Group 6
ENGR 111 Spring 2021

Michael Bao, Victoria Delk,
Seong Hong, Kenny Le,
Jenggang Wang, Charles Zhang

# ENGR111 Project
## Financial Analysis of HBO MAX

### I. Introduction

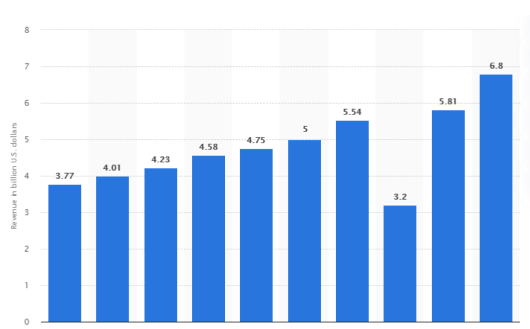
"It's Not TV. It's HBO." This slogan alone has been around for nearly 25 years, and HBO has been able to establish its prominence in the television industry justifying their slogan. What started as the first subscription television service in the United States is now the latest in a growing list of companies that provide streaming services with its new platform: HBO Max. Streaming services have become extremely popular in the last decade due to the accessibility and freedom that they allow users. Instead of spending around $60 for a starting cable TV bundle, users have over 200 streaming service options that they can subscribe to for about a fifth of that price (Cook, 2020).

While HBO was established way back in 1972, HBO Max was a recent streaming service that was launched in May 2020. Its IPO is actually tied to the AT&T stock with the ticker symbol NYSE: T. This is due to the parent of HBO Max being WarnerMedia which, in turn, is under the US telecoms giant AT&T. Thus, the market share for HBO Max holds at about 12% from its initial 3% market share back at its release (Wit, 2021).

As preeminent as HBO Max may seem, other streaming service giants such as Netflix, Amazon Prime Video, and Hulu have been in the market for ten or twenty years already. However, despite HBO entering the streaming service industry later similar to Disney+, HBO still reaps the competitive edge of the unprecedented quarantine and coronavirus which allowed HBO Max to rampantly develop.

### II. Ratio Analysis

With the launch of HBO Max, HBO was able to increase its subscription revenue to an all time high. Reportings from December 2020 revealed that HBO cashed in 6.8 billion U.S. dollars from subscription revenue alone from the 5.81 billion in the previous years (Stoll, 2021).




HBO's Subscription Revenue from 2011 to 2020 in billion U.S. dollars (Statista, 2021).

When taking into account the outstanding equity shares of HBO Max and, consequently, AT&T, the basic EPS could be calculated using data from Yahoo Finance.

| | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| Basic EPS | 4.77 | 2.85 | 1.90 | -0.75 |

Interestingly enough, the company does not have a higher Earnings Per Share as of recent years when discussing market value ratios. HBO Max does have a debt to equity ratio of 1.077 and a return on equity of 12.33 when reflecting on the profitability ratio. The ROE would show that the company had good utilization of equity capital, but as the Debt-Equity Ratio confirms, the company did take on a lot of debt given that the HBO Max was a recent unveil.

The trends that could be tied to the general evaluation of the company's strengths would be their utilization of the current circumstances shaped by the coronavirus which allowed HBO Max to ease into the newfound streaming market already occupied by Netflix and Amazon. However, the weakness of the company shows when the financial ratios do not meet up to par with some of its competitors, but this is not to discredit the success of HBO Max altogether.

## III. Company's Bonds

AT&T's investors website indicates that they own a great amount of various bonds. However, they did not disclose the amount or types of bonds they hold. By using FINRA, a certified non-profit third-party organization for market screening, we can affirm that AT&T holds several types of short term and long term bonds. FINRA's database provides information on 186 different available bonds, including not just AT&T Inc. but AT&T Corp, Broadband Corp, CDA Inc., and Wireless SCVS Inc. From some AT&T bonds maturing in July of this year, to some bonds maturing in the year 2097, AT&T allows many different short and long term bonds.

One of the short-term bonds that was issued by AT&T Inc is the bond (CUSIP: 00206RHL9); it has a maturity date of January 15, 2022. This bond is a kind of Senior Unsecured Note issued on June 6, 2019 with initial price of about $130,000 and a coupon rate of 4.00%. The yield was initially 2.75%, and after a sudden peak in March 2020, the yield rate gradually dropped to 0.509% in late June 2020, which was the bond's most recent trade. The overall trend of the yield of the bond is provided as below.


