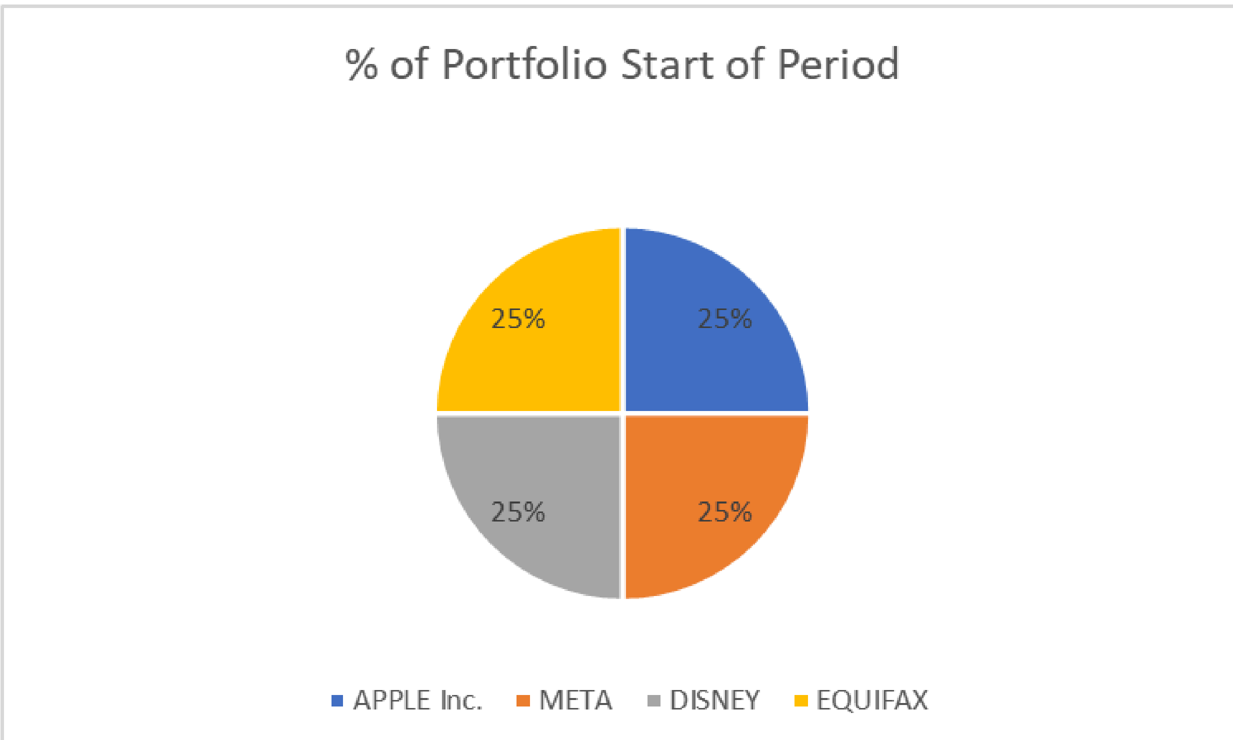
Portfolio at the Beginning (Year 0):

