# Equity Valuation Thesis
# The Walt Disney Company


## Diogo Alves
## 152420093


Dissertation written under the supervision of Professor José Carlos Tudela Martins

Dissertation submitted in partial fulfilment of requirements for the MSc in Finance, at the Universidade Católica Portuguesa, 4th of January 2022.

## ABSTRACT

**ENG**

The goal of this dissertation is to evaluate the American diversified multinational media and entertainment conglomerate, the Walt Disney Company traded at the New York Stock Exchange with the ticker: “DIS”. An extensive and detailed analysis is performed according to the diverse opinions within the academic literature. Considering the different models to assess the fair value of the company, the most appropriate approaches are selected and compared to J.P.Morgan equity report.

**PT**

O objetivo desta dissertação é avaliar a diversidade e consequente panóplia de segmentos de negócio, adjacente à multinacional norte-americana Walt Disney, cotada na bolsa de valores de Nova Iorque, sob o ticker “DIS”. Trata-se de uma análise intensiva, detalhada e minuciosa, formada com base em várias opiniões da literatura académica. Considerando as diferentes possibilidades de avaliação do valor justo da empresa, as abordagens mais adequadas são selecionadas e comparadas ao relatório patrimonial da J.P.Morgan.



**Title:** Equity Valuation Thesis, The Walt Disney Company

**Author:** Diogo Alves

**Keywords:** evaluation, models, DCF, fair price, intrinsic value, relative, value

## Contents

# 1.Introduction

This dissertation aims to evaluate the Walt Disney Company a public company trading in the NYSE and headquartered in Burbank, California, United States. Once a firm known for its animated characters, becoming nowadays a consolidated multinational operating in a diverse business segments. Walt Disney has become one of its industry leaders with a strong reputation around the world, one of the reasons to perform its evaluation.

First of all, each evaluation method to analyze a company is explained in detail, backed by many authors throughout history, presenting different points of view, advantages and disadvantages.

Secondly, an overview of the business along the sectors/segments Disney operates is presented. In addition, each sector trends and forecast on what to expect in the near futures is further developed.

Finally, of the approaches mentioned, only two were used to evaluate Walt Disney: the Discounted Cash Flow and Relative Evaluation-Multiples. As for the EVA and Dynamic Roe models, its analysis was performed but not providing any meaningful results, being disregarded to the final valuation. After achieving the fair price of Walt Disney, findings were compared to a J.P.Morgan report performed by professional analysts and provided by the professor at Universidade Católica Portuguesa, Paulo Silva.

## 2.Executive Summary

The Walt Disney Company is a diversified multinational, able to build and empire becoming a leader in the Media Entertainment sector with strong brand recognition all over the world along its consumer loyalty. Despite being affected by seasonality in some segments of the business, the firm managed to offset this effect by being flexible and adapt to new trends and capitalize on strategic decisions. In terms of price performance, it is a stable company that still has room for growth, presenting a positive trendline.

After a deceleration in growth in 2008 Disney recovered and maintained increasing revenues year over year, expected to maintain this pattern by investing wisely in each of the four segments operating. Throughout history, Disney augments its market power through acquisitions, several times a direct competitor.

Disney shows is adventurous spirit and initiatives when faced with a crisis, namely a worldwide pandemic. The firm realized its dependency on theme parks forcefully closed affecting results, however the perfect opportunity to reorganize internally and change the focus of its business model by creating a streaming platform, surpassing expectations, while exploiting the gains of its most recent acquisition of the distributor 21st Century Fox. Disney made as a precaution measure retain earnings prioritizing the Direct-to-Consumer & International segment.

To get an idea of the opportunity Disney stock is for a potential investor, in the following table is presented the last 10 years returns and volatility relative to the S&P500 index.

| | Last 10 Years | |
|---|---|---|
| | Disney | S&P 500 Index |
| **Average Return** | 19,77% | 12,07% |
| **St. Dev.** | 23,78% | 14,06% |

**Recommendation :**

**BUY**

**Target Price Valuation:**

196,22$

**Company Financials 11/11/2021 (in millions):**

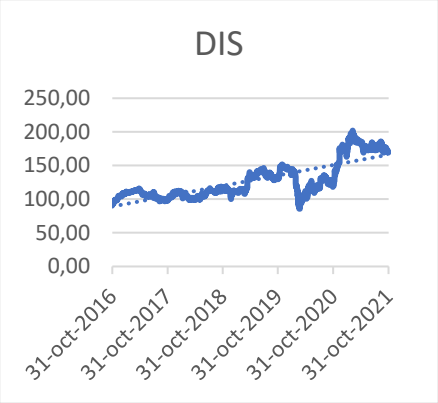
Market Cap: 294.50

Market Value of Equity: 293.095

Market Value of Debt: 24.343

Shares Outstanding: 1.808

Market Price: 162,11$




**J.P.MORGAN Equity Report:**

15th September 2021

Target Price: 220$

# 3. Literature Review

## 3.1 Valuation

Valuation plays an important role in many areas of finance such as in corporate finance, mergers and acquisitions, and portfolio management being a subject of detailed study in the past literature. Firm valuation can be used to assess the fair value of a business using a variety of models based on fundamentals, market values, competitors, and macroeconomic environment in general. Even considering that all relevant concepts are explained in depth by many empirical research and corporate finance books, not everyone understands them. It requires some financial literacy and even with practice, can lead in the end to errors in estimations, ultimately, to strategic errors as Marc Goedhart, Timothy Koller, and David Wessels (2005).

In theory, each valuation approach is no more than a simple different way of expressing the same underlying model as Young, Sullivan, Nokhasteh and Holt (1999). For this reason, analysts use various valuation methods ranging from a basic model to sophisticated ones.

Fernández (2007) states that "understanding the mechanisms of company valuation is an indispensable requisite" not just in acquisitions and mergers but also to determine which business segments are either creating or destroying economic value. According to Copeland, Koller and Murrin (1994) valuation is the best metric where you should look at the bigger picture and the company as a whole by comprehending value creation, "adopt a long-term perspective, manage all cash flows across both the income statement and balance sheet, and understand how to compare cash flows from different periods on a risk-adjusted basis."

Damodaran (2002) identifies three types of valuation: 1) Discounted Cash Flow (DCF) 2)Relative Valuation (Multiples) 3) Contingent Claim Valuation with Fernández (2007) presenting a similar division summarized as follows:

*Figure 1- Valuation Methods*

**Valuation Methods**

| | Equity Values | Enterprise Values (Equity and Debt) |
|---|---|---|
| **Cash Flow Approaches** | Dividend Discount Model (DDM)<br>Free Cash Flow to the Equity (FCFE) | Free Cash Flow to the firm (FCFF)<br>Adjusted Present Value (APV) |
| **Returns Based Approaches** | Dynamic ROE | Economic Value Added (EVA) |
| **Relative Valuation (Multiples)** | EV/EBITDA<br>Price-to-Earnings (P/E)<br>EV/Sales Price-to-Book Value (PBV)<br>Price-to- Cash Flow (PCF) | Enterprise Value to EBIT<br>Enterprise Value to EBITDA<br>Enterprise Value to Capital |
| **Contigent Claim Valuation** | -- | Option Theory |

Source: Damodaran (2002) & Fernández (2007)

# 4 Valuation Models

## 4.1 Firm Valuation

## 4.2 Discounted Cash Flow (DCF)

As stated by Luerhman (1997) the discounted cash flow method emerged in the seventies and has the best practice when it comes to the valuation of a company in opposition to more recent academics who believe is going to become obsolete due to the surge of other types of valuation and technology contributing to more reliable models compared to DCF. Nonetheless, Damodaran (2002) argues "it is the foundation on which all other valuation approaches are built" and an example in Young, Sullivan, Nokhasteh and Holt (1999) for an intuitive idea of why this is we can compare the DCF with a Free Cash Flow Yield model where both involve capturing future cash flows from now to infinity.

The DCF model is based on the belief of that the intrinsic value of an asset is the sum of future expected cash flows plus the present value of the terminal value discounted at a rate in accordance with the riskiness of the asset. Thus, higher discount rate for riskier assets and vice-versa.

$$Value = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t}$$

In fact, exists three ways of using DCF. The first one values the entire company, the second one values the company by parts distinguishing first the business all equity funded and then adding

the effects of debt financing along other claims, and finally the third one measures the equity stake of the company. It is important to highlight that the first approach evaluates through the free cash flow to the firm (FCFF) using the WACC as a discount rate whereas the third approach (from a shareholders perspective) uses the Ke (Cost of equity) as the discount rate. The second approach is the Adjusted Present Value (APV).

A discussion arises among different authors, Damodaran (2012) argues that DCF approach is simpler and easy to apply while Luehrman (1997) considers a higher level of accuracy by valuing separately the business, opportunities and ownership claims among others. Following this reasoning, DCF has a disadvantage because it considers the business as a whole not allowing to identify precisely possible problems within the company.

### 4.3 Free Cash Flow to the Firm (FCFF)

This is the most used and accepted method by professionals. The free cash flow to the firm measures the company's profitability after all expenses have been paid, providing the fair value of the company by computing the present value of the projected free cash flows discounted at their respective weighted average cost of capital (WACC).

$$Value\ of\ the\ Firm = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1+WACC)^t}$$

Where,

FCFF t = Free Cash Flow Firm in period t

WACC = Weighted average cost of capital

WACC is best described as an aggregated risk of the entire company. The only downside being it works for static capital structure, assuming a constant leverage level which means being the optimal capital structure as in Bierman (2010) proportionally weighted. The cost of capital relies on several components.

The WACC formula is the following:

$$WACC = \frac{D}{D+E} \times K_d \times (1-t) + \frac{E}{D+E} \times K_e$$

Where,

$\frac{D}{D+E}$= Debt-To-Value ratio

Kd= Cost of Debt

t= Effective Tax Rate

$\frac{E}{D+E}$ = Equity-to-Value ratio

Ke= Cost of Equity

Considering this is the method commonly used by practitioners and contains the same overall assumptions, I will perform it in order to determine the fair value of the company.

#### 4.3.1.1 Cost of Equity

The cost of equity can be seeing from two different points of view, from the company perspective and from the investor. As a company, the cost of equity is the rate of return required to decide if an investment is feasible. However, from an investor point of view it represents the rate of return required to for bearing the risk of owning a stock.

Ke can be computed by either using the dividend capitalization model or the capital asset pricing model (CAPM), this last model being the one most practitioners use and the one performed to evaluate this factor.

$$K_e = R_f + \beta \times (R_m + R_f)$$

Where,

$Ke=Rf+\beta\times(Rm+Rf)$

$R_f = Risk - free\ rate$

$\beta = Beta$

$R_m = Expected\ Return\ of\ the\ Market$

Each component is going to be explained further.

#### 4.3.1.3 Risk Free Rate

The risk-free rate plays an important role when determining the cost of capital and in finance generally. As the name implies, it is the supposed rate of return of an investment with zero risk. When performing an evaluation is used very often to calculate the cost of equity or the excess returns, depending on the purpose. The majority of opinions say that yields over the long-term

government bonds are a good proxy of the risk-free rate. In theory, these bonds maturity are in line with the investments life as in Damodaran (2008) with professionals usually utilizing the 10y bond or the 30y bond of the economy a specific company operates in accordance with the duration we are projecting the cashflows for the long term.

Fernández (2004) defends "not using the historical average of the risk-free or using the short-term government rate". Also, points out that it has nothing to do with historical returns. In contrast, Damodaran (2002) and Koller et al. (2005) both recommend the most assertive expected risk-free rate being the 10y government bond.

#### 4.3.1.3 Beta

The Beta in Damodaran (2002) is shown "to standardize the risk measure" by dividing the covariance of the stock with the market portfolio, through a regression of the stock returns with the market divided by the variance of the market reflecting the risk that investment adds through a regression.

$$\beta_i = \frac{Cov\ (R_i\ , R_m)}{Var\ (R_m)}$$

Where,

Ri= Share's returns

Rm = Market Returns

Beta is used in fundamental analysis to determine the volatility of stock or portfolio relative to the overall market. We depart from the premise that the market has beta of 1.0, therefore individual stocks are ranked accordingly to their deviation from the market helping investors know how much risk they are willing to take for a stock. The interpretation of a beta equal to 1.2 means that, when the market increases by 1% the stock will increase even more, 0.2% to be more specific. To sum up, higher-betas correspond to a riskier stock but with potential to provide higher returns. Conversely, same reasoning applies for lower-betas.

We can observe in Damodaran (2012) that exists three ways to estimate betas: using the historical market prices, using the fundamental characteristics of the investment to estimates betas, and finally using accounting data. The most common practice conveys using historical data by regressing stock returns relative to market.

Also, a function is used as follows:

$$R_j = \alpha + \beta \times R_m$$

Where,

Ri= Returns of the stock

α = intercept of the regression

β = slope of the regression corresponding to the estimated beta

Notwithstanding, the calculations present some limitations where "estimates of beta for individual securities are imprecise, creating a measurement error problem when they are used to explain average returns." Fama and French (2003) as well as in Damodaran (2002) state the usage of regressed betas comprises high levels of standard errors, external noises and skewness associated with the estimation choices such as the market index used or the analysis period. This last argument emphasized in Fama and French (2004)

#### 4.3.1.4 Equity Risk Premium

This term denotes the excess returns a stockholder receives when investing in equities and it's the return over a risk-free rate. The return you receive above the risk-free rate it is called equity risk premium or Market risk premium. This factor compensates investors for taking higher risks based on risk-reward tradeoff.

Many models exist to compute risk as the variance of the expected returns. Meanwhile, many academics defend the existence of two risks : the unsystematic risk which is firm-specific and can be reduced by diversification of any possible action a company takes; the systematic risk, occurring as consequence of external factor such as interest risk, inflation risk, and market risk. Therefore, it cannot be eliminated completely and thus the one that should be rewarded.

The problem lies in the way it should be computed and what to consider since it is very subjective being a theoretical premium, in fact not being a real way of telling how much an investor will make or how the market is going to perform and is positively correlated with changes over time as market fluctuates, the systemic risk mentioned before.

From a macroeconomic perspective, the MRP reflects the broader outlook on the whole economy. Factors influencing investors' views on market risk include outlooks for economic growth, consumer demand, inflation, interest rates, and geopolitical risks. As such, the MRP is a single metric that reflects these inputs in the expected returns of various asset classes as discussed by Goldman Sachs analysts in 2008. From their calculations, results show the MRP probably ranging between of 5% - 7% today. Moreover, the majority of economist agree with the validation of the premium as the market compensates for bearing risk. How exactly to calculate it is still disputed. For instance, an academic economist survey gives an average range of 3% to 3.5% for 1 year horizon, while 5% to 5.5% for a 30-year horizon. For this evaluation, we will use Damodaran website where total implied equity risk premium is calculated by country, in this case the U.S economy bears a premium of 4,72%. implied ERP for October 2021 is 4.84% and 4.93% covid adjusted.

Common practice uses historical rates of return and the formula used is the difference of market returns and the risk-free rate over a period of time. It is important to highlight that most institutions and investors use the same database to calculate the equity risk premium but many discrepancies in the right time period to use, the right risk-free rate (treasury bills or bonds) and if the average should be arithmetic or geometric argued by Damodaran (2002). Fernández (2004) states "It is obvious that the geometric average is a much better indicator of average growth in the past."

"Damodaran (2012) claims that for long-term projects or businesses in developed markets one should use the long-term government bond rate as the risk-free rate and that the duration of the bond should be similar to those of the cash flows.

#### 4.3.1.5 Cost of Debt

The cost of debt measures the current cost to the firm of borrowing funds to finance projects. Similarly, the expected return that lenders hope to make on their investments including a premium for default risk, and we call that expected return the cost of debt. As discussed in Damodaran (2002), Kd is determined by the following variables: the risk-free rate, the default risk and the tax shields associated with debt. It is necessary to "examine bond ratings as measures of default risk and the determinants of these ratings".

Basically, agency ratings give companies a rate depending on the level of debt and company stability to make interest payments, afterwards, the specific rating and default spread should be used only when debt outstanding is traded on the market. Furthermore, if rating information is not available, based on the financial ratios, usually the interest coverage ratio discussed in Damodaran (2002) it is possible to determine an estimated rating.

$$Interest\ Coverage\ Ratio = \frac{EBIT}{Interest\ Expense}$$

Where,

EBIT= Earnings Before Interest Taxes

In this evaluation, in order to precise a cost of debt we simply add the risk-free rate to the spread for Disney rating after-taxes.