As a comparison, we also select one of the bonds that have a maturity date period longer than 10 years from the database of Finra. This long-term bond was issued on August 8, 2019 and matured on July 15, 2097. The initial price of the bond was $125,000 with a coupon rate of 7.120%. The yield rate, similar to the short-term bond, had an unexpected spike in March 2020 and slowly declined to 4.60%. The latest trade of the bond was on May 25, 2021 with a trade price of $153,000. The diagram showing the relationship between the yield and time is shown below.

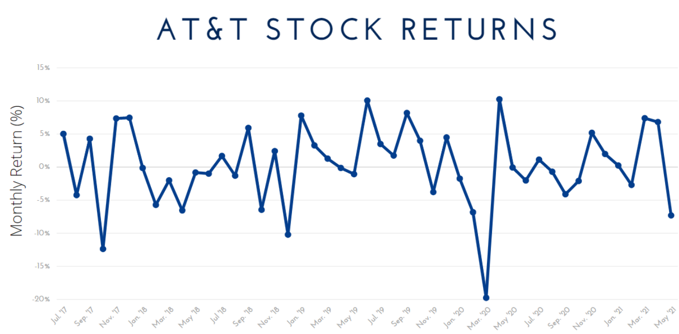

From AT&T Inc's both short-term and long-term bonds, we can see that the yield has a gradual decreasing tendency, but they both had sudden peaks in the mid-2020. If we look at one of many competitors of AT&T Inc, we can find a similar regression curve. In 2020, Verizon Communication Inc. had a summit at the exact time period as AT&T Inc. had. The chart below is one of the long-term bonds Verizon had from Finra's data.


The reason that led to this similar trend acrossing the two companies might be because of the global outbreak of COVID-19 and the effect the pandemic had on our market. The uncertainty to our economy caused an extreme fall of the bond price and the rise of the yield percentage.

## IV. Company's Stock

| Prices: | | | | |
|---|---|---|---|---|
| | 2020-2021 | 2019-2020 | 2018-2019 | 2017-2018 |
| July | 30.13 | 33.81 | 32.16 | 37.84 |
| August | 29.95 | 34.48 | 32.2 | 39.25 |
| September | 29.74 | 35.08 | 31.78 | 37.59 |
| October | 28.52 | 37.95 | 33.66 | 39.2 |
| November | 27.4 | 38.95 | 30.99 | 33.86 |
| December | 28.82 | 37.48 | 31.74 | 36.35 |
| January | 29.39 | 39.16 | 28.5 | 39.06 |
| February | 28.94 | 37.96 | 30.21 | 38.51 |
| March | 28.16 | 35.37 | 31.2 | 36.31 |
| April | 30.24 | 28.38 | 31.6 | 35.58 |
| May | 31.78 | 30.77 | 31.05 | 32.75 |
| June | 29.46 | 30.75 | 30.72 | 32.48 |

Above, we have the monthly stock prices for AT&T's stock, collected from Yahoo Finance. During data collection, we ensured that all stock prices were recorded at the opening time of the first day of each month, keeping our data consistent. Relative peaks of stock prices in the high-30s can be seen throughout most of 2017-18 and about half of 2019-20. In 2018-2019 and 2020-21, AT&T's stock prices fell to the low 30s and high 20s. In addition, over the 4 years we analyzed, AT&T distributed quarterly dividends, which have slowly increased from \$0.49/share to \$0.52/share. Using all of this collected data, we calculated and graphed the stock's average monthly returns, as seen below.