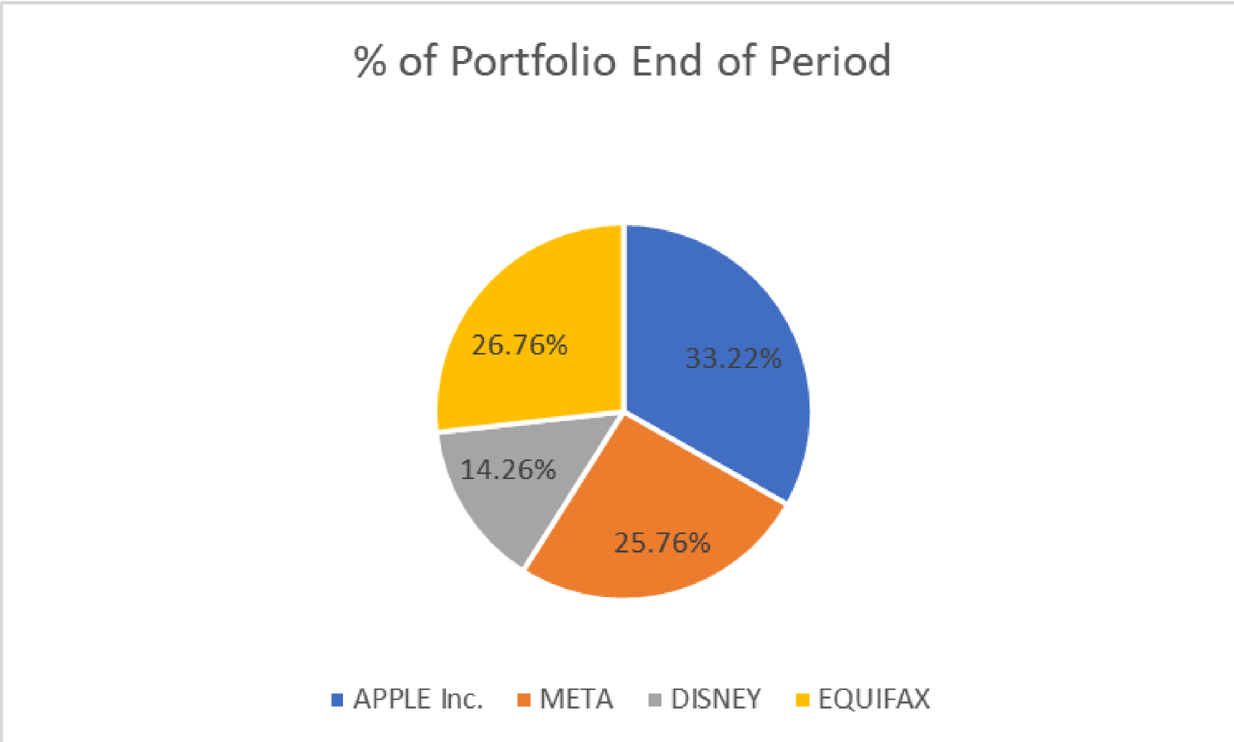
Company Name	Stock Price	Number of Shares	Total Beginning Value	Percent of Portfolio
APPLE Inc.	$115.81	21.59	$2,500	25%
META	$261.90	9.55	$2,500	25%
DISNEY	$131.87	18.96	$2,500	25%
EQUIFAX	$153.43	16.29	$2,500	25%
TOTAL			$10,000	100%

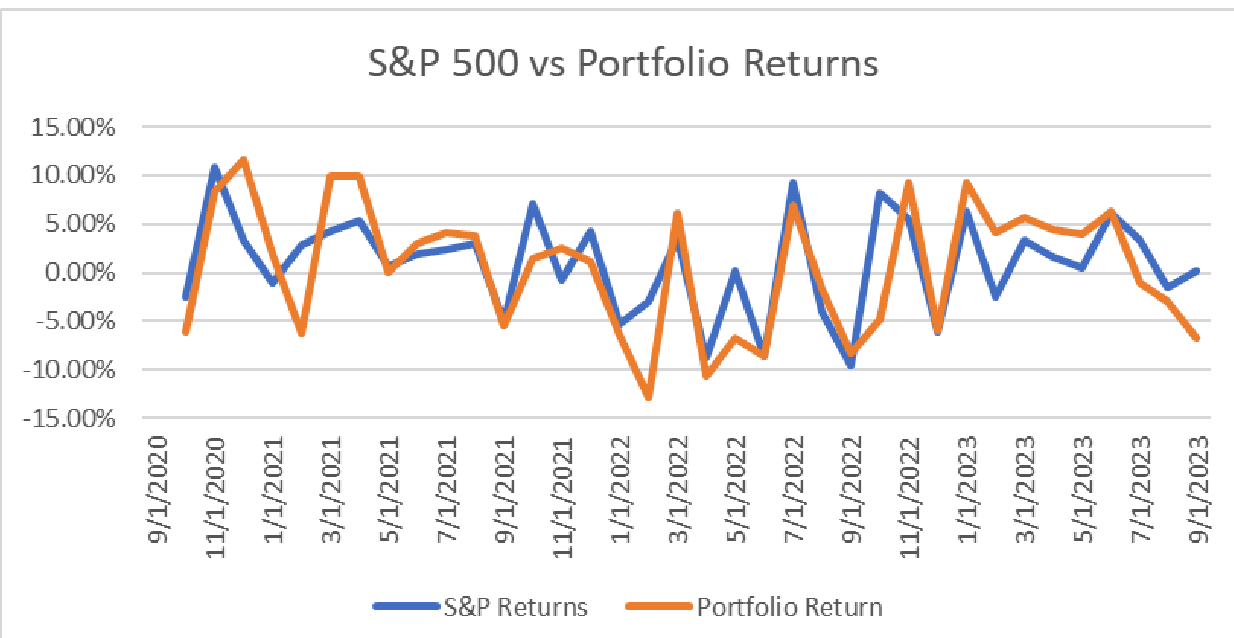
Portfolio at the End (Year 3):