### 4.3.2 Adjusted Present Value (APV)

The DCF method valuation is the most used method but in previous literature an alternative and different approach has appeared as also valid but not often used by analysts due to the difficulty it supposes and based on estimates indirectly determined. The main difference here is not using the WACC, this approach values operational assets and the mentioned costs and benefits of debt independently.

The adjusted present value consists in the net present value of a project, first one should value the company all equity financed and then adding the benefits of debt (PV of Tax Shields) and the cost of borrowing being the main difference the evaluation being performed separately from the assets of the company as explained in Damodaran (2006).

Despite being used sometimes, this model has many flaws since it is used for a highly leveraged firm or financing a project for the simple reason that the capital structure changes over time and consequently the discount rate, however we are contrarily assuming a static structure. Same reasoning applies to debt.

Damodaran (2002) explains the three steps to estimate the value of the firm: 1) the value of the firm without debt; 2) the present value of the interest tax savings generated by borrowing money: 3) Determine the expected cost of bankruptcy along the effects of borrowing on the company entering financial distress.

We need to go back to 1963, that is when this method was initially described Modigliani and Miller (1963) separating tax shields using the cost of debt as a discount rate. Later, Myers (1974) presented the APV method used nowadays who was also recommended by Luehrman (1997) permitting to pinpoint where the value generated is coming from. The same author defends the WACC is becoming obsolete with time.

The formula to determine the Enterprise Value is the following:

**Enterprise Value of the firm** = Value of the business 100% equity financing + PV of Expected Tax shields – Expected bankruptcy costs

For the first part of the equation and specified in Damodaran (2002), in order to calculate the value of the firm unlevered, we need the FCFF0 discounted to the unlevered cost of equity assuming a growth rate, with expected cash flows growing in perpetuity.

$$Value\ of\ Unlevered\ Firm = \frac{FCFF0(1+g)}{\rho u - g}$$

Where,

FCFF0 = current after-tax operating cash flow to the firm

g= growth rate

$\rho u$= unlevered cost of equity extracted from the computation of the unlevered beta

$$\beta_{Unlevered} = \frac{\beta_{current}}{(1 + (1-t) \times \frac{D}{E})}$$

With,

βunlevered = Unlevered beta of the firm

βcurrent = Current equity beta of the firm

t = Tax rate for the firm

D/E = Current debt/equity ratio

Despite being a relatively good model, due to its complexity and estimation-based I will not use it.

#### 4.3.2.1 Tax Shields

The second factor seen in the APV equation are the benefits of incurring debt and can be calculated in these two different ways:

1➔ $Value\ of\ Tax\ Benefits = \sum_{t=1}^{t=\infty} \frac{Tax\ Rate \times Interest\ Rate \times Debt}{(1+r)^t}$

2➔ $PV_{Tax\ Shields} = T_c \times Debt$

Where,

Tc= Tax rate

Now some difficulties start to arise, as which tax rate to use and a constant debt level. From the company financial statements, we can determine both, the effective tax rate and the marginal rate. Further, the effective tax rate can be inferred by dividing the income taxes by the EBIT (Earnings Before Interest Taxes) whereas the marginal tax rate is the rate at which the last or the next dollar of income was or will be taxed. Damodaran (2002) confers meanwhile that interest payments taxes are subtracted at the margin, assuring the correct rate should be the marginal tax rate.

Another issue to assess is whether the tax savings become a perpetuity assuming constant tax rate and debt level throughout time. Fernández (2003) believes firms have to be evaluated differently according to their indebtedness strategy, meaning reach a target D/E ratio or keep it constant. As explained by Damodaran (2002) if the company decides not assuming a perpetuity, the previous equation needs to be modified.

There is a diversity in opinions among authors, Miles and Ezzell (1980, 1985), Harris and Pringle (1985), and Kaplan and Ruback (1995), subsequently returned to Modigliani and Miller's original tax approach, discounting tax deduction at the unlevered equity discount rate. While Harris and Pringle (1980) proposed discounting the tax shields at the unlevered cost of capital

#### 4.3.2.2 Expected Bankruptcy Costs

This is the final step to calculate the firm value and corresponds to the negative part explicitly stated in Damodaran (2002) "This step of the adjusted present value approach poses the most

significant estimation problems, since neither the probability of bankruptcy nor the bankruptcy cost can be estimated directly." Besides, considers direct costs such as liquidation costs and indirect costs like changes in customers preferences.

Bankruptcy costs may be computed using historical data with previously literature analyzing in depth the scale of this cost. Usually, rating agencies provide studies where they estimate the probability of bankruptcy making use of historical default rates linked to each level of debt Vernimmen (2005). Damodaran (2006) defends that any reason is possible and even large publicly traded companies can enter financial distress, enhancing the fact that growth and consequently cost of financial distress should be properly determined, proposing the APV method.

This is the formula provided by Damodaran (2002):

$$Expected\ Value\ of\ Bankruptcy\ Costs = Probability_{Bankruptcy\ Costs} \times PV_{Bankruptcy\ Costs}$$

The Expected bankruptcy costs play an essential role in the capital structure decision-making since they impose limits from which the benefits of interest tax shields are interesting, up to the point where it is not logic to raise more debt given it does not compensate anymore. Also, there is a mass support of Modigliani and Miller's idea that bankruptcy costs provide the basis for the existence of an optimal capital structure.

It can be estimated: by using bond rating estimation where an interest coverage ratio is calculated to each level of debt a firm has leading to a specific rating of the company. Afterwards, use the probability of default corresponds to that rating. Another way is to use a probability of default determined by statistical approach based on firm specific characteristics for each level of debt.

Many empirical studies, Korteweg (2007) studied 244 firms in 22 industries between 1994 and 2004 concluding this value is a percentage of the total value of the firm with the cost of financial distress being 4% of the firm's value but not exceeding 11% for any industry. Moreover, when a firm fills for bankruptcy it can go up to 31% of firm value.

#### 4.3.2.3 APV vs FCFF

There is a diverse opinion related to which model should be used and the implications. Luerhrman (1997) argues that APV is less strict that the FCFF working perfectly whenever a firm has a variable capital structure or prefers to reach a target with time. Goedhart et al (2005) are in favor of the APV usage for companies with changing capital structure.

Luerhrman (2007) also conveys the APV model, being a helpful tool used by managers to perceive where the value (or loss) is specifically coming from. Moreover, supports the idea that WACC as a discount rate is incapable of dealing with complex and varying capital structures a company may have.

As reported in Sabal (2007) is easily applicable in a non-perpetuity scenario, contrarily to the FCFF's WACC main assumptions of a constant tax rate and market value of debt. As already explained, some FCFF inconvenient can be reduced or eliminated if computed in a yearly basis. However, practitioners prefer not to use it this way because it means complicating a simple model and is to time demanding.

Overall, the models using WACC as the discount rate are more suitable for fixed levels of debt under a perpetuity assumption where, for now, there is no agreement in which discount rates should be used when computing tax shields in the APV method as Sabal (2007). Fernández (2006) has a completely different argument and arrived at the conclusion that there are no reasons to believe that FCFF methods are more adequate in perpetuities relative to APV since they are equivalent from a theoretical perspective. Argument supported by back testing the WACC formula stating the differences appear from the way tax shields are valued, positively related to discount rates.

Booth (2002) alleges using of the APV as the best method when evaluating high levered transactions, for instance LBO's, considering a significant part of the post-transaction value comes from an adequate financing structure.

## 4.4 Equity Valuation

### 4.4.1 Free Cash Flow to Equity (FCFE)

The free cash flow to equity aims to calculate the net present value of equity, thus cash generated by the business potentially available to be distributed to shareholders in the form of dividends. Here, the discount rate used is the cost of equity (Ke) previously explained and estimated by the CAPM model. All the information can be obtained in the cash flow statement.

The formula to the equity value of the firm is the following:

$$Equity\ Value = \sum_{t=1}^{t=n} \frac{FCFE_t}{(1+K_e)^t}$$

Where,

FCFE= Cash from Operations – Capex + Net Borrowing

Net Borrowing= (New Debt Issued – Debt Repayments)

Ke= Cost of equity

Damodaran (2006) states the major difference compared to FCFF, and possibly a disadvantage, is debt since it must account for new debt issuances as well as debt repayments. The same author contends that FCFE predictions are more difficult than set the optimal D/E ratio. In addition, Koller et al (2005) shares the same idea of the difficulty implementing this method for the reason one should forecast the changes in debt along interest payments on a year-to-year basis. However, Damodaran (2006) considers both models equivalents theoretically if and only if considered the same assumptions regarding leverage.

For this evaluation, I will not use this model since it is theoretically equivalent to the FCFF and based on the same suppositions, and also because it represents the same result but from a different point of view.

### 4.4.2 Dividend Discounted Cash Flow (DDM)

The Dividend Discounted Model works under the assumption that when investors buy a public traded company and buy a stock receive may receive to inflows of money: capital gains (from selling a stock at a higher price in a period of time) and dividends. This model is mainly focused

on Dividends since indirectly prices increase based on future dividends. The value of the firm equals the present value of future dividends over an indetermined period.

According to Damodaran (2002) the difficulty lies within the uncertainty of predicting future dividends. For that reason, two versions of DDM exist (one only working under two basic assumptions)

Therefore, we have:

1) **The Gordon Growth Model**

   This model is used for quite stable companies assuming a constant growth rate of dividends. The following formula is used:

$$GGM = \frac{D_0(1+g)}{K_e - g}$$

   Where,

   DPS1 or D0*(1+g) = Expected dividends per share next year
   D0= Current Annual Dividend
   g= growth rate= Retention Rate *Return on Equity
   Ke= Cost of Equity

   Theoretically, this model is not difficult to use but if we assume a constant growth rate of dividends, we also need to assume a same rate for earnings, which in practice is not always achievable. Therefore, according to Damodaran (2002) GGM is used when meeting these conditions: 1)firm growing rate ≤ nominal growth rate of the economy; 2) the firm needs a well-defined payout policy making dividends constant and stable.

2) **The Two-stage Dividend Discount Model**

   This model is more complex and it is a variant of the previous one explained. This methos is adaptable to a firm's situation by considering periods where low earnings are expected and then recover to a constant rate.

   It consists in two stages:

   "Stage 1: Where the growth rate of dividends is not stable"

"Stage2: The model follows a "steady state" as the Gordon Model":

**NPV=(D0 x (1+r/r-g1)^n/(1+r)^n) + (D0 x (1+r)/r-g2)) x (1+g1)^n/(1+r)^n**

Where,

D0 = Current Annual Dividend

r = current yield + dividend growth rate

g1=dividend growth rate next 5 years

g2=terminal growth rate after 5 years

n = number of high growth rate years

The value of the stock is the sum of the present value during phase 1 plus the present value during phase 2.

As noted by Damodaran (2002), is evident this model approach is less complicated with fewer assumptions being the hard part setting a reasonable dividend growth rate. Nevertheless, this method can be tricky when the firm you are evaluating decides to strategically pay less dividends and pile up cash leading to underestimate the value of equity.

In our valuation this method will not be used attributable to the fact that The Walt Disney Company stopped paying dividends in 2020 due to strategic purposes and, as explained on the annual report, the firm is not planning to start paying again their semi-annual dividend any time soon.

## 4.5 Relative Valuation (Multiples)

The Relative Valuation or multiples are a market-based approach allowing to value an asset or a firm relative to similar assets or firm priced in the market. Multiples will vary across firms because of the regulatory differences.

Relative valuation consists in looking at comparable companies and analyze what the markets are paying for them, and judge compared to the numbers the company we are valuing presents. This approach is not limited to sector, industry or products when selecting the peer group.

According to Goedhart, Koller and Wessels (2005), four important principles should be considered:

1) Find similar companies in terms of expected growth, ROIC, size, profitability, D/E or markets

2) Usage of forward multiples, based on future earnings and not historical data

3) Usage of enterprise value multiples (EV Multiples)

4) Adjust EV/EBITDA multiple for non-operating items

Best practice is to combine this approach with other methods of valuation, this combination is enhanced by Damodaran (2002) who claims that 90% of equity reports do it along approximately 50% of acquisition valuations.

The most common multiples used are summarized in the following table:

*Figure 2- Relative Valuation- Main Multiples*

| *Relative Valuation* | *Multiple* |
|---|---|
| **Enterprise Value Multiples** | EV/EBITDA |
| | EV/EBIT |
| | EV/SALES |
| **Equity Value Multiples** | Price-to-earnings (PER) |
| | Price-to-Cash Flow ratio (PCF) |
| | Price-to-Book Value (PBV) |

Source: Damodaran (2006)

In order to compute the multiple of a company you simply have to multiply a value driver such as revenues, cash flow, EBITDA and multiply by the multiple which is the average of peers ratios of that driver as argued in Liu et al (2007).

It is important to highlight as in Goedhart and Koller (2005) argues, multiples based on enterprise value provides a better conclusion than PER multiple since they cannot be easily manipulated with regards to accounting policies. By way of illustration, EV/EBITDA is considered by the same authors it's trustworthiness among the other ratios being less susceptible to manipulations due to the fact it is not directly affected by changes in the capital structure. Nevertheless, this effect is not completely eliminated with changes in capital structure impacting a the WACC which can increase the multiple.

Another point to discuss is whether to make some adjustments concerning the use of excess cash, operating leases, employee stock options or even pensions since it can lead to inconsistent results because they are punctual events who do not occur often, meaning that it does not make sense to consider them.

Based on Vernimmen (2005), exists to types of multiples: the market multiples and transaction multiples (also precedent transactions). The first type, already explained in dept previously consists of setting a sample of similar operating characteristics disregarding the sector or products they operate in or produce. However, the precedents transaction multiple is established for companies in the sector being considered direct competitors. The disadvantage is not knowing if you are overvaluing or not a company because it is based on previous market conditions, macroeconomic factors and period. In conclusion, this approach may not be the most suitable for an accurate valuation.

For the aforementioned valuation, the multiples are considered in order to determine the company's value compared to Walt Disney competitors and analyze if it's being traded above or below the market.

## 4.6 Returns Based Approach

### 4.6.1 Economic Value Added (EVA)

This Economic Value Added approach is a measure based on the residual income and indicates the profitability of a project or firm. The premise is that real profitability occurs when the return on invested capital (ROIC) exceeds the cost of capital (WACC), thus management creates value for shareholders and vice-versa. It was developed by Stern Steward & Co and intends to assess the real profit of a company, stated by him explicitly "EVA is a measure of the true financial performance of a company." in Stewart (1991). Many authors from past literature have a consensus on this model as discussed also by Damodaran (2006) "The economic value added (EVA) is a measure of the surplus value created by an investment or a portfolio of investments." EVA is a variant on the return spread and it is high correlated with the Market Value Added (Market Value-Book Value of Capital) stated by Damodaran (2002) as well.

The EVA method can be calculated using this formula:

**EVA= (ROIC – WACC) x Capital Invested = Net Operating Profit After Taxes (NOPAT) – (Capital Invested x WACC)**

In Damodaran (2002) is expressed that NPV methos is valid in this case for the present value of EVA, being simply an extension of it. Thereby, investments or firms with positive NPV's will add value, whereas if the NPV is negative decreases it.

The NPV of EVA can be computed as follows:

$$NPV = \sum_{t=1}^{t=1} \frac{EVA_t}{(1+kc)^t}$$

Finally, discussed in Damodaran (2002) the biggest limitation is the degree of difficulty find the value which cannot be retrieved directly from the firm statements, ultimately leading to wrong estimations and consequently very different valuation in the end.

### 4.6.2 Dynamic ROE

The dynamic ROE follows the same reasoning of the EVA and similar to the typical financial measure ROE, however, here this method directly computes the value of the equity.

The formula used is the following:

$$Residual\ Income\ Model = Equity\ Book - Value + \frac{(ROE - K_e) \times Equity\ Book - Value}{(K_e - g)}$$

Where,

ROE= Net Income/ Shareholders Equity

Equity Book Value= Common Equity

Ke= Cost of Equity (from CAPM)

g= growth rate

The interpretation is that whenever the ROE is higher than Ke, the firm is creating value to shareholders. The same logic is applied for the end result.