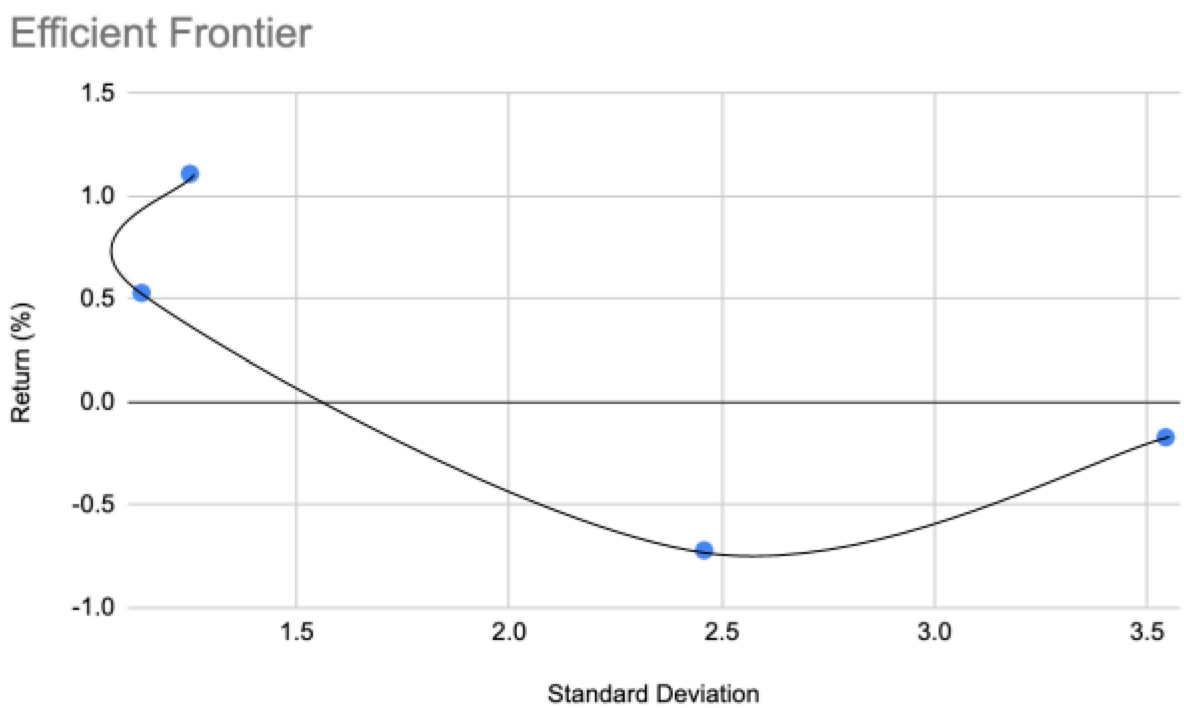



This line graph shows the monthly stock returns for AT&T. You can see that the return value fluctuates from a low of approximately -20% in March 2020 to a high of around 10% the following month. Over the 4-year span we analyzed, AT&T had an average monthly return of 0.18%, with a standard deviation of 6.02%. When compared to the overall market (using NASDAQ as a proxy), we can see that AT&T has a significantly smaller standard deviation than the market's 16.78%. This would seem to imply that AT&T has a below-average risk in comparison to the market, and is a notably less volatile investment.

## V. Portfolio Analysis

We would invest in this company's stock due to several reasons. One reason is that AT&T will continue to increase its sales and profit from HBO's new HBO Max streaming service. Another reason is that AT&T's stock returns indicate a lower-than-average risk compared to the market risk. AT&T stock will be less volatile compared to that of the market. A third reason is that AT&T has had an overall positive average monthly return over the 4-year period that we analyzed. If we were to form a portfolio, we would only include AT&T stock in our portfolio. We would not include bonds in our portfolio because the yield of AT&T's short-term and long-term bonds has a gradual decreasing tendency.

Shown below is a graph for the efficient frontier calculated for our portfolio.




The risk level of the MVP of the assets we chose is low.

## VI. References (Everyone)

Finra, "Market Data - Bond - AT&T INC", 11 June 2021, http://finra-markets.morningstar.com/BondCenter/Results.jsp

Finra, "Market Data - Bond - VERIZON COMMUNICATIONS INC", 11 June 2021, http://finra-markets.morningstar.com/BondCenter/BondDetail.jsp?ticker=C583821&symbol=VZ3926366

Stoll, Julia. "HBO: Subscription Revenue 2020." *Statista*, 2 Mar. 2021, www.statista.com/statistics/329295/hbo-subscription-revenue/.

Wit, Alex Dudok de. "Report: Netflix Lost 31% Of U.S. Market Share In Past Year." *Cartoon Brew*, 13 Apr. 2021, www.cartoonbrew.com/business/report-netflix-lost-31-of-u-s-market-share-in-past-year-204170.html.

Yahoo Finance "AT&T Inc. (T) Income Statement." *Yahoo! Finance*, Yahoo!, 11 June 2021, https://finance.yahoo.com/quote/T/financials/.

Yahoo Finance "AT&T Inc. (T) Historical Data." *Yahoo! Finance*, Yahoo!, 11 June 2021, https://finance.yahoo.com/quote/T/history?p=T.

Yahoo Finance "NASDAQ-100 (NASDX) Risk" *Yahoo! Finance*, Yahoo!, 11 June 2021, https://finance.yahoo.com/quote/nasdx/risk/.