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Equity Valuation: Netflix, Inc.

Ricardo Sérgio Gomes Santos

Master (MSc) in Finance

Supervisor:
PhD Pedro Manuel de Sousa Leite Inácio, Assistant Professor,
ISCTE-IUL

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BUSINESS
SCHOOL

Department of Finance

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Resumo

Esta dissertação tem como objetivo estimar o justo valor da ação da Netflix, Inc. a 31 de dezembro de 2020. Após uma revisão da indústria de entretenimento e media e do desempenho financeiro e operacional histórico da Netflix, apresentam-se duas abordagens para avaliar a empresa.

A primeira é uma análise DCF com base nas demonstrações financeiras da Netflix, usando o WACC como taxa de desconto. A segunda é uma análise comparando os múltiplos da empresa com os de empresas semelhantes para avaliar os resultados da análise DCF e o desempenho da Netflix face à concorrência.

Adicionalmente, complementámos a nossa avaliação conduzindo uma análise de sensibilidade para verificar a robustez dos nossos pressupostos e das respetivas projeções.

Através da nossa análise de DCF, alcançámos um preço-alvo de $306.60. Dando ênfase aos resultados dos dois métodos de avaliação utilizados, a conclusão é a de que a Netflix está sobrevalorizada em comparação com o preço de fecho de $540.73 no final de 2020. Desta forma, os resultados obtidos levam-nos a recomendar a venda das ações da Netflix.

Palavras-chave: Netflix; Entretenimento e Media; Análise DCF; WACC; Justo Valor; Múltiplos

Classificação JEL: G30, G32

Abstract

This dissertation concerns the estimation of the fair value of Netflix, Inc. share at the end of December 31, 2020. After a review of the entertainment and media industry and Netflix's past business and financial performance, two approaches will be presented to value the company.
The first is a DCF analysis based on Netflix's financial statements, using WACC as the discount rate. As a second stage valuation, an analysis comparing the company's multiples with those of similar companies was made to assess both the DCF's forecasts and Netflix's performance with the competition.
Additionally, we complemented our valuation by conducting a sensitivity analysis to check the robustness of our assumptions and respective estimations.
Through our DCF analysis, we reached a target price of $306.60. By emphasizing the results of the two valuation methodologies applied, the premise is that Netflix is overvalued in comparison to the market price of $540.73 as of the end of 2020. Thus, the results obtained lead us to recommend selling Netflix's shares.

Keywords: Netflix; Entertainment and Media; DCF Analysis; WACC; Fair Value; Multiples
JEL Classification: G30, G32

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List of Abbreviations

AAGR – Average Annual Growth Rate

APAC – Asia-Pacific

APV – Adjusted Present Value

ARPU – Average Revenue Per User

AVoD – Advertising-Based Video on Demand

CAGR – Compound Annual Growth Rate

CAPM – Capital Asset Pricing Model

CEO – Chief Executive Officer

COVID-19 – Coronavirus Disease

D&A – Depreciation and Amortization

DCF – Discounted Cash Flow

DDM – Dividend Discount Model

DVD – Digital Video Disc

E&M – Entertainment and Media

EBIT – Earnings Before Interest and Taxes

EBITDA – Earnings Before Interest, Taxes, Depreciation and Amortization

EBT – Earnings Before Taxes

EMEA – Europe, Africa, and Middle East

EVA- Economic Value Added

EV/EBIT – Enterprise Value-to-EBIT

EV/EBITDA – Enterprise Value-to-EBITDA

FAANG – Facebook, Apple, Netflix, and Google (Alphabet)

FCFE – Free Cash Flow to Equity

FCFF – Free Cash Flow to the Firm

IPO – Initial Public Offering

LATAM – Latin America

LTM – Last Twelve Months

Netflix – Netflix, Inc.