Therefore, both approaches established from returns will be used to help understand in detail many Walt Disney strategic decisions effect relative to the acquisition of a competitor and stopping dividend payment.

## 4.7 Contingent Claim Valuation

### 4.7.1 Option Theory

The contingent claim valuation allows to value an asset with the characteristics of an option such as the following mentioned in Damodaran (2002): the current value, the variance in value of the underlying asset, the strike price, time to maturity or the risk-free rate. All variables stated use an option pricing model.

Koller et al (2005) argue that even if it's not a common practice valuation model it is suitable for companies offering a single product, companies in commodity-based industry for instance. Moreover, Vernimmen (2005) states that contingent claim permits analysts to value flexibility when it comes to value different projects.

The methos has become known in the 70's but not used often. In order to value these types of investment opportunities we could use the binomial model and Black-Scholes model. Some of the limitations are the complexity of it and since researchers found a way to value non-traded assets, such as patents or underdeveloped reserves, the inputs to value the underlying asset cannot be extracted from financial markets and have to be estimated as Damodaran (2002) explains. Therefore, applying option pricing models have significant estimation errors compared to its application in short-term traded options.

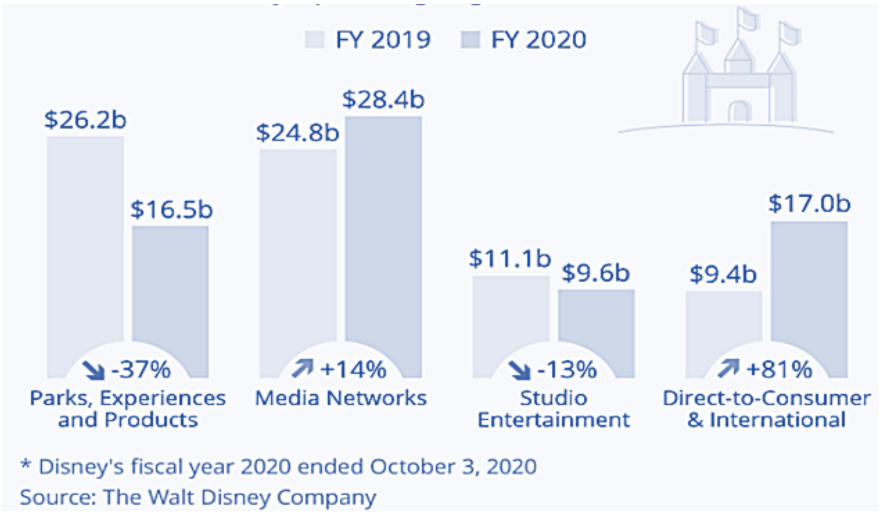
Due to the complexity of this approach and irrelevancy for the valuation case, this method will not be applied.

# 5.Walt Disney Company History (Appendix)

# 6. Segments and industry trends

Walt Disney is probably best known for their on-screen characters that they have developed over the years, but the company is a media/entertainment giant that has operations in media networks, theme parks and experiences, studio entertainment and direct-to-consumer services. The firm is nowadays a conglomerate that owns Disney+, ESPN, Freeform, FX, National Geographic, ABC Television, 50% of A+E (History channel, Lifetime, FYI and A+E), 21$^{ST}$ Century Fox, Hulu, Vice, Star, Marvel and more. Hereon, every segment will be explained as well as what experts say is thriving. The following graph reflects how results were affected by the virus along the adjustment in Disney strategy. With parks and studios closed Disney pivot into the DTCI segment.

*Figure 3- Revenue of Walt Disney Company in fiscal year 2020 vs 2019, by operating segment*




### 6.1.1 Media Networks

According to the firm 10-k report, this segment generates revenues from affiliate fees charged to multi-channel video distributors for the right to deliver Disney programming to its customers, advertising on a ratings-based ad sales, in accordance with viewership, sale and distribution of television programs in Television and Streaming videos on demand (TV/SVOD). This segment includes branded domestic cable networks such as Disney, ESPN, Freeform, FX or National Geographic, ABC broadcast television network, eight owned domestic television stations and a 50% equity stake in A+E Television networks. The most significant expenses related to it are reported as SG&A, Depreciation and Amortization, and diverse operating expenses consisting of programming and production costs, technical support costs and labor.

At the top end of the market, most revenue is concentrated within a small number of large companies and Walt this is considered one of the leading players. To get an idea of what this segment entails, we have and estimate of the subscribers of 2020 in millions. Even considering the pandemic, the difference to 2019 is minimalist.

*Table 1- The number of domestic subscribers for cable channels (in millions)*

| Estimated Subscribers | 2020 | 2019 |
|---|---|---|
| **Disney** | | |
| Disney Channel | **85** | **86** |
| Disney Junior | **66** | **66** |
| Disney XD | **66** | **68** |
| **ESPN** | | |
| ESPN | **84** | **83** |
| ESPN2 | **84** | **83** |
| ESPNU | **62** | **61** |
| ESPNEWS | **62** | **58** |
| SEC Network | **57** | **59** |
| **Freeform** | **85** | **85** |
| **FX** | | |
| FX | **86** | **87** |
| FXX | **83** | **56** |
| FXM | **57** | **84** |
| **National Geographic** | | |
| National Geographic | **85** | **86** |
| National Geographic Wild | **60** | **59** |

Source: 10-k report at the sec.gov; Estimations by Nielsen media Research

Although this is the most profitable segment in terms of total revenue and operating income percentage, it suffers from seasonality risk being higher during the fall and lower during summer months not considering covid effects. From 2019 to 2020 revenues decreased 6% to again increase in 2021 3% to 67,418 despite making less revenue at the quarter end due to decreases in broadcasting caused by lower ABC and owned television stations results. This last, because of increasing marketing costs followed by high programming, productions costs and lower advertising revenue. Also, live sports may see further disruptions putting more pressure on revenues and subscribers trend weakening profits.

Disney needs to understand the economic needs of customers to provide tailored options in terms of content and pricing, already being implemented with their bundle (Disney+Hotstar). According to Deloitte's COVID-19 digital media trends survey, 9 % of respondents reported a decrease in their household income since the pandemic began, being more susceptible to cancel streaming services driven with original content as the main factor to retain customers. Rather than focusing solely on streaming video, Disney should explore potentially adding games, music, and podcasts to their suite of offerings or partnering with other providers.

### 6.1.2 Parks, Experiences and Consumer Products

This segment represents the third biggest stake in the total revenue and the one most affected by the pandemic experiencing a decrease of 37%. They operate twelve parks in the world across six different resorts in Florida, California, Tokyo, Paris, Hong Kong, and Shanghai. Disney resorts, both domestic and international, were closed as the restrictions became more and more strict since March 2020 in the entire world. Here it is important to highlight that out of the 203,000 employees in total as of October 2020, approximately 75% or 155,000 employees work in this segment forcing the firm to take a severe but necessary strategic decision to furloughed over 120,000 workers. This decision was part of a reduction workforce plan, terminating the contract of 32,000 employees in the beginning of 2021.

Besides that, parks continue their slow recovery with the progressive easing of travel restrictions. With the vaccine the response was supposed to be greater than it actually was, with lighter parks attendance explained by concerns regarding the rising cases with delta variant, extreme weather throughout some U.S areas and with hotels and resorts occupancy decreasing from 90% to 65%. It is expected the hesitation around parks visitation, dependent on the vaccine rate. Disney views the situation as temporary being bullish on the long run already working on margin expansion potential at parks as result of better yield management with a new membership program revealed. Nevertheless, according to the 4$^{th}$ quarter 2021 report, the situation got better with revenues for the quarter increasing 99% from 2.2bn to 5.4bn with domestic parks leading the surge compensating a 3% decrease in consumer products attributable to lower royalties from the licensed videogames Marvel's Avengers and Twisted Wonderland. The results are explained by reopening of parks and resorts most of 2021. The negative impact of the 2020 pandemic on Disney's Parks division stands in direct contrast to the boost it has received in its media division, with its Disney Plus streaming service making up for some of the revenues lost at its leisure attractions.

As stated in a MarketLine report, in 2019 U.S international tourists decrease 1.3% preventing growth. The U.S has the reputation of being the leisure hotspot and home of Disney, Universal and SeaWorld but with a CAGR of -9,6% 2016-2020 with the overall sector shrinking by 43,2% only in 2020. In contrast, it is expected to accelerate with a CAGR of 11,4% between 2020-2025.

### 6.1.3 Studio Entertainment

This segment primary revenue comes from film distribution in theaters, home entertainment (DVD, Blu-ray discs) and Tv/SVOD, sale of stage plays tickets, licensing and use of Disney

live entertainment productions with expenses involving production amortization, marketing costs and cost of sales. Considering what Disney is known for, studio entertainment only represents 15% of the total revenue in 2020 which decreased 33% relative 2021 with less theatrical releases and production delays as the main explanation along significant marketing costs. Moreover, lower Tv/SVOD distribution results due to the impact of the ongoing pandemic with less film contents and the change of licensing to third parties. Lockdowns around the world combined with travel bans have crippled the entertainment industry in general as well as theaters closed. Nevertheless, Walt Disney remains a leader player still producing 7 out of top 10 highest grossing movies at the US box offices in 2019.

The U.S movie and Entertainment industry is not stable with 2018 being the only year it presented growth with 2020 decreasing even more amidst covid-19 with the market shrinking by 3,1% in 2019. Walt Disney has presence in U.S, Europe and Asia registering a CAGR between 2015 to 2019 of -0,4%, -1.3% and 4.2%, respectively. In accordance with a MarketLine report on this industry, in 2024 this market is expected to decrease 16,4% relative to 2019 and predicted to decrease over 4%. In Damodaran website from 2021 onwards says the opposite predicting for the next 2 years revenues increase of 13,34% plus 17,03% EPS growth for next 5 years in Entertainment industry. These figures seem feasible considering the current situation in which the worldwide box office is slowly recovering from the pandemic conveying a positive outlook for Disney. The following tables reflect the firm having 5 movies in the top 10 grossing movies in 2021. Also, even if less movies were released it maintains its leadership, now reinforced with the acquisition of 20st Century Fox under the oversight of 21$^{st}$ Century Fox.

*Table 2- Top Grossing Movies of 2021*

| Rank | Movie | Release Date | Distributor | Genre | 2021 | Tickets Sold |
|---|---|---|---|---|---|---|
| 1 | Shang-Chi and the Legend of the Ten rings | Sep 3, 2021 | Walt Disney | Action | $224,520,145 | 24,510,932 |
| 2 | Venom: Let There be Carnage | Oct 1, 2021 | Sony Pictures | Action | $207,665,986 | 22,670,959 |
| 3 | Black Widow | Jul 9, 2021 | Walt Disney | Action | $183,651,655 | 20,049,307 |
| 4 | F9: The Fast Saga | Jun 25, 2021 | Universal | Action | $173,005,945 | 18,887,111 |
| 5 | A Quiet Place: Part II | May 28, 2021 | Paramount Pictures | Horror | $160,215,261 | 17,490,749 |
| 6 | No Time to Die | Oct 8, 2021 | United Artists | Action | $155,582,117 | 16,984,947 |
| 7 | Eternals | Nov 5, 2021 | Walt Disney | Action | $141,143,809 | 15,408,712 |
| 8 | Free Guy | Aug 13, 2021 | 20th Century Studios | Action | $121,609,590 | 13,276,156 |
| 9 | Jungle Cruise | Jul 30, 2021 | Walt Disney | Adventure | $116,987,516 | 12,771,562 |
| 10 | Godzilla vs, Kong | Mar 31, 2021 | Warner Bros | Action | $100,563,133 | 10,978,507 |

Source : https://www.the-numbers.com/market/2021/summary

*Table 3- Market Share Per Distributor 2021*

| Rank | Distributor | Movies | 2021 Gross | Tickets | Share |
|---|---|---|---|---|---|
| 1 | Walt Disney | 9 | $815,028,391 | 88,976,894 | 23.64% |
| 2 | Warner Bros. | 19 | $599,676,088 | 65,466,812 | 17.40% |
| 3 | Universal | 18 | $577,002,729 | 62,991,554 | 16.74% |
| 4 | Sony Pictures | 16 | $399,075,963 | 43,567,236 | 11.58% |
| 5 | United Artists | 7 | $268,357,877 | 29,296,710 | 7.78% |
| 6 | Paramount Pictures | 7 | $266,462,944 | 29,089,840 | 7.73% |
| 7 | 20th Century Studios | 3 | $154,945,341 | 16,915,429 | 4.49% |
| 8 | Lionsgate | 8 | $90,277,337 | 9,855,600 | 2.62% |
| 9 | FUNimation | 2 | $57,467,647 | 6,273,760 | 1.67% |
| 10 | Focus Features | 16 | $52,170,231 | 5,695,431 | 1.51% |

Source : https://www.the-numbers.com/market/2021/summary

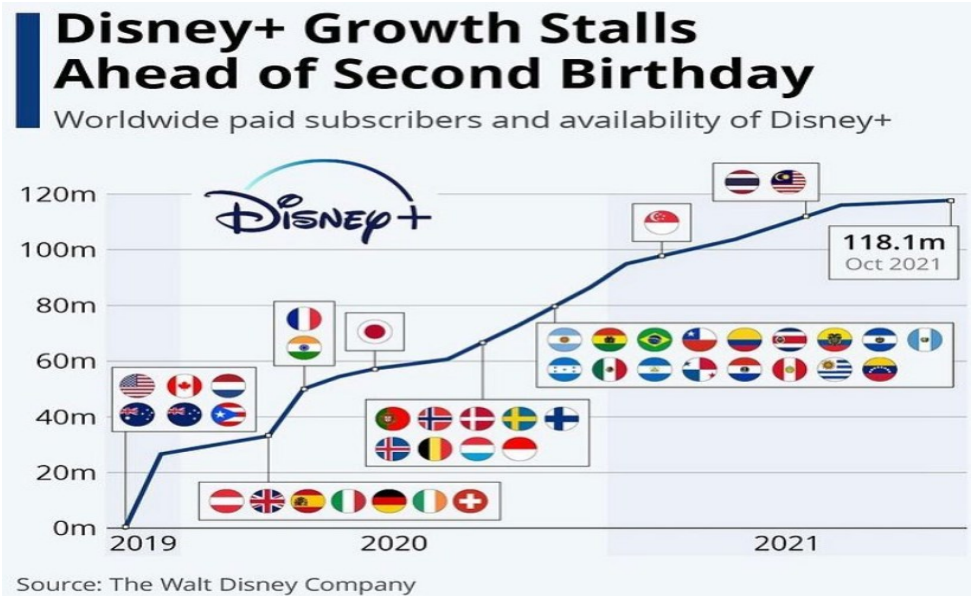
### 6.1.4 Direct-To-Consumer & International

The DTC segment primarily generates revenue from subscription fees for all DTC streaming services with the most important, in terms of business and client usage, are Disney+, Hotstar, ESPN+, Hulu and for international channels Disney, ESPN, Fox, National Geographic plus in the not-too-distant future the platform STAR. Overall, the segment consists of providing streaming services of general entertainment, sports and family programming offered either individually or in a bundle, arriving to customers directly or through third-party distributors, thanks to technology developments, on every mobile or connected devices billed in a monthly or annual basis. Walt Disney has based its strategy and investments to this segment where they see more potential to grow even if competitors are increasing due to lower barriers to entry. As consequence of the pandemic with parks closed, revenues decreased affecting the business as a whole and reporting a loss for FY2020, however the company stopped paying their semi-annual dividend indefinitely investing the proceeds for DTC operations.