Company Name	Stock Price	Number of Shares	Total Ending Value	Percent of Portfolio
APPLE Inc.	$171.21	21.59	$3,696	33.22%
META	$300.21	9.55	$2,867	25.76%

DISNEY	$83.68	18.96	$1,587	14.26%
EQUIFAX	$182.83	16.29	$2,978	26.76%
TOTAL			$11,128	100%




% of Portfolio End of Period
33.22%
25.76%
14.26%
26.76%
APPLE Inc.
META
DISNEY
EQUIFAX


S&P 500 vs Portfolio Returns
15.00%
10.00%
5.00%
0.00%
-5.00%
-10.00%
-15.00%
9/1/2020
11/1/2020
1/1/2021
3/1/2021
5/1/2021
7/1/2021
9/1/2021
11/1/2021
1/1/2022
3/1/2022
5/1/2022
7/1/2022
9/1/2022
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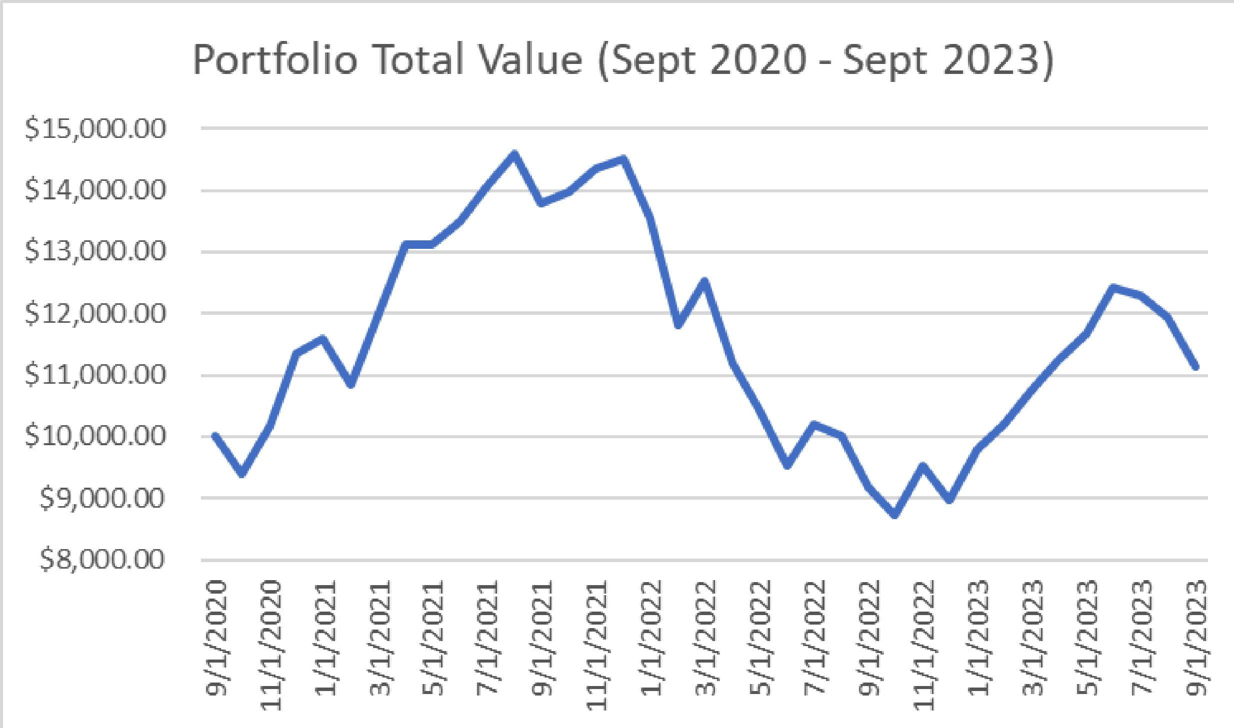
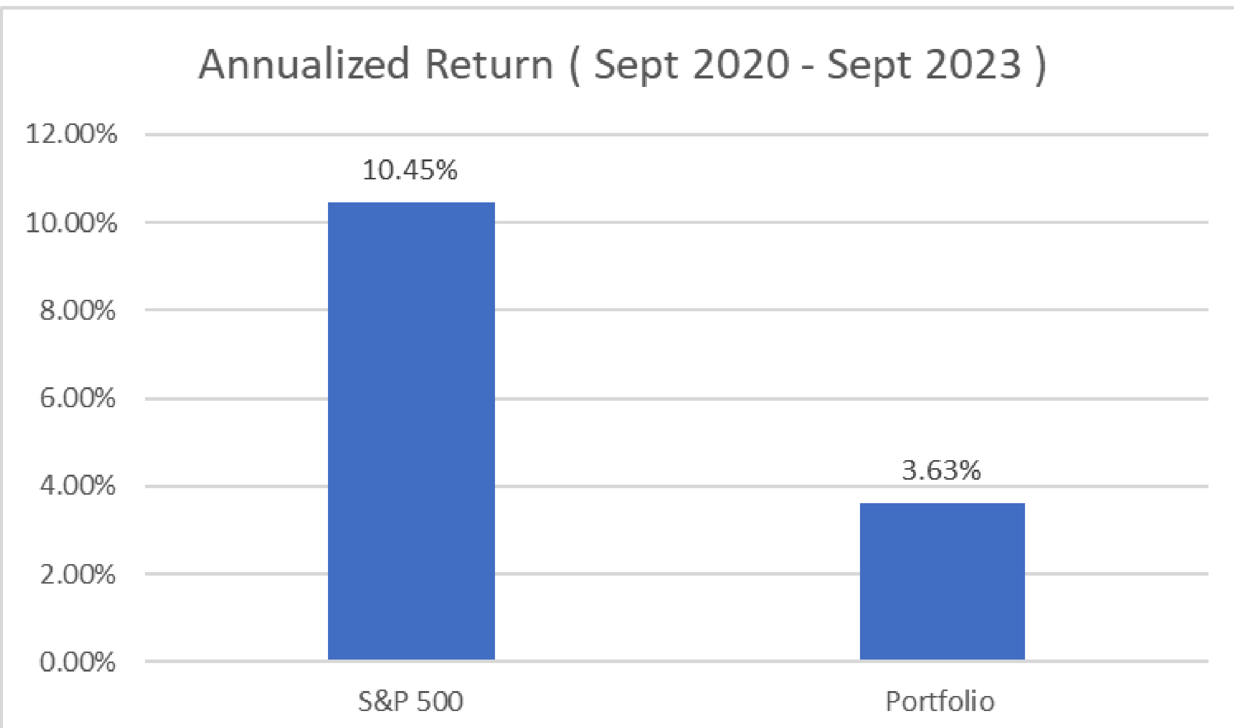
S&P Returns
Portfolio Return





Portfolio Analysis

The provided data represents the annual returns of the S&P 500 index and a portfolio including our three companies including, Equifax, Meta, Disney, and Apple. The S&P 500 had an annual return of 10.45%, indicating that an investment in an index fund tracking the S&P 500 would have grown by this percentage over the year. On the other hand, the portfolio showed an annual return of 3.63%, meaning that the investments within this portfolio increased by this percentage over the same period.

When comparing these returns, it's evident that the S&P 500 outperformed the portfolio. This could suggest that the portfolio may be invested more conservatively in lower-risk assets which typically yield lower returns. Alternatively, it could indicate that the investments within the portfolio did not perform as well as the market overall, or that the portfolio may lack sufficient diversification, causing it to miss out on the sectors that contributed to the S&P 500's growth.

Source: **https://finance.yahoo.com/quote/SPY/history?p=SPY**