NOPLAT – Net Operating Profit Less Adjusted Taxes

NTM – Next Twelve Months

OTT – Over-the-Top

P&E – Property and Equipment

P/BV – Price-to-Book Value

P/E – Price-to-Earnings

R&D – Research and Development

ROA – Return on Assets

ROE – Return on Equity

ROIC – Return on Invested Capital

SG&A – Selling, General, and Administrative

SVoD – Subscription Video on Demand

TMT – Technology, Media, and Telecommunications

TTM – Trailing Twelve Months

TV – Television

TVoD – Transitional Video on Demand

UCAN – North America

US – United States

WACC – Weighted Average Cost of Capital

WC – Working Capital

YoY – Year-on-Year

YTM – Yield-to-Maturity

Introduction

The subscription video on demand (SVoD) industry has been rapidly growing during the last decade and Netflix, Inc. (Netflix) had a major role. Founded in 1997, Netflix started its business model by selling and renting DVDs by mail, expanding it in 2007 with the introduction of streaming services. During this last decade, streaming TV services have become very popular, especially in western countries like the United States (US). With the exponential growth in streaming services demand, Netflix became one of the world's largest streaming TV companies, and the world's largest internet media and entertainment company, with over 200 million paid memberships.

Currently, the stock market has been more volatile than ever given the uncertainty revolving around the global health crisis we are facing since 2020. Furthermore, there is a big debate among financial experts on whether some sectors are becoming overvalued in the stock market in general, especially the companies in the TMT sector. Netflix is one of those companies that have been at the center of some investors' skepticism.

During 2020, Netflix saw its stock price increase by 67%, while the S&P 500 surged by over 18% for the same period. As of the end of that year, Netflix's TTM P/E was 88.94x, whereas the average TTM P/E of the FAANG group was 51.88x, which could be an indication that the company's share price might be overvalued.

Thus, the main goal of this case study is to reach an estimate on the fair value of one Netflix's share as of December 31, 2020, and infer if it is overvalued or not, and compare it with the company's main competitors.

With this in mind, we first proceed to review the main valuation frameworks and methods in the literature review chapter. After that, we are going to overview the industry where Netflix is positioned, and afterward, we will analyze the company's past performance and its business model as well as its prospects in order to carry out the valuation.

In the valuation chapter, we use Netflix's pro forma financial statements and conduct a detailed forecast of the company cash flows, based on the discounted cash flow method. As a second-stage valuation, we use a comparable company analysis to compare Netflix's metrics and multiples with those of the selected peer group.

1. Literature Review

1.1. Discounted Cash Flow Models

"Financial theory states that the fair market value of an ongoing business is the present value of its expected cash flows." (Gilbert, 1990). We can framework this statement to the discounted cash flow (DCF) methodology—the most widely used and trusted approach among analysts of investment banks and other financial areas that seek to estimate the intrinsic value of any asset. In order to do so, every analyst must make a projection of the firm's cash flows and estimate the discount rate(s) that reflect(s) the riskiness of those cash flows. In addition, the analyst makes industry and firm assumptions to incorporate in the income statement, balance sheet, and capital investment assumptions which will be reflected into a DCF model.

The basis for the DCF valuation is in the present value rule. The rationale for the value of any asset is the cash flows that it generates in present value terms (Damodaran, 2002) and the mathematical formula is as follows:

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

where,

$n = life\ of\ the\ asset$

$CF_t = cash\ flow\ generated\ by\ the\ asset\ in\ the\ period\ t$

$r = discount\ rate\ reflecting\ the\ riskiness\ of\ the\ expected\ cash\ flows$

There are a lot of DCF models and each one of them can be custom created by each investment bank and consulting firm. Nevertheless, Damodaran (2002) claims we can divide them into three different categories. The first one is the valuation of the equity stake of the firm, which only includes the value to equity holders. The second is the valuation of the entire firm, which includes the value to all the claim holders (bondholders, preferred stockholders, etc.). The third is to value the enterprise in different pieces, beginning with its operations and adding the effects of the debt and other non-equity claims. The main differences between these three approaches are the relevant cash flows and discount rates (Damodaran, 2002).