One of the most reputable and profitable revenue generators in the prior years is Disney + launched in 2009 exponentially increasing its global paid subscribers competing only with Netflix. However, even with subscriber counts are still growing, growth is slowing suggesting a worldwide recovery from the virus. Same trend for AT&T Warner Media and Viacom CBS. Disney + paid subscribers arrived at 118.1 million subscribers versus 214 million in Netflix. One main reason Disney has successfully attained such number of subscribers is starting in the U.S and rapidly expanding to Western Europe. After, Disney provided a bundle, Disney+ Hotstar service in India followed by the conversion of Disney Deluxe in Japan to Disney+ in June 2020. In September 2020, the bundle offers arrives to Indonesia and in November spreads

to Latin America expecting more of it over Asia-Pacific for 2021. The following graph presents the process of expansion in detail:

*Figure 4- Disney+ Paid Subscribers Openings*




Moreover, to have an idea the market Walt Disney has reached, based on internal reports, in October 2020 Disney+ subscribers was approximately 74 million growing 59% in 2021. ESPN+ offers live sporting events, on-demand sports content and unique content not provided in other ESPN networks. Revenue is derived from subscription fees and pay-per-view fees reaching 10 million subscribers in 2020 increasing 70% in 2021. Finally, we have HULU, a streaming platform obtained through TTCF acquisition. Hulu's income comes also from subscription fees, SVOD services and digital OTT MVPD service with 37 million contributors increasing to 44 million in 2021.

In 2020, 59% of customers preferred online experiences such as shopping or stream services. Now with ease of access and personalization, direct-to-consumer is emerging as a business model offering customer service without any intermediaries which Disney is implementing. Looking ahead, the deployment of emerging technologies, such as AR/VR, data analytics, will drastically improve online customer experience in a strong data-driven strategy to determine client patterns.

### 6.1.5 Risk Factors

Conforming to Walt Disney report, news and Morgan Stanley analysts there are some systematic risk and points to take into consideration as an investor. Most of them are identified in this evaluation and affect all segments. As mentioned before, parks attendance and resorts

occupancy results declined due to the pandemic situation, slowly achieving similar numbers prior to covid-19 but to a less extent than expected performing better during summer, early winter and spring holidays. Also, macroeconomic downturns can affect affiliate fees estimates and earnings having to pay high fixed costs related to parks and sports rights including certain events deferred or cancelled.

Live sports may see further disruptions undermining revenues and subscriber trends, decreasing Media Networks profits. Media segment is subject to seasonal advertising patterns along changes in viewership. Likewise, theater closing and delaying the theatrical window are some of the strategic decisions Disney must make potentially having an impact on results. The studio entertainment business competes in all forms of entertainment with substantial new similar competitors appearing presenting a threat since success depends heavily on public taste and preferences making this market volatile and is directly tied to consumer products. For theaters not closed, release dates go in function of competition, vacation and holiday periods. DTC profits fluctuate for the same reasons: subscriber levels, timing and performances of releases as well as where content is first displayed.

Furthermore, from the 21st century fox acquisition in 2019 additional risk emanated. As we can see in the following tables, debt increased 124% slightly augmenting again in 2020 at a much faster pace than cash being saved for unexpected events. Within this transaction the rating agency Standard and Poor downgraded their long term debt two notches to BBB+, along short term debt to A-2 giving an overall negative outlook. As a result, their capital structured varied considerably.

*Table 4- Cash and Debt Evolution*

| $ | Cash and Cash Equivalents | Debt |
|---|---|---|
| sep-18 | 4.2bn | 20.9 bn |
| sep-19 | 5.4 bn | 47 bn |
| oct-20 | 17.9 bn | 58.6bn |

*Debt Rating*

| May 2020 Rating S&P | |
|---|---|
| Lt Debt | BBB+ |
| St Term Debt | A-2 |
| LT Rating: NEGATIVE | |

Source: 10-k report at the sec.gov

To sum up, Walt Disney suffers, besides covid-19, from seasonality effects and indebtedness.

### 6.1.6 Sources of Revenue

In this section can be seen a breakdown of the revenue by segment and geographically. Due to the pandemic situation, Walt Disney shifted their business model focusing as seen below in their theme parks segment in 2019 with 36% of total revenues to 25% in 2020 forced by

macroeconomic factors. The conglomerate and entertainment leader is able to adapt prioritizing their DTCI and Media Networks operations successfully. Despite revenues decreasing, as all peers in 2020, the decision to redirect business to online platforms started already in 2019 thriving away from traditional theaters. Time will confirm if it was a good decision. As part of their plan to focus not only on content but in tailored options Disney offers the opportunity to mix different services with affordable prices.

*Figure 5- Monthly Price per Streaming Service*

| PLAN | Price |
|---|---|
| Disney + | 7,99$/month |
| Star+ | 10,50$/month |
| D+ /Star+ | 14$/month |
| Hulu SVOD | 7$/month |
| Disney+ ESPN+Hulu | 13,99$/month |

Source: https://variety.com/2021/digital/news/disney-phase-out-hotstar-us-espn-hulu-bundle-1235050111/

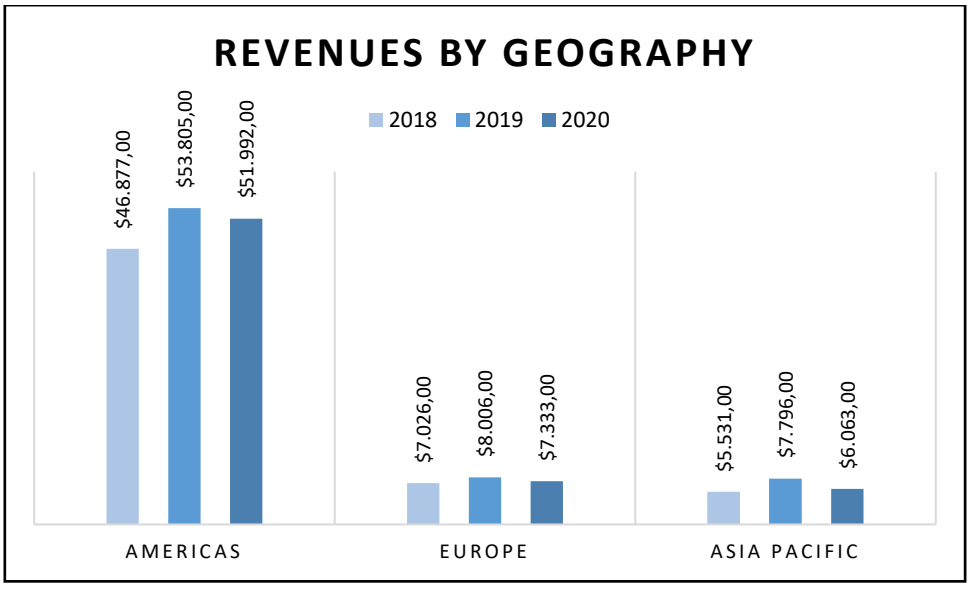
We see revenues augmenting reflecting the new segment focus (numbers in millions):

*Table 5- Revenue Per Segment 2019 vs 2020*

| Revenue Breakdown 2020: | | |
|---|---|---|
| Media Networks | $28.393 | 43% |
| Parks, Experiences and Products | $16.502 | 25% |
| Studio Entertainment | $9.636 | 15% |
| Direct-to-Consumer & International | $16.967 | 26% |
| Eliminations | -$6.110 | -9% |
| | $65.388 | 100% |

| Revenue Breakdown 2019: | | |
|---|---|---|
| Media Networks | $24.827 | 36% |
| Parks, Experiences and Products | $26.225 | 38% |
| Studio Entertainment | $11.127 | 16% |
| Direct-to-Consumer & International | $9.386 | 13% |
| Eliminations | -$1.958 | -3% |
| | $69.607 | 100% |

One of the risks is relying on most of the business in the U.S, however with the use of technology is now broadening its market especially in Asia and less towards Europe while launching more services.




Source: 10-k report at the sec.gov

Disney gives a detail insight where they are getting their income from highlight the affiliate fees from the Media segment, for parks obviously the sale of tickets and merchandise, TV/SVOD licensing for their studio operations and DTCI from affiliate fees, advertising and subscription fees.

*Table 6- Income Detailed*

| Revenues 2020 | Media Networks | Parks, Experiences and Products | Studio Entertainment | DTCI | Eliminations | Consolidated |
|---|---|---|---|---|---|---|
| Affiliate fees | $ 15.018 | — | — | $ 3.673 | $ -762 | $ 17.929 |
| Advertising | $ 6.374 | $ 4 | — | $ 4.477 | — | $ 10.855 |
| Subscription fees | — | — | — | $ 7.645 | — | $ 7.645 |
| Theme park admissions | — | $ 4.038 | — | — | — | $ 4.038 |
| Resort and vacations | — | $ 3.402 | — | — | — | $ 3.402 |
| Retail and wholesale sales of merchandise. food and beverage | — | $ 4.952 | — | — | — | $ 4.952 |
| TV/SVOD distribution licensing | $ 6.489 | — | $ 4.557 | $ 745 | $ -5.348 | $ 6.443 |
| Theatrical distribution licensing | — | — | $ 2.134 | — | — | $ 2.134 |
| Merchandise licensing | — | $ 2.674 | $ 536 | $ 32 | — | $ 3.242 |
| Home entertainment | — | — | $ 1.528 | $ 84 | — | $ 1.612 |
| Other | $ 512 | $ 1.432 | $ 881 | $ 311 | — | $ 3.136 |
| Total Revenues | $ 28.393 | $ 16.502 | $ 9.636 | $16.967 | $ -6.110 | **$ 65.388** |

Numbers in Millions USD

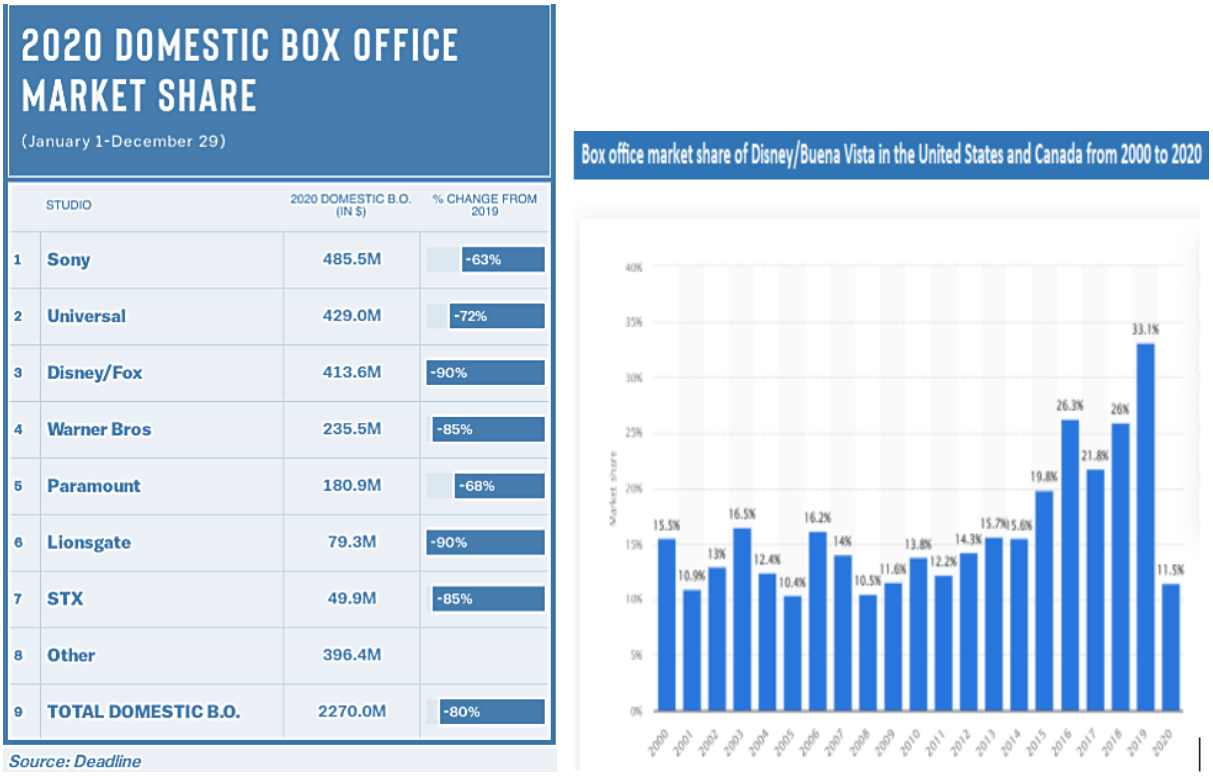
Source: 10-k report at the sec.gov

## 7.Competitors

The trend in this market Disney operates to be differentiated from new competitors consists in other companies acquisition and as mentioned before, offering personalized content and bundles. A clear example occurs with Walt Disney for instance purchasing 21st century fox in 2019 to strategically position itself as one of the largest streaming companies through ESPN+, Hulu and Disney+. The purpose is to be able to produce more videos, series, more intellectual property through its SVOD offers thus cementing its position. Walt Disney pre-covid was

leading the market with a total 33,1% in market share decreasing by 90% in 2020 but still in the top 3, results almost offset by the DTC segment. In addition, Comcast operates as a leading player in this market through its NBCUniversal Media (Universal) subsidiary, which it acquired in 2009 and similarly AT&T also a leading player in the movies and entertainment market through its WarnerMedia subsidiary. Following this, SVOD platforms are increasing in demand hindering growth in physical and movies sales, also as result of the appearance of new streaming services presenting significant challenges to more mature companies. There has been an increasing competition from streaming services such as Spotify and VOD companies such as Netflix and Amazon Prime Video, who have gone on to produce their own original content and with AT&T launching HBO Max in 2020.

*Figure 6- Disney Market Share*



**2020 DOMESTIC BOX OFFICE MARKET SHARE**

(January 1-December 29)

| | STUDIO | 2020 DOMESTIC B.O. (IN $) | % CHANGE FROM 2019 |
|---|---|---|---|
| 1 | Sony | 485.5M | -63% |
| 2 | Universal | 429.0M | -72% |
| 3 | Disney/Fox | 413.6M | -90% |
| 4 | Warner Bros | 235.5M | -85% |
| 5 | Paramount | 180.9M | -68% |
| 6 | Lionsgate | 79.3M | -90% |
| 7 | STX | 49.9M | -85% |
| 8 | Other | 396.4M | |
| 9 | TOTAL DOMESTIC B.O. | 2270.0M | -80% |

Source: Deadline



## 8 Company Valuation

In this section, I will present the results achieved in the DCF approach, relative valuation, EVA model and Dynamic ROE. All assumptions will be explained in detail, starting at the 11th of November 2021 with Disney trading at 162.11$ per share and a market capitalization of 294.50$ bn.

With exception to the other models, the DCF predictions are from 2021 to 2030 since enough information is provided by the company. All the forecasting period is for the firm given that 80% of their business is in the U.S.

To have an idea of how the company performed in the last 5 years through ratios, in the following table we can see it summarized. Revenues increase at an average of 4,80% declining in 2017 although recovering in 2019 because of acquisitions. However, the pandemic affected Walt Disney in 2020, results were slightly offset due to strategic decisions related to their prioritization to their media networks segments and DTCI. Margins remained quite stable but expenses rising has have impacted net income, especially in 2020. We can see that despite being a industry leader it is still affected by seasonality and severe competition, leading to change their business model focus, not too dependent on parks or studios.

Despite total debt increasing in absolute terms, their D/E ratio increases moderately. Walt Disney acquired a competitor in 2019 expecting see a positive return in the next few years. In 2020, the results are not good but expected due to worldwide situation. Nevertheless, maintaining a good liquidity position to compensate for possible coming surprises. To compute these values, you can see on the appendix the financial statements of Disney.

*Figure 7- Ratio Analysis*

| | Ratios | | | | | |
|---|---|---|---|---|---|---|
| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Revenue | 52.465 | 55.632 | 55.137 | 59.434 | 69.607 | 65.388 |
| %growth | | 6,04% | -0,89% | 7,79% | 17,12% | -6,06% |
| Gross Margin | 46% | 46% | 45% | 45% | 40% | 33% |
| Net Income | 8.382 | 9.391 | 8.980 | 12.598 | 11.054 | (2.864) |
| % Growth | | 12% | -4% | 40% | -12% | -126% |
| NI Marg. | 16% | 17% | 16% | 21% | 16% | -4% |
| ST Debt | - | - | - | 3.790 | 8.857 | 5.711 |
| LT Debt | - | - | - | 17.084 | 38.129 | 52.917 |
| Total Debt | - | - | - | 20.874 | 46.986 | 58.628 |
| D/E Ratio | - | - | - | 39,51% | 50,04% | 66,42% |
| Quick Ratio | - | - | - | 75,5% | 66,7% | 115,0% |
| Cash RATIO | - | - | - | 23% | 17% | 67% |
| ROA | - | - | - | 12,8% | 5,7% | -1,4% |
| ROE | - | - | - | 24% | 12% | -3% |
| ROE-Ke | - | - | - | 17 | 5 | (11) |
| EBITDA | - | - | - | 17.848 | 15.997 | 9.139 |
| EPS | - | - | - | 8,36 | 6,64 | (1,58) |
| Shares Ot | - | - | - | 1507 | 1666 | 1808 |

Source: Own calculations

## 8.1 DCF Valuation

### 8.1.1 Forecasting Revenues

After the financial statements forecast all items in the DCF calculations are imperative.

Revenues are one of the most important items since the others are driven from its values. Walt Disney separates their revenues in depth, showcasing the values by segments and by each primary source of income of it. These tables provided were used to assume different patterns from historical data, projections made by the firm and logic in some cases. As already mentioned, revenues increase except for 2020, during the pandemic, with DTCI as the main driver of Disney going forward partially offsetting losses in parks and studio segments, declining 37% and 13%, respectively. For that reason, we are going to focus on that specially. Also, since 2020 dividends were sacrificed to prioritize investments in DTCI initiatives.

*Table 7- Revenue Growth Rates 2020*

| ***Revenue*** | **2018** | **2019** | **2020** |
|---|---|---|---|
| Media Networks | 21.922 | 24.827 | 28.393 |
| Parks, Experiences and Products | 24.701 | 26.225 | 16.502 |
| Studio Entertainment | 10.065 | 11.127 | 9.636 |
| Direct-to-Consumer & International | 3.414 | 9.386 | 16.967 |
| Eliminations | (668) | (1.958) | (6.110) |
| **Total Revenue** | **59.434** | **69.607** | **65.388** |

| ***Revenue Growth*** | **2018** | **2019** | **2020** |
|---|---|---|---|
| Media Networks | | 13% | 14% |
| Parks, Experiences and Products | | 6% | -37% |
| Studio Entertainment | | 11% | -13% |
| Direct-to-Consumer & International | | 175% | 81% |
| Eliminations | | 193% | 212% |
| ***Total Revenue Growth*** | | **17%** | **-6%** |

To start the assumptions in revenues this table is fundamental. On the annual report, Disney breaks down their DTCI operations by streaming services owned except for Star which has not being launched yet. As a base, the annual revenue from 2019 to 2021 is calculated by multiplying the annual paid subscriptions by the average monthly revenue per subscriber annualized. Now, comes the difficult part projecting the subscribers money spent per subscriber. Therefore, a forecast of the streaming services is provided by Disney and assembled in Morgan Stanley equity report. Disney estimated initially that for 2024 Disney+ would have 60-90 million subscribers, then in 2020 due to unexpected growth in all services, estimates

increased significantly. In the following table we can observe that currently the goals are going to be attained probably before than expected.

*Figure 8- Forecast Disney DTC subscribers Until 2024*

| | April '19 Guide | Dec '20 Guide | Current MSe |
|---|---|---|---|
| **Disney Plus + Star DTC** | | | |
| YE2024 Subscribers | 60-90mm | 230-260mm | 245.0mm |
| *Disney+ Hotstar Subscribers* | | *30-40%, or ~70-100mm* | *92.2mm* |
| 2024 Content Expense | Mid $4bn | $8-9bn | $8.9bn |
| Peak operating loss timing | FY2020-FY2022 | FY2021 | FY2022 |
| Profitability timing | FY2024 | FY2024 | FY2024 |
| **ESPN Plus** | | | |
| YE2024 Subscribers | 8-12mm | 20-30mm | 27.0mm |
| Profitability timing | FY2023 | FY2023 | FY2023 |
| **Hulu** | | | |
| YE2024 Paid Subscribers | 40-60mm | 50-60mm | 58.5mm |
| Profitability timing | FY2023 or FY2024 | FY2023 | FY2021 / FY2022 |
| **Global Streaming** | | | |
| YE2024 Paid Subscribers | 108-162mm | 300-350mm | 330.5mm |
| 2024 DTC Content Expense* | | $14-16bn | ~$16.1bn |

Source: Company data, Morgan Stanley Research

In accordance with the table, the maximum of 350 million subscribers expected in 2024 as baseline to calculate the subscribers for the rest of the years. For FY2021, values were retrieved from the results Disney announced the 10$^{th}$ of November 2021. Afterwards, is assumed, in paid subscriptions growth, a 42% rate constant until FY2024 and then declining linearly 5% to 2030. A growth rate of 2% and 17% is presumed after slowing down in 2021 and then remaining constant. The average revenue per subscriber is forecasted using the average of the previous years, including 2021. The reached numbers seem doable with Disney+ having 565 million subscribers by 2030 with other platforms gradually increasing acceptably.

*Table 8- Forecast DTC Revenue*

| ***Paid Subscriptions*** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Disney+ | - | 73,70 | 118,10 | 167,70 | 238,14 | 284,01 | 355,01 | 426,01 | 489,91 | 538,91 | 565,85 | 565,85 |
| Hulu SVOD | 25,60 | 36,60 | 39,70 | 40,49 | 41,30 | 42,13 | 42,97 | 43,83 | 44,71 | 45,60 | 46,51 | 47,45 |
| Hulu SVOD + Live TV | 2,90 | 4,10 | 4,00 | 4,08 | 4,16 | 4,24 | 4,33 | 4,42 | 4,50 | 4,59 | 4,69 | 4,78 |
| Total Hulu | 28,50 | 40,70 | 43,70 | 44,57 | 45,47 | 46,37 | 47,30 | 48,25 | 49,21 | 50,20 | 51,20 | 52,23 |
| ESPN+ | 3,50 | 10,30 | 12,10 | 14,21 | 16,70 | 19,62 | 23,05 | 27,07 | 31,80 | 37,36 | 43,89 | 51,56 |
| Star | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total Subscribers** | **32,00** | **124,70** | **173,90** | **226,49** | **300,30** | **350,00** | **425,36** | **501,33** | **570,93** | **626,46** | **660,94** | **669,64** |
| | | | | | | | | | | | | |
| ***Average Monthly Revenue Per Subscriber*** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** |
| Disney+ | - | 4,80 | 4,03 | 4,42 | 4,42 | 4,42 | 4,67 | 4,92 | 5,17 | 5,42 | 5,67 | 5,92 |
| Hulu SVOD | 13,09 | 12,24 | 13,51 | 12,95 | 12,95 | 12,95 | 12,95 | 12,95 | 12,95 | 12,95 | 12,95 | 12,95 |
| Hulu SVOD + Live TV | 55,98 | 67,24 | 75,11 | 66,11 | 66,11 | 66,11 | 66,11 | 66,11 | 66,11 | 66,11 | 66,11 | 66,11 |
| ESPN+ | 5,12 | 4,35 | 4,48 | 4,65 | 4,65 | 4,65 | 4,65 | 4,65 | 4,65 | 4,65 | 4,65 | 4,65 |
| Star | - | - | - | | | - | | | | | | |
| | | | | | | | | | | | | |
| ***Annual Revenue*** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** |
| Disney+ | - | 4.245 | 5.711 | 8.885 | 12.616 | 15.047 | 19.873 | 25.126 | 30.365 | 35.018 | 38.467 | 40.164,11 |
| Hulu SVOD | 4.021 | 5.376 | 6.436 | 6.291 | 6.417 | 6.545 | 6.676 | 6.810 | 6.946 | 7.085 | 7.227 | 7.371,08 |
| Hulu SVOD + Live TV | 1.948 | 3.308 | 3.605 | 3.237 | 3.301 | 3.368 | 3.435 | 3.504 | 3.574 | 3.645 | 3.718 | 3.792,36 |
| ESPN+ | 215 | 538 | 650 | 793 | 932 | 1.095 | 1.286 | 1.511 | 1.775 | 2.085 | 2.449 | 2.877,09 |
| Star | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total Revenue** | **6.184** | **13.467** | **16.403** | **19.206** | **23.267** | **26.054** | **31.270** | **36.950** | **42.659** | **47.833** | **51.860** | **54.205** |
| | | | | | | | | | | | | |
| ***Paid Subscriptions Growth*** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** |
| Disney+ | | | 60% | 42% | 42% | 19% | 25% | 20% | 15% | 10% | 5% | 0% |
| Hulu SVOD | | 43% | 8% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Hulu SVOD + Live TV | | 41% | -2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Total Hulu | | 43% | 7% | | | | | | | | | |
| ESPN+ | | 194% | 17% | 17% | 17% | 17% | 17% | 17% | 17% | 17% | 17% | 17% |
| Star | | | | | | | | | | | | |

Source: Thesis Model

Subsequently, revenues are forecasted for 2022 since 2021 results are confirmed from Disney 10-K report. Surprisingly, revenues declined from 2020 for all segments, however total revenues increased 2$ billion due to lower eliminations. To estimate each revenue per segment, the computation is simple, it is based on the prior year revenue multiplied by (1+rate). The so-called rate has been assumed, for instance, the 15% rate for 2022 a stable rate is used linearly declining 0,005 each year as the firm matures. For the 6% and 8% rate for Parks and studios the same rate pre-covid is applied being constant which seems feasible if parks do not close and Disney keeps making good quality content. For DTCI segment the same pattern from previous years is used augmenting approximately 3$ billion per year added to the total revenue previously calculated. This value consists in the approximate difference between 2019 and 2020 exists among DTCI revenue reported versus estimated. For eliminations, the average from past years remains constant at negative 3000$ not having a rate assumed since Disney does not reveal exactly how it is calculated.

*Table 9- DCF Top Line Estimates*

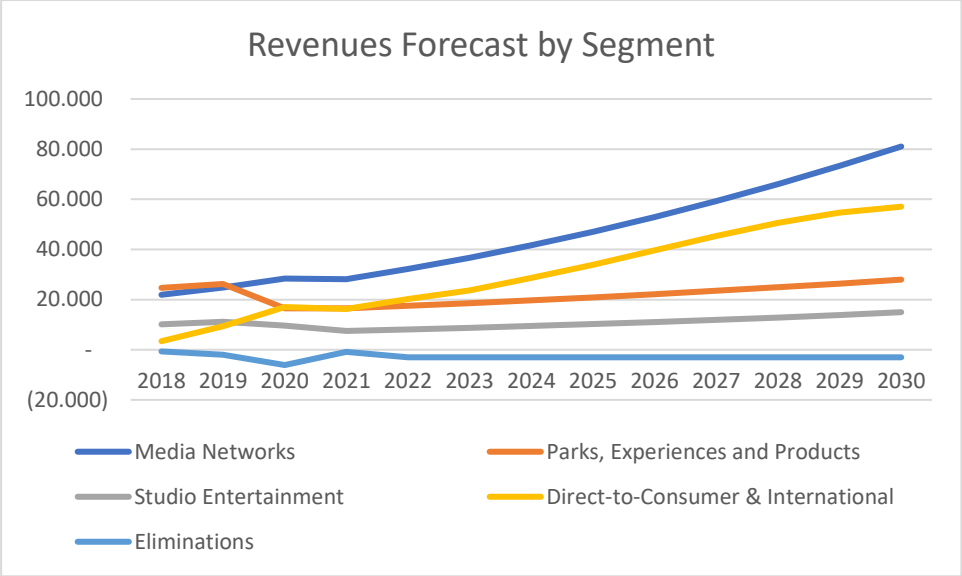
| *Revenue* | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| Media Networks | 28.093 | 32.307 | 36.991 | 42.170 | 47.863 | 54.085 | 60.846 | 68.148 | 75.985 | 84.343 |
| Parks, Experiences and Products | 16.552 | 17.545 | 18.598 | 19.714 | 20.897 | 22.150 | 23.479 | 24.888 | 26.381 | 27.964 |
| Studio Entertainment | 7.496 | 8.096 | 8.743 | 9.443 | 10.198 | 11.014 | 11.895 | 12.847 | 13.875 | 14.985 |
| Direct-to-Consumer & International | 16.319 | 22.206 | 26.267 | 29.054 | 34.270 | 39.950 | 45.659 | 50.833 | 54.860 | 57.205 |
| Eliminations | (892) | (3.000) | (3.000) | (3.000) | (3.000) | (3.000) | (3.000) | (3.000) | (3.000) | (3.000) |
| **Total Revenue** | **67.568** | **77.154** | **87.599** | **97.381** | **110.228** | **124.200** | **138.880** | **153.715** | **168.101** | **181.496** |

| *Revenue Growth* | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| Media Networks | -1% | 15% | 15% | 14% | 14% | 13% | 13% | 12% | 12% | 11% |
| Parks, Experiences and Products | 0% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 6% |
| Studio Entertainment | -22% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% |
| Direct-to-Consumer & International | -4% | 36% | 18% | 11% | 18% | 17% | 14% | 11% | 8% | 4% |
| Eliminations | | | | | | | | | | |
| ***Total Revenue Growth*** | **3%** | **14%** | **14%** | **11%** | **13%** | **13%** | **12%** | **11%** | **9%** | **8%** |

Source: Thesis Model

We have already estimated how revenues will progrees during the established period, both historical and forecasted. Results are driven by Media Networks and DTCI segments.

*Figure 9- Evolution of The Revenue During the Forecasted Period*




Source: Thesis Model

### 8.1.2 Forecasting Expenses

The following table presents all the assumptions summarized and ready to be implemented in the DCF calculations.

*Table 10- Main Assumptions DCF*

| Assumptions | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sales growth | | 17% | -6% | 3% | 14% | 14% | 11% | 13% | 13% | 12% | 11% | 9% | 8% |
| COGS as a % of sales | 55% | 60% | 67% | 60% | 60% | 59% | 59% | 58% | 58% | 57% | 57% | 56% | 56% |
| SG&A as a % of sales | 15% | 17% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% |
| Other expenses as a % of sales | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Tax Rate | 11% | 26% | 18% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% | 21% |
| | | | | | | | | | | | | | |
| Capital Expenditures "CapEx" (amount) | 4.465 | 4.876 | 4.022 | 4.730 | 5.594 | 6.570 | 7.304 | 8.267 | 9.315 | 10.416 | 11.529 | 12.608 | 13.612 |
| Capital Expenditure as a % of Revenue | 8% | 7% | 6% | 7% | 7% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% |
| Depreciation (amount) | 3.011 | 4.167 | 5.345 | 4.020 | 4.755 | 5.584 | 6.208 | 7.027 | 7.918 | 8.854 | 9.799 | 10.716 | 11.570 |
| Depreciation as % of CapEx | 67% | 85% | 133% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% |
| | | | | | | | | | | | | | |
| **Working Capital** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** |
| Current Assets | 12.675 | 22.706 | 17.337 | | | | | | | | | | |
| Current Liabilities | 9.479 | 17.762 | 16.801 | | | | | | | | | | |
| Working Capital | 3.196 | 4.944 | 536 | 4.145 | 4.733 | 5.374 | 5.974 | 6.762 | 7.620 | 8.520 | 9.430 | 10.313 | 11.135 |
| Net Working Capital Turnover | 18,6 | 14,1 | 122,0 | 16,3 | 16,3 | 16,3 | 16,3 | 16,3 | 16,3 | 16,3 | 16,3 | 16,3 | 16,3 |

Source: Thesis Model

Sales growth represents the growth rates calculated before when forecasting revenues per segment. The following items are going to be compared to the revenues computed to build the model since it is the main driver. Starting with the cost of goods sold (COGS), it indicates the costs of the products Disney sells and the costs of providing their services. COGS increase is associated with high fixed costs in the parks and experiences segment, in comparison to other assets owned, negatively affecting gross margins. On average, COGS represent 61% of revenues beginning in 2021 to the same level as 2019 and then slowly decreasing as revenues do similarly. Also, selling, general and administrative expenses (SG&A) as a percentage of the sales with other expenses denoting depreciation and amortization (D&A) that is 0 because as we are going to see further ahead allows to compute EBITDA. Even though revenues are augmenting, SG&A will stay flat at 19% rate after 2020 Covid effect. To get an idea of the taxes Disney is paying in the past years, taxes are divided by EBIT, after subtracting the historical D&A.