1.1.1. Firm Valuation Models

1.1.1.1. Cost of Capital Approach

One of the most widely used valuation methods from the DCF framework is the cost of capital approach. In this valuation, we have two main elements: the Free Cash Flow to the Firm (FCFF) and the Weighted Average Cost of Capital (WACC). Thus, the value of the firm can be obtained by forecasting the FCFF and discounting them at the WACC:

$$Value\ of\ the\ firm = \sum_{i=1}^{t=n} \frac{FCFF_t}{(1+WACC)^t} + \frac{Terminal\ Value_n}{(1+\ WACC)^n} \quad (2)$$

In order to get from the firm value to the equity value, one must add the value of non-operating assets owned by the firm, and subtract out all non-equity claims, such as debt and capitalized leases (Damodaran, 2007). Lastly, the analyst can reach the fair value of the company stock by dividing the equity value by the number of outstanding common stock.

Gup and Thomas (2010) suggest that this approach is the most sophisticated because it is based on cash flows resulting from the balance sheet statement and the income statement, takes into account the opportunity cost of capital, and it reflects the period in which the cash flows are explicitly forecast.

On the opposite, Luehrman (1997b) considers that using the cost of capital approach is obsolete; and analysts only use it because it became standardized in the financial world over the years.

The value of the firm or any asset is indeed equal to the value that it generates, and that value ultimately corresponds to its capacity of generating future cash flows.

1.1.1.1.1. Free Cash Flow to the Firm

As said before, one of the fundamental elements the analyst has estimate in his DCF model before assessing the value of the enterprise is the FCFF. Goedhart, Wessels and Koller (2010) affirm that the FCFF is the "cash available to all investors—equity holders, debt holders, and any other nonequity investor".

Furthermore, there are two different ways to compute the FCFF. The first is to add up all the cash flows to the claim holders. The second way is to estimate the cash flows prior to all

these claims. Regarding the second path, we should start by estimating the earnings before interest and taxes (EBIT), then net out the tax effect, add all the non-cash claims—e.g., depreciation and amortization costs—and finally subtract the capital expenditures and changes in working capital, leaving us with the FCFF's estimation (Damodaran, 2002). The following equation illustrates the previous computations:

$$FCFF = EBIT(1 - Tax\ rate) + NCC - CAPEX\ \pm Changes\ in\ WC \qquad (3)$$

where,

$NCC = Non - cash\ charges$

$CAPEX = Capital\ expenditures$

$WC = Investments\ in\ working\ capital$

Even though the cash flows are prior to debt payments and do not explicitly consider tax benefits of debt, these benefits are incorporated in the discount rate: the WACC (Damodaran, 2002).

1.1.1.1.2. Terminal Value

In a valuation, at the point where it becomes impractical to forecast the individual key value drivers in a year-to-year basis, we should use a perpetuity-based (or continuing) value (Goedhart et al., 2010), commonly known as Terminal Value.

The analysts' explicit forecasting period tend to range between five and ten years, depending on the industry and the company's (or asset) characteristics. Damodaran (2002) states that the analyst must determine the last explicit year at the point in time where a stable growth rate can be verified. This will depend on the company's size relative to its market, current growth rate, and competitive advantages (Damodaran, 2002).

After, forecasting the cash flows for the last explicit year, we calculate the Terminal Value in order to add back to their previous forecasts and reach the total present value of the asset. Usually, the Terminal Value accounts for most of the value of the asset given that it is a point estimation of all the cash flows *ad infinitum*.

Damodaran (2002) affirms that we can reach the terminal value in three different ways. The first one by assuming that the company would liquidate all its assets at the terminal year and the Terminal Value would be an estimation for their sell price. The second way is to apply a

multiple to estimate the value in the terminal year. The last one, and by far the most widely used, is to assume that the asset's cash flows will grow at a stable rate forever. With a stable growth rate, we can use a perpetual growth model (Damodaran, 2002).

In general terms, the Terminal Value of any asset that provides hypothetical perpetual cash flows can be written as:

$$Terminal\ Value_n = \frac{Cash\ Flow_{n+1}}{Cost\ of\ Capital_{n+1} - g_n} = \frac{Cash\ Flow_n(1 + g_n)}{Cost\ of\ Capital_{n+1} - g_n} \qquad (4)$$

where the cost of capital and the growth rate (g_n) are sustainable forever (Damodaran, 2002).