Similar logic is applied below, values from Disney balance sheet and cash flow statement are retrieved, meaning capital expenditures and depreciation. It is observable that Capex goes in line with revenues decreasing over time, thus Disney requiring less money to keep the business running. Although, depreciation keeps increasing even surpassing the capex but stabilized during the forecasted period, the reason is theme parks still needing maintenance and costs while not generating income. In the assumptions, depreciation is linked with CAPEX and the

gross PPE. Generally, total depreciation is equal to the net Capex over the life of an asset, therefore, when a company regularly has a CAPEX higher than depreciation means the firm is investing and growing its assets, otherwise it would be under-investing. Disney is investing in the business with the exception to 2020 prioritizing changing the business model and minimizing losses. When observing the balance sheet, the same trend is identified with attractions, buildings and equipment (PPE) being surpassed in terms of growth in 2020 relative to depreciations. PPE increased 6,01% versus 9,56% in depreciation.

Finally, there is working capital as the difference between current assets and current liabilities compared afterwards to revenues. In this calculation, only operational items were considered, such as accounts receivables, inventories, television costs and advances and other current assets whereas for current liabilities only accounts payables were utilized. Deferred revenue should be added to AP in the computation but were disregarded since in the 10-k report this item accounts also for "others" not being detailed what part is deferred revenue. Net working capital turnover augmented exponentially in 2020 showcasing how efficiently Disney is using the working capital available or short-term assets and liabilities to support sales and growth. A major decrease in current assets is due to lower accounts receivable plus television costs. As for current liabilities accounts payable decreased meaning Disney can retain more cash. Furthermore, the 16,3% in the forecast period is the average between 2018 and 2019, 2020 is an outlier and especial as the situation lived that year.

Once the percentages from historical information, it is used to assess how it is going to change in the future. First, for COGS, pre-covid percentage is going to be maintained and decreasing after pushed down by DTCI revenues and lower margins. No information is provided by Disney on what they expect from SG&A, for our evaluation it remains constant as in 2020. In the U.S, the corporate tax rate has varied until 2018 being flat now at 21%. Although, the average tax rate, achieved dividing income taxes by operating income, is 18% in this valuation the 21% rate is stated as reasonable and the one used for the forecasted period assuming stability.

The capex rate is 7% as the historical average slowly increasing and stabilizing in 2024. For depreciation, the average is 95% but to be conservative an 85% rate is feasible.

As commented in the literature review, for the DCF calculations the Income Statement is used as a baseline plugging the estimated values from 2021 to 2030 using the rates presumed in the table 9. For instance, COGS are the product of revenues by the 60% rate being equal to 40.829 billion hence the rest similarly. All items are extracted from the financial statements and follow

the same pattern: Revenues less COGS equal the gross profit, the result less SG&A equals the EBITDA that subtracting D&A equals the EBIT less income taxes achieving the Adjusted EBIT or EBT. Arrived at this point, we apply the formula:

$$Unlevered\ Free\ Cash\ Flow = Adjusted\ EBIT + D\&A - CAPEX\ (+\ -)Changes\ in\ NWC$$

| Income Statement (USD Millions) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revenues | 59.434 | 69.607 | 65.388 | 67.568 | 77.154 | 87.599 | 97.381 | 110.228 | 124.200 | 138.880 | 153.715 | 168.101 | 181.496 |
| Cost of goods sold | 32.726 | 42.061 | 43.880 | 40.829 | 46.235 | 52.057 | 57.383 | 64.403 | 71.945 | 79.754 | 87.505 | 94.853 | 101.504 |
| Gross Profit | 26.708 | 27.546 | 21.508 | 26.739 | 30.918 | 35.542 | 39.998 | 45.826 | 52.255 | 59.126 | 66.211 | 73.248 | 79.992 |
| SG&A, ex. Amortization | 8.860 | 11.549 | 12.369 | 12.781 | 14.595 | 16.571 | 18.421 | 20.851 | 23.494 | 26.271 | 29.077 | 31.798 | 34.332 |
| Other Expenses | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| EBITDA | 17.848 | 15.997 | 9.139 | 13.958 | 16.324 | 18.972 | 21.577 | 24.975 | 28.761 | 32.855 | 37.133 | 41.449 | 45.660 |
| Depreciation & Amortization | 3.011 | 4.167 | 5.345 | 4.020 | 4.755 | 5.584 | 6.208 | 7.027 | 7.918 | 8.854 | 9.799 | 10.716 | 11.570 |
| EBIT | 14.837 | 11.830 | 3.794 | 9.937 | 11.569 | 13.387 | 15.369 | 17.948 | 20.844 | 24.002 | 27.334 | 30.733 | 34.089 |
| Taxes (Effective Tax Rate) | 1.663 | 3.026 | 699 | 2.087 | 2.429 | 2.811 | 3.227 | 3.769 | 4.377 | 5.040 | 5.740 | 6.454 | 7.159 |
| Adjusted EBIT | 13.174 | 8.804 | 3.095 | 7.851 | 9.140 | 10.576 | 12.141 | 14.179 | 16.466 | 18.961 | 21.594 | 24.279 | 26.930 |
| | | | | | | | | | | | | | |
| Plus: Depreciation & Amortization | 3.011 | 4.167 | 5.345 | 4.020 | 4.755 | 5.584 | 6.208 | 7.027 | 7.918 | 8.854 | 9.799 | 10.716 | 11.570 |
| Less: Capital Expenditures | -4.465 | -4.876 | -4.022 | -4.730 | -5.594 | -6.570 | -7.304 | -8.267 | -9.315 | -10.416 | -11.529 | -12.608 | -13.612 |
| (Increase) Decrease in working capital | | -1.748 | 4.408 | -3.609 | -588 | -641 | -600 | -788 | -857 | -901 | -910 | -883 | -822 |
| **Unlevered Free Cash Flow** | | 6.347 | 8.826 | 3.532 | 7.712 | 8.950 | 10.446 | 12.150 | 14.212 | 16.498 | 18.954 | 21.505 | 24.067 |

Source: Thesis Model

Outstandingly, UFCF is significantly lower than 2020 expected to stably recover onwards. The difference is caused by some factors, D&A decreases in compliance with the conservative assumption made with capex increasing normally as the pandemic situation is better. With the exception of 2020, capex outpaces depreciation, a trend been kept after 2022 and normal for a business like Disney. The low FCF is driven by the negative change in working capital of -3.609 in 2021 induced by higher changes in current assets relative to changes in current liabilities which is not necessarily bad.

The next step consists in discounting the sum of the present value of the unlevered free cash flows at Disney's WACC plus the terminal value. All stages are going to be described:

### 8.1.3 WACC

The WACC is measured with the following formula and is estimated to be **7,17%**.

$$WACC = \frac{D}{D+E} \times K_d \times (1-t) + \frac{E}{D+E} \times K_e$$

### 8.1.4 Cost of Equity

As mentioned, there are several ways to compute the cost of equity, in this case the capital asset pricing model (CAPM) will be used as it is commonly practiced by professionals.

$$K_e = R_f + \beta \times (R_m + R_f)$$

Breaking the formula separately, the risk-free rate used is the 10-year US treasury bond since it is a long-term forecast for Disney mostly focused and headquartered in the U.S. The 1,57% value is retrieved in a trustworthy website, the world government bonds.

The beta is calculated based on the next formula:

$$\beta_i = \frac{Cov\ (R_i\ , R_m)}{Var\ (R_m)}$$

Thereby, data on the index S&P500, the market, as well as the holding period returns of Disney stock from 29/01/10 to 31/12/2020 in the center for research in security prices LLC (CRSP). The covariance of the stock over the market is divided by the covariance of the market both in a daily and monthly basis.

| | BETA (Daily) |
|---|---|
| Cov(Ri,Rm) | 0,00 |
| Var(Rm) | 0,00 |
| Beta | 1,05 |

| Correlation | R-Squared |
|---|---|
| 68% | 46% |

| | BETA (Monthly) |
|---|---|
| Cov(Ri,Rm) | 0,00 |
| Var(Rm) | 0,00 |
| Beta | 1,23 |

| Correlation | R-Squared |
|---|---|
| 73% | 53% |

The levered beta used in computations is the 1,23 monthly based, attributable to high correlation and greater R^2. The stock is more volatile than the market assuming a market beta equal to 1.

Since Disney stock is in the New York Stock Exchange the market risk premium could be computed by comparing the excess returns of the S&P500 versus the risk-free rate, but results were too high and not reasonable. Therefore, the MRP of 4,85% is used according to Damodaran website where is calculated the implied market risk premium, covid adjusted, considering earnings for 2020 assuming a 40% earnings recovery in 2021. Last updated on the 1st of December 2021.

| Cost of Equity (levered) | $t_0$ |
|---|---|
| Risk-free rate of return | 1,57% |
| Beta (levered) | 1,23 |
| Market Risk Premium | 4,85% |
| **Cost of Equity (levered)** | **7,55%** |

Source: Thesis Model

### 8.1.4 Cost of Debt

Disney has a BBB+ rating given by Standard and Poor's implying a probability of default of around 22%, downgraded due to recent acquisitions incurring long term debt. The cost of debt is measured adding the risk-free rate to the spread. The Damodaran website provides a table in function of the interest coverage ratio and its rating, therefore, the 1,56% is used.

*Table 11- Spread in Function of The Rating*

| For developed market firms with market cap > $5 billion | | | |
|---|---|---|---|
| If interest coverage ratio is | | | |
| > | ≤ to | Rating is | Spread is |
| 8.50 | 100000 | Aaa/AAA | 0.63% |
| 6.5 | 8.499999 | Aa2/AA | 0.78% |
| 5.5 | 6.499999 | A1/A+ | 0.98% |
| 4.25 | 5.499999 | A2/A | 1.08% |
| 3 | 4.249999 | A3/A- | 1.22% |
| 2.5 | 2.999999 | Baa2/BBB | 1.56% |
| 2.25 | 2.249999 | Ba1/BB+ | 2.00% |
| 2 | 2.2499999 | Ba2/BB | 2.40% |
| 1.75 | 1.999999 | B1/B+ | 3.51% |
| 1.5 | 1.749999 | B2/B | 4.21% |
| 1.25 | 1.499999 | B3/B- | 5.15% |
| 0.8 | 1.249999 | Caa/CCC | 8.20% |
| 0.65 | 0.799999 | Ca2/CC | 8.64% |
| 0.2 | 0.649999 | C2/C | 11.34% |
| -100000 | 0.199999 | D2/D | 15.12% |

Source: Damodaran Website

Hence, the cost of debt pre-taxes is 3,13%, taxed at 18,42% rate, calculated by simply dividing incomes taxes by EBIT. Ultimately, the cost of debt (Kd) is 2,55%. Kd is lower than Ke, being one of the reasons Disney easily raises debt and issues bonds to raise capital.

| Cost of Debt | $t_0$ |
|---|---|
| | |
| Risk-free rate of return | 1,57% |
| Risk Premium (Spread) | 1,56% |
| Cost of debt before taxes | 3,13% |
| Taxation | 0,58% |
| | |
| **Cost of debt after taxes** | **2,55%** |

Source: Thesis Model

Alternatively, dividing Net Interest Expenses by Total Debt results in a 2,54% cost of debt.

### 8.1.5 Capital Structure

The capital structure is computed based on market values of debt and equity not directly specified in the financial statements. First, the Market Value of Equity consists in multiplying

the current share price (as of 11/11/2021) by the number of shares outstanding. Secondly, formula is applied to get the Market Value of Debt:

$$MV\ of\ Debt = Interest\ Expense\ \times \left[\frac{1-\frac{1}{(1+Kd)^t}}{Kd}\right] + \left[\frac{Total\ Debt}{(1+Kd)^t}\right]$$

Here, all the variables have been explained except for "t" that designates a weighted average maturity while using Bloomberg as the source to get information on the Bonds outstanding Disney has.

Hence, we arrive to Disney capital structure with equity representing 92,33% of the total market value and debt just 7,67%.

| Capital Structure | | $t_0$ |
|---|---|---|
| | | % |
| MV of Equity | 293.095 | 92,33% |
| MV of Debt | 24.343 | 7,67% |
| **Total MV** | 317.438 | 100,00% |
| | Tax Rate | 18,42% |

Source: Thesis Model

### 8.1.6 Terminal Value (TV)

This factor is probably the most important, representing at least 70% of the final fair value of the company. Contrary to DCF, the forecasting period is just for the next 10 years, whereas the TV presupposes Walt Disney to grow at the same rate to infinity. Therefore, a sensitive measure. Usually, the terminal growth rate value is in line with GDP growth, inflation and the economy being a low single digit percentage.

For this valuation, is going to be used the GDP annual growth rate in the U.S averaged between 1948 until 2021 of 3,13% according to previous studies. This value seems to be in line with the following metrics forecasted by the Federal Reserve making it a good estimate of growth.

*Table 12- Terminal Growth Rate Assumption*

| Variables | 2021 | 2022 | 2023 | 2024 | Average | Longer run |
|---|---|---|---|---|---|---|
| Change in Real GDP | 5,9 | 3,8 | 2,5 | 2 | 3,55 | 3,18 |
| Unemployment Rate | 4,8 | 3,8 | 3,5 | 3,5 | 3,90 | |
| PCE Inflation | 4,2 | 2,2 | 2,2 | 2,1 | 2,68 | |
| Core PCE Inflation | 3,7 | 2,3 | 2,2 | 2,1 | 2,58 | |

Source: Federal Reserve Website

The formula used for the Terminal Value is:

$$TV = \frac{FCF_{10} \times (1+g)}{(WACC - g)}$$

### 8.1.7 DCF Results

After the WACC measurement and the terminal value, the intrinsic value of Disney stock can be calculated discounting the unlevered cash flows to the present plus the sum of the terminal value discounted, arriving to the enterprise value. Thereafter, to get the equity value one must subtract the Net Debt, meaning the difference in total debt of 58.628 and cash and cash equivalents of 17.914. Finally, the equity value or fair value of the company is divided by the total shares outstanding in 2020, in this case 1.808 million shares.

*Figure 10- Sum of the PV free cash flows and Terminal Value; Fair Value of Disney*

| Perpetuity Growth Method | |
|---|---|
| Weighted average cost of capital | 7,17% |
| Net present value of free cash flow | $87.815 |
| Terminal growth rate | 3,13% |
| Terminal value | $614.763 |
| Present value of the terminal value | $307.669 |
| Enterprise value | $395.483 |
| Less: Net debt | $40.714 |
| **Equity Value** | **$354.769** |

(Numbers in Millions)

| 11/11/2021 | |
|---|---|
| Share price | $ 162.11 |
| Mkt Cap | 294.50 bn |

| Intrinsic Value | |
|---|---|
| Fair Value | $ 196,22 |
| N. Shares | 1808 |

Upside 21,04%

Source: Thesis Model

The final result per share is 196,22$, an estimated price increase of 21,04% compared to the day of valuation on the 11th of November 2021 implying a market capitalization of 294.50 bn.

*Figure 11- Sensitivity Analysis between WACC and Perpetuity Growth*

| WACC | Perpetuity Growth | | |
|---|---|---|---|
| | 2,50% | 3,00% | 3,50% |
| 6,50% | 379.169 | 427.935 | 492.956 |
| 7,00% | 326.640 | **363.003** | 409.756 |
| 7,50% | 284.789 | 312.685 | 347.554 |

Source: Thesis Model

A sensitivity analysis was performed and the impact of small changes of 0.50% in WACC and the perpetuity rate are significant. Equity value can diverge from a minimum of 284,78$ to 492,92$. The variation is more accentuated when changing only the growth rate implying differences of 11% to 13%.

## 8.2 Relative Valuation – Multiples

The relative valuation model aims to compare a company share price with the performance of similar firms, not necessarily being in the same industry or direct competitors. This is a market-based model considered as a benchmark, usually used to complement results obtained in the DCF method.

First thing to do is define the peer group and then compute the multiples using each company fundamentals. The multiples used are based on last twelve months data initially using the appropriate multiples. However, when determining which multiples to use, the 2020 values did not reflect accurately Disney fair price (negative prices were attained) mainly due to losses on that year and abnormal values. In addition, Bloomberg forecasted multiples were used using future estimates to assess the future price of Walt Disney. Unfortunately, Bloomberg does not disclose which peers were considered.

*Table 13- Criteria to Assess the Peer Group*

| Comps | Walt Disney | ViacomCBS | Amc Netw. | Comcast | Charter Coms | Sony | Match Group | Fox Corp | Netflix | Six Flags Ent | SeaWorld |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Business Areas/Market | Media Net | Media Net | Media Net | Media Net | Media Net | Media Net | Entertainm | Entertainm | Entertainm | Parks,Exp | Parks,Exp |
| Size (Millions) | 319.143 | 23.634 | 2.018 | 248.394 | 124.494 | 152.049 | 45.683 | 23.085 | 295.711 | 3.841 | 5.463 |
| D/E | 66% | 128% | 443% | 113% | 273% | 36% | -300% | 79% | 147% | -226% | -2058% |
| Gross Margin | 33% | 41% | 50% | 68% | 38% | 34% | 73% | 37% | 39% | 90% | 91% |
| Net Profit Margin | -4% | 10% | 9% | 10% | 7% | 10% | 5% | 8% | 11% | -119% | -72% |
| PE Ratio (ttm) | 288,6 | 7,1 | 8,5 | 17,41 | 31,64 | 18,6 | 85,88 | 12,78 | 58,45 | 83,23 | - |
| PE Forward | 71,26 | 9,66 | 5,2 | 16,9 | 30,47 | 22,24 | 80,07 | 14,22 | 61,22 | 30,43 | 27,05 |
| Growth Rate (Sales) 2022 | 25,60% | 3,80% | 3,40% | 5,70% | 5,10% | 1,40% | 22,50% | 10,90% | 14,80% | 11,80% | 10,50% |

Source: Yahoo Finance and Disney 10-k report

First and foremost, given the Disney conglomerate operating in different segments, the peer group is delimited into 3 groups defined each per segment. The firms are diverse with immense

differences between them. The similar companies determined in the table below have been discriminated in function of their industry, size, debt-to-equity ratio, margins, current and forward PE ratio and expected revenue growth.

After carefully analyzing the different metrics, it is possible to observe that for the media networks competitors despite size and debt, other metrics do not vary. In this sector, incurring +100% debt-to-equity is "normal", similar gross and net margins as well except Disney for reasons described throughout this valuation. The current PE ratio for Disney is clearly higher than the rest of its peers who have similar values. Therefore, data on the forward PE is retrieved to get an idea of what is expected from each company in the short term. It is possible to observe that forward PE has decreased, for analysts this can be interpreted that earnings are expected to increase, keeping in mind that estimated based results might be biased. Moreover, as a leading positions in its market, Disney is expected to grow more than its peers who have alike percentages.

The second group, the entertainment segment, do not have so many discrepancies having normal metrics in general. Finally, the third group, just like Disney has been the most affected by covid with outrageous levels of debt and reporting losses but expected to recover slowly in the following years.

The composition of peer groups can be found along the expected price per group and an overall view.

*Table 14- Peer Group Per Operating Segment*

| Company | Ticker | Current Share Price | 52-wk. High | % of 52-wk. High | Equity Value | Enterprise Value | EV / Revenue | EV / EBITDA | EV / EBIT | P / EPS |
|---|---|---|---|---|---|---|---|---|---|---|
| **Group 1: Media Networks** | | | | | | | | | | |
| Amc Networks | AMCX | 48,61 | 83,63 | 58,1% | 1.988 | 3.949 | 0,00x | 0,07x | 0,01x | 10,48x |
| ViacomCBS | VIAC | 35,6 | 101,97 | 34,9% | 23.193 | 39.942 | 1,58x | 8,74x | 9,65x | 9,08x |
| Comcast | CMCSA | 53,66 | 61,8 | 86,8% | 245.168 | 254.370 | 2,46x | 13,53x | 14,54x | 23,54x |
| Charter Communications | CHTR | 694,21 | 825,62 | 84,1% | 12.466 | 94.220 | 1,96x | 5,24x | 11,40x | 45,08x |
| **Mean** | | | | | | | **1,50x** | **6,90x** | **8,90x** | **22,04x** |
| **Median** | | | | | | | **1,77x** | **6,99x** | **10,53x** | **17,01x** |
| **Group 2: Studio /Entertainment** | | | | | | | | | | |
| Match Group Inc | MTCH | 149,75 | 182 | 82,3% | 42.391 | 45.186 | 18,90x | 5,59x | 5,91x | 305,61x |
| Fox Corp | FOX | 38,22 | 44,8 | 85,3% | 22.716 | 26.017 | 2,11x | 12,45x | 14,21x | 23,59x |
| Netflix | NFLX | 657,58 | 700,9894 | 93,8% | 291.276 | 299.379 | 11,9770495 | 65,30x | 65,30x | 108,15x |
| **Mean** | | | | | | | **11,00x** | **27,78x** | **28,47x** | **145,79x** |
| **Median** | | | | | | | **11,98x** | **12,45x** | **14,21x** | **108,15x** |
| **Group 3: Parks** | | | | | | | | | | |
| Six Flags Entertainment | SIX | 41,3 | 51,75 | 79,8% | 355 | 2114 | 4,90x | (23,20) | (8,75) | (8,28) |
| Seaworld | SEAS | 64,61 | 70,48 | 91,7% | 5.115 | 7580 | 21,29x | (23,47) | (22,63) | (16,19) |
| **Mean** | | | | | | | **8,73x** | **(15,56)** | **(10,46)** | **(8,16)** |
| **Median** | | | | | | | **13,09x** | **(23,33)** | **(15,69)** | **(12,23)** |
| **Overall** | | | | | | | | | | |
| **Mean** | | | | | | | **7,24x** | **7,14x** | **9,96x** | **55,67x** |
| **Median** | | | | | | | **2,46x** | **5,59x** | **9,65x** | **23,54x** |
| **Walt Disney** | **DIS** | **162,11** | **203,02** | **79,8%** | **294.575** | **335.289** | **5,13x** | **106,81x** | **88,37x** | **(102,60)** |

Source: Yahoo Finance and own calculations

According to Bloomberg estimates its possible to observe data accounting for negative pandemic effects on the different metrics as a base, stabilizing for multiples (decreasing) and then ROA, ROE and ROIC slowly growing implying the worldwide economy recovering.

*Table 15- Forecast Multiples*

| | FY2020 | FY2021 | FY2022 |
|---|---|---|---|
| **EV/Revenue** | 4,87 | 4,84 | 3,92 |
| **EV/EBITDA** | 30,04 | 31,22 | 22,75 |
| **EV/EBIT** | 72,01 | 48,09 | 28,18 |
| **PE** | 74,66 | 65,86 | 36,90 |
| **Price/Sales** | 3,39 | 4,74 | 3,29 |
| **Price/Cashflow** | 29,11 | 57,52 | 28,78 |
| **Price/Book Value** | 3,21 | 3,03 | 2,86 |
| **Return on Assets** | 2,08 | 2,34 | 3,83 |
| **Return on Equity** | 4,77 | 5,51 | 7,40 |
| **ROIC** | 4,98 | 3,67 | 4,83 |

Source: Bloomberg

Two scenarios arise from the multiples, one for 2020 and the other for 2021. From this point we can infer the fair value of Walt Disney provided by each multiple multiplying it to its respective metric. For instance, mean EV/ EBITDA multiple of peers is multiplied by Disney EBITDA and then divided by the total number of shares outstanding resulting in the estimated fair price. Furthermore, enterprise multiples are applied since they are less prone to inaccuracies and accounting.

For 2020, the year used, the minimum price is -118,26$ derived from negative net income, which is not possible, therefore not considered, and 176,13$ which is in line with the 196,22$ achieved in the DCF calculations. As a matter of comparison, using multiples of 2021 the price ranges between 71,87$ and a maximum of 261,43$, those prices are not likely to occur besides not feasible.

*Figure 12- Estimated Prices in Function of Multiples*

| | IMPLIED INTRINSIC VALUE | |
|---|---|---|
| | 2021 | 2022 |
| EV/Revenue | $ 179,02 | $ 165,46 |
| EV/EBITDA | $ 238,38 | $ 203,18 |
| EV/EBIT | $ 261,43 | $ 178,32 |
| PE | $ 71,87 | $ 40,28 |
| Price/Sales | $ 175,35 | $ 138,90 |
| Price/Cashflow | $ 175,17 | $ 87,66 |
| Price/Book Value | $ 146,93 | $ 138,32 |
| Shares | 1.828 | 1.828 |
| Min | $ 71,87 | $ 40,28 |
| Max | $ 261,43 | $ 203,18 |

Source: Thesis Model

## 8.3 EVA Model

As stated in the literature, EVA aims to describe the true performance of a company allowing to assess profitability. The model starts with the Net Operating After Taxes (NOPAT) for the simple reason it provides an accurate look at Disney operating efficiency with the advantage of not considering leverage nor tax savings. NOPAT reflects the firm potential cash earnings assuming it is unleveraged. In this case, it decreases not being too alarming since cash and cash equivalents, on the balance sheet, rising year after year at a faster pace. Next, we have the cost of capital, computed utilizing the same process as in the DCF valuation, decreasing in 2019 when Disney acquired a competitor incurring debt. The last item accounts for the two main sources of financing, Equity and Debt, to achieve the total capital invested. For this method, the total Disney's shareholders equity was not considered, instead, total equity is used because it does not consider non-controlling interest, another source of financing. The important increase from 2018 to 2019 is attributable to adding 21$^{st}$ century fox equity to Disney. In addition, net debt is calculated directly from the balance sheet as well.

Given the strategic decisions Disney has made in 2018 and 2019 plus the pandemic, this model gives a fair insight of what happened along its consequences. In "normal" situation, in 2018, EVA approach gives a value of 7.123 decreasing the following year due to Disney using debt to finance its acquisition merging their equity. In 2020, the pandemic occurs while Disney is paying down debt slowly, cost increasing with segments not being able to fully operate translated into less income justifying a negative value incurring losses for that year suspending

dividends to prevent possible surprises while switching business model. For 2021, it is predicted a better situation but still negative. The EVA results are not reliable for evaluation purposes since the values achieved are negative making it irrelevant.

*Figure 13- Estimated EVA Model*

| | EVA @ WACC<br>EVA=NOPAT - (WACC X CAPITAL INVESTED) | | | |
|---|---|---|---|---|
| | FY2018 | FY2019 | FY2020 | FY2021 |
| EBIT | 14.837 | 11.830 | 3.794 | 9.937 |
| Less: Income Taxes | 1.663 | 3.026 | 699 | 2.087 |
| **NOPAT** | **13.174** | **8.804** | **3.095** | **7.851** |
| | | | | |
| **WACC** [1] | 8,70% | 5,72% | 7,17% | 7,17% |
| Equity | 52.832 | 93.889 | 88.263 | 93.011 |
| Net Debt [2] | 16.724 | 41.568 | 40.714 | 38.447 |
| **Total Capital Invested** | 69.556 | 135.457 | 128.977 | 131.458 |
| | | | | |
| **EVA** | 7.123 | 1.056 | -6.149 | -1.571 |

1 https://www.gurufocus.com/term/wacc/NYSE:DIS/WACC-/The-Walt-Disney

2 Net Debt= Total Debt - Cash

## 8.3 Dynamic ROE

This model is similar to the previous one described and as implied, related to the return on equity. Dynamic ROE permits an investor to appraise how Disney stock is interesting for his expectations and how is going to benefit from it. Therefore, strictly following the formula, the equity value plugged is the total Disney shareholder's equity retrieved from the balance sheet. ROE is computed dividing Net Income by Total Equity. In 2019, Net Income decreased and Equity doing the opposite, as mentioned before, causing a decline to half in ROE as a consequence of Disney restructuring. For 2020, negative ROE is normal considering Disney incurred a loss rendering this metric nullified affecting results using this approach. As for the other items, growth remains constant as it is the average rate used in this valuation, with the cost of equity presumed constant as well. Moreover, it is important to notice that Disney business in normal situations performs well creating value pre-covid seen in the difference of ROE and Ke apart from 2020 where shareholders where severely affected aside from canceling dividends indefinitely prioritizing the business. For 2021, Disney starts to recover with more equity being injected in the company along with a positive ROE and positive result. However, far from 2018 or 2019. Disney situation is better for 2021 and is not reflected. Despite the calculations, the model is not worthwhile and does not give a proper insight on the valuation, thus not being considered.

*Figure 14- Estimated Dynamic ROE Model*

| Dynamic ROE<br>Dynamic ROE= Equity Book-Value + ((ROE-g) x Equity Book-Value)/ (Ke-g)) | | | | |
|---|---|---|---|---|
| | FY2018 | FY2019 | FY2020 | FY2021 |
| **Equity Book-Value** | 48.773 | 88.877 | 83.583 | 88.553 |
| **ROE** | 24% | 12% | -3% | 2% |
| **g** | 3,13% | 3,13% | 3,13% | 3,13% |
| **Ke** | 7,55% | 7,55% | 7,55% | 7,55% |
| | | | | |
| **Dynamic ROE** | 277.331 | 262.657 | -36.951 | 70.983 |

Source: Thesis Model

## 9 Equity Report Comparison

This chapter aims to compare the results achieved relative to those performed by an investment bank analyst. Out the three equity reports received, the JPMorgan is the one used to compare because they provide more calculations to base their reasoning when forecasting. The equity report is dated as 15-Sep-2021 with a target price of 220$, higher than the evaluation performed. However, results were affected due to new variant of the virus more contagious and vaccine booster followed by new government measures worldwide plus passports.

*Figure 15- Summary of the Results Comparison*

| Valution Output | | |
|---|---|---|
| | Thesis Results | J.P.Morgan Report |
| Valuation Period | 2021 - 2030 | 2021 - 2023 |
| Valuation Used | DCF Model | DCF Model |
| Estimated Fair Value | **196,22 $** | **220 $** |
| Recommendation | Buy | Overweight |
| Bloomberg Concensus | 195,91 $ | |

Source: Thesis Model

Assuming the market is efficient, the price represents current complications economically, also reflected in Bloomberg where the mean price lies around 195,91$.

In the following tables it is possible to observe some financial metrics and multiples.

Estimates starts in 2021 until 2023 as the JPM reports states. Top line in 2021 is up 3% against 6% from 65.388 million $. In 2022, the growth percentage keeps increasing only converging in 2023. The assumptions prevail here and cause data discrepancies. In addition, JPM report has estimated the 4th quarter of 2021 which was published the 10th of November 2021. In our valuation, revenues are more stable in the short term, contrary to JPM belief in a more optimistic scenario increasing from 69 million $ to 82 million $.

For EBITDA, first off, it is computed differently, thus increasing at different rates being the disparity even greater. Our 2020 EBITDA amounts to 9.139 million $ versus 4.055 million $. The difference lies around the SG&A expenses as it's the only item not reported. Nonetheless, from 2022 onwards the difference is lower.

*Table 16- Revenues and Growth Comparison*

| Revenues | 2021E | 2022E | 2023E |
|---|---|---|---|
| **Thesis** | **67.568** | **77.154** | **87.599** |
| Growth % | 3,3% | 14,2% | 13,5% |
| **JPM Report** | **69.596** | **82.488** | **93.894** |
| Growth % | 6,4% | 18,5% | 13,8% |

Numbers in Millions

Source: Thesis Model

*Table 17- EBITDA and Growth Comparison*

| EBITDA | 2021E | 2022E | 2023E |
|---|---|---|---|
| **Thesis** | **13.958** | **16.324** | **18.972** |
| Growth % | 52,7% | 17,0% | 16,2% |
| **JPM Report** | **9.363** | **15.465** | **20.595** |
| Growth % | 130,9% | 65,2% | 33,2% |

Numbers in Millions

Source: Thesis Model

The analyst report does not show directly their DCF model, but it can be inferred since they show the three main financial statements, actual and projected. Thereafter, they have summarized the unlevered free cash flow. Again, the UFCF from 2020 is computed differently therefore reflected in the growth rates. In addition, a bigger dissimilarity is seeing in 2020 due to increase in working capital. In the JPM report, FCF slowly augment to similar values in the end. JPM does not permit to convey where the difference comes from nor the reasons.