Many investment bankers and other professionals in the finance industry are prone to use the multiple method, commonly known as exit multiple, to estimate the Terminal Value. This kind of approach is typically applied for companies that are going to be liquidated or acquired in the future and are not publicly traded. Additionally, this involves combining an income approach (discounting the cash flows) and a market approach (using the benchmark to estimate the multiple) in the DCF model.

Moreover, if the analyst is using the cost of capital approach, she usually projects the Enterprise Value-to-EBIT (EV/EBIT) or the Enterprise Value-to-EBITDA (EV/EBITDA) as of the end of the forecasted period (Pratt, 2008). Then, the measure of income in the last year of the projected period, either EBIT or EBITDA, is multiplied by its respective multiple. Lastly, the Terminal Value is discounted back at the cost of capital.

1.1.1.1.3. Weighted Average Cost of Capital

In order to reach the enterprise value, we must use the present value rule of the DCF framework: discount the free cash flows to the firm at a rate that reflects the riskiness of the cash flows, which in this case is the WACC. This discount rate is defined by Young, Sullivan, and Nokhasteh (1999, p. 14) as the "after-tax cost of debt multiplied by the proportion of debt plus the cost of equity multiplied by the proportion of equity".

Hence, WACC is the weighted average of two key inputs: the after-tax cost of debt and the cost of equity, and what underlies the weights of these two rates is the capital structure of the firm. However, there are some cases where companies issue preferred stock. Therefore, being this a different source of capital, we should use the following version of the WACC formula:

$$WACC = K_e \times \frac{E}{E+D+P} + K_d \times (1 - Tax\ rate) \times \frac{D}{E+D+P} + K_p \times \frac{P}{E+D+P} \quad (5)$$

where,

$K_e = Cost\ of\ equity$

$K_d = Cost\ of\ debt$

$K_p = Cost\ of\ preferred\ stock$

$E = Value\ of\ the\ company's\ equity$

$D = Value\ of\ the\ company's\ debt$

$P = Value\ of\ the\ company's\ preferred\ stock$

Goedhart et al. (2010) state that the FCFF should be discounted at the WACC because it "represents rates of return required by the company's debt and equity holders blended together, and as such is the company's opportunity cost of funds". Accordingly, prior to computing the WACC, we should estimate the cost of equity and the cost of debt (and the cost of preferred stock if it applies) separately as they are specific to those two types of investors.

It is also important to note that the tax benefits of debt (i.e., tax shields) are captured via WACC since it is a tax-adjusted rate, allowing us to measure the impact of leveraging the firm (Luehrman, 1997a). For this reason, Fernandez (2019, p. 2) states that defining WACC as a "cost of capital" may be misleading and it should be considered both a weighted average and a required return of capital.

1.1.1.1.4. Cost of Debt

The cost of debt is one of the primary costs of capital and represents the company's cost of debt financing when getting a bank loan or issuing a bond. Damodaran (2008) describes that the cost of debt is determined by adding two variables. The first one is the risk-free rate, which when using a higher rate, and holding all else constant, makes the cost of debt increase. The second variable is the default spread (or default risk) of the company. As this spread increases, it also makes the cost of borrowing money increase (Damodaran, 2002).

The tax benefits of debt arising from interest payments and the company's contractual debt are incorporated in the after-tax cost of debt. Damodaran (2002, p. 39) states that "since interest is tax deductible, the after-tax cost of debt is a function of the tax rate". In other words, as the

tax rate increases, the tax benefit that accrues making interest payments increases. Nevertheless, the after-tax cost of debt can be computed as follows:

$$After - tax\ cost\ of\ debt = Pre - tax\ cost\ of\ debt\ (1 - Tax\ rate) \qquad (6)$$

Concerning companies with public traded long-term debt, Goedhart et al. (2010) suggest using the yield-to-maturity (YTM) approach. The YTM is the annual return that an investor earns on a bond if he purchases it today and holds it until maturity. In other words, it is the present value of the bond's payments to its market price.

However, many companies do not have bonds that are liquid and traded frequently, making it hard to estimate the YTM. In these cases, and since these companies are usually rated, Damodaran (2002) proposes the debt-rating approach. Based on a company's debt rating, we estimate the pre-tax cost of debt by using the yield on comparably rated bonds for maturities that closely match that of the company's existing debt.