*Table 18- Unlevered Free Cash Flow and Growth Comparison*

| UFCF | 2021E | 2022E | 2023E |
|---|---|---|---|
| **Thesis** | **3.532** | **7.712** | **8.950** |
| Growth % | -60,0% | 118,4% | 16,0% |
| **JPM Report** | **3.340** | **4.142** | **7.748** |
| Growth % | -41,3% | 24,0% | 87,1% |

Numbers in Millions

Source: Thesis Model

Now, for the multiples valuation, the values provided are not significant since information is to some extent vague. Both, Bloomberg and JPM report do not disclose the peer group used, not allowing to judge if the multiples demonstrate an accurate result. Moreover, for EV/REVENUE the same pattern is observed, the first two years it increases slowly and the significantly, implying revenues increasing faster than EV. Contrarily, for EV/EBITDA, results range from 30x to 22x, whereas JPM analysts attained vastly different results.

*Table 19- Multiples Comparison*

| Multiples | 2020E | 2021E | 2022E |
|---|---|---|---|
| **Thesis** | | | |
| **EV/REVENUE** | **4,87x** | **4,84x** | **3,92x** |
| **EV/EBITDA** | **30,04x** | **31,22x** | **22,75x** |
| **JPM Report** | | | |
| **EV/REVENUE** | **5,70x** | **5,40x** | **4,50x** |
| **EV/EBITDA** | **92,00x** | **72,40x** | **36,50x** |

Source: Thesis Model

## 10 Conclusion

To sum up, a detailed analysis was performed permitting to distinguish that many valuation models can be used, in accordance with previous literature, providing different results depending on the growth assumptions for Disney as a company and the diverse sectors it operates in. Nevertheless, no model is better or more accurate than the other.

For this valuation, a "BUY" recommendation of the stock is suggested using the DCF model with a target price of 196,22$ representing an upside of 21,04%, thereby it is undervalued being an opportunity for investors to consider. Moreover, the relative valuation approach is used yielding a distinct fair price. Also, the EVA and Dynamic ROE were utilized but not arriving to decent results. Although, Disney shows signs of a slowly recovering to pre-covid results.

It is important to highlight, that the price obtained might change having an impact on the results obtained here depending on the worldwide economy recovery, especially in the U.S, still uncertain.

# 11 Appendix

*Figure 16- Disney History*

It all started in 1923 with Walt Disney arriving to California by making the series of Alice's Wonderland and selling it to a distributor. This was the first of many successes of the Disney Company, originally the Disney Brothers Cartoon Studio managed equally by Walt Disney and his brother Roy who later suggested changing the name to Walt Disney Studio. Then, after finishing Alice Comedies, in 1927 created a new series creating Oswald the Lucky Rabbit. However, their distributor outsmarted them owning the rights to Oswald. That same year, they have built a studio where they created the famous character Mickey Mouse with Steamboat Willie, the first cartoon with synchronized sound in theaters on the 18th of November 1928 immediately being popular. After gaining traction with its different series of cartoons, Disney staff found that merchandising the characters was an additional source of revenue to explore, this was the start of a new segment, soon having Mickey Mouse dolls, dishes, radios, figurines…In 1934, they decided to make an animated film, release three years later in 1937 becoming a hit with Snow White and the Seven Dwarfs as the highest-grossing film of all time. Following this, work started on other productions such as Pinocchio and Fantasia in 1940, Dumbo in 1941 and Bambi in 1942, all considered classic nowadays. The 1950's success continue for the company having Disney television shows and producing the first completely live-action film. The World War II limited the staff, consequently decreasing its operating capital. However, in 1954, ABC network helped launching tv series becoming a partner. Furthermore, the triumphant bet on television programs, the decision was to diversify diving into the amusement parks sector setting "theme parks" having a competitive advantage over competitors by adding attractions regularly. Despite unprecedented achievements, the 60's brought the end of an era with the death of Walt Disney. The company continued the same, making more animated classics supervised by Roy, sadly passing in 1971. The company was led for the next ten year by Disney brothers' trainees in order to continue their legacy. Then, one of the last Walt's plans, was put in the work, the Experimental Prototype Community of Tomorrow or EPCOT center opening in 1983 an immense park located in Florida, United States. Notwithstanding, Disney financial stability was not good enough, requiring a new CEO and president, one from the competitor, Paramount Pictures, and the other, from Warner Bros resulting in their best decision producing animation classics. For instance, The Little Mermaid in 1989 and The Lion King in 1994. It is important to highlight that Disney took advantage of its reputation and know-how, already capitalized, to start expanding via investing and buying strategic entities such as Starwave during the dot com bubble in 1999. That same year, the company bought two ships named Disney Magic and Disney Wonder departing on the first Disney cruise line as part of the Parks, Experiences and Products segment. In 2005, Disney produces the first 3-D movies, the Chicken Little. In addition, one year later the Studio Entertainment segment strategically acquires Pixar for 7,6 billion $ and Marvel Entertainment in 2009 for 4,2 billion $. In 2009, Disney sells some of its assets, franchises such as Power Rangers and releases the success *Toy Story 3*. 2012 was an important year with the acquisition of LucasFilm from George Lucas and releases the very first Marvel film distributed by Disney *Marvel's The Avengers*". As of 2013 releases *Frozen* surpassing classics like The Lion King or Toy Story 3 facilitation the acquisition of Maker Studios. As 2015, Disney establishes the Consumer Products and Interactive Media divisions and signs a partnership for Spider-Man with Sony. The moment where Disney decided to change its business model was in 2017 ending a deal with Netflix in order to create their own streaming service, Disney+. Negotiation finalized in 2019 followed with the acquisition of 21st century fox. In 2021 Disney names first woman as CEO, Susan Arnold.

*Figure 17- Most Important Platforms and Channels*


*Figure 18- Companies that Compose Disney, by Operating Segment*

*Figure 19- Paid Subscribers per Streaming Platform*

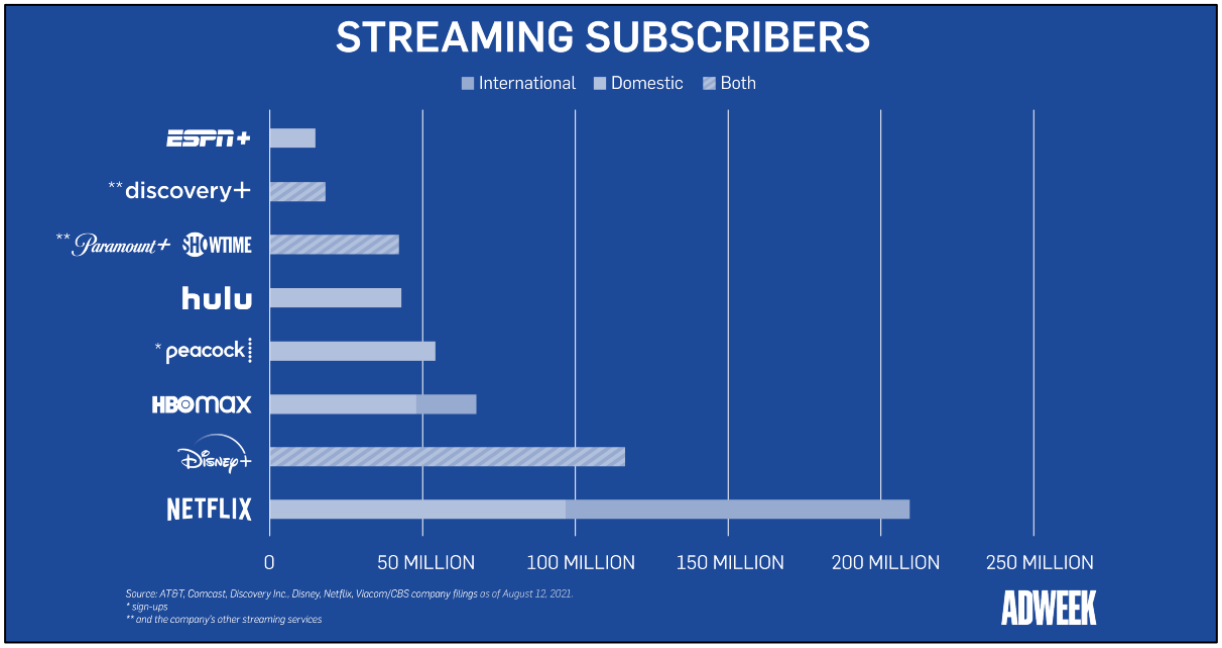



*Figure 20- Disney Management Team*

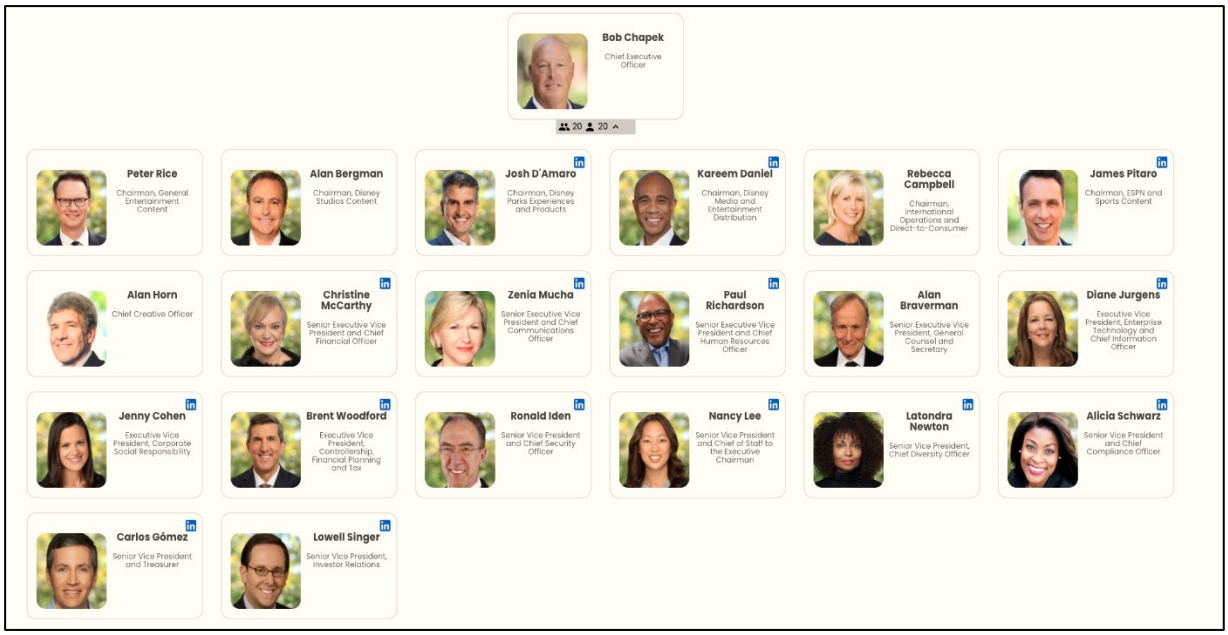


*Figure 21- Consolidated Balance Sheet*

| ***Balance Sheet*** | **2018** | **2019** | **2020** |
|---|---|---|---|
| Cash and cash equivalents | 4.150 | 5.418 | 17.914 |
| Receivables | 9.334 | 15.481 | 12.708 |
| Inventories | 1.392 | 1.649 | 1.583 |
| Television costs and advances | 1.314 | 4.597 | 2.171 |
| Other current assets | 635 | 979 | 875 |
| **Total Current Assets** | **16.825** | **28.124** | **35.251** |
| Produced and licensed content costs | 7.888 | 22.810 | 25.022 |
| Investments | 2.899 | 3.224 | 3.903 |
| Attractions, buildings and equipment | 55.238 | 58.589 | 62.111 |
| Accumulated depreciation | (30.764) | (32.415) | (35.517) |
| Projects in progress | 3.942 | 4.264 | 4.449 |
| Land | 1.124 | 1.165 | 1.035 |
| Intangible assets, net | 6.812 | 23.215 | 19.173 |
| Goodwill | 31.269 | 80.293 | 77.689 |
| Other assets | 3.365 | 4.715 | 8.433 |
| **Total Assets** | **98.598** | **193.984** | **201.549** |
| | | | |
| Accounts Payable | 9.479 | 17.762 | 16.801 |
| Current portion of debt | 3.790 | 8.857 | 5.711 |
| Deferred revenue and Other | 4.591 | 4.722 | 4.116 |
| **Total Current Liabilities** | **17.860** | **31.341** | **26.628** |
| Borrowings | 17.084 | 38.129 | 52.917 |
| Deferred Income Tax Liabilities | 3.109 | 7.902 | 7.288 |
| Other Long-term Liabilities | 6.590 | 13.760 | 17.204 |
| Redeemable noncontrolling interests | 1.123 | 8.963 | 9.249 |
| **Total Non-Current Liabilities** | **27.906** | **68.754** | **86.658** |
| | | | |
| **Total Liabilities** | **45.766** | **100.095** | **113.286** |
| **Total Equity** | **52.832** | **93.889** | **88.263** |

# 12 Bibliography

## 12.1 Academic Literature


Booth, L., 2002. Finding value where none exists: pitfalls in using Adjusted Present Value. Journal of Applied Corporate Finance, Vol. 15, no. 1

Copeland, T., et al. (1994), Valuation: Measuring and managing the value of companies, Wiley frontiers in Finance

Damodaran, A. (2002) Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, New York: John Wiley & Sons, Inc.

Damodaran, A., (1994), Damodaran on Valuation, John Wiley, New York

Damodaran, A., (2008), Equity Risk Premiums (ERP): Determinants, Estimation and Implications, Stern School of Business

Damodaran, A., (2008), What is the risk free rate? A Search for the Basic Building Block, Stern School of Business

Damodaran, A., (2012), Investment Valuation: Tools and Techniques for determining the Value of Any Asset, John Wiley, New York

Damodaran, A., 2006, Valuation Approaches and Metrics: A Survey of the Theory and Evidence, Stern School of Business

Fama, E. and French, K. R., 2004. The Capital Asset Pricing Model: Theory and Evidence, The Journal of Economic Perspectives, Vol. 18, No. 3.

Fernandez, P., 2004. 80 common and uncommon errors in company valuation. IESE Business School.

Fernández, P., 2007. Company valuation methods: The most common errors in valuations. IESE Business School.

Goedhart, M. H., Koller, T. and Wessels, D. ,(2005), The right role for multiples in valuation, The McKinsey Quarterly

Harold Bierman, 2010. The costs of equity capital, Journal of Corporate Treasury Management.

Korteweg, A., (2007), The Costs of Financial Distress across Industries, Graduate School of Business, Stanford University.

Harris, R. S., and Pringle, J.J., (1985), Risk-Adjusted discount rates: extensions from the average risk case, Journal of Financial Research, 8, p.237-44

Kaplan, S. N. and Ruback, R. S. (1995). The Valuation of Cash Flow Forecasts: An Empirical Analysis. Journal of Finance

Luehrman, T., (1997), What's it worth?, Harvard Business Review

Miles, J., and Ezzell, J., (1980), The Weighted Average Cost of Capital, Perfect Capital Markets, and Project Life: A Clarification, Journal of Financial and Quantitative Analysis, 1980, vol. 15, issue 3, 719-730

Modigliani, F., and Miller, M. (1963), Corporate Income Taxes and the Cost of Capital: A Correction, American Economic Review, Vol. 53, No. 3: 433-443.

Myers, S.C. (1974), "Interactions of Corporate Financing and Investment Decisions – Implications for Capital Budgeting", Journal of Finance (March), pp. 1-25.

Sabal, J., 2007. "WACC or APV?. Journal of Business Valuation and Economic Loss Analysis

Stewart, G. B. (1991), The Quest for Value, The EVA Management Guide, Harper Business

Young, M., et al. (1999), All Roads Lead to Rome: an integrated approach to valuation methods, Goldman Sachs Investment Research.

Vernimmen, P., Quiry, P., Dallocchio, M, Fur, Y., and Salvi, A., 2005. Corporate Finance: Theory and Practice. John Wiley & Sons, Inc.-

### 12.2 Company Information

Walt Disney 10-k Report, www.sec.gov

Walt Disney Website, https://thewaltdisneycompany.com/investor-relations/

### 12.3 Other

Deutsche Bank Equity Research (August 2021)

Morgan Stanley Equity Research (October 2021)

MarketLine Report: “Leisure Attractions in the United States” (December 2020)

MarketLine Report: “Movies & Entertainment in the United States” (June 2020)

Deloitte Report: “2021 Media and Entertainment Industry Outlook”

PWC report: “After a boom year in video streaming, what comes next? Hint: Make it about the customer, not just the content

http://www.worldgovernmentbonds.com/country/united-states/

http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.htm

https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.htm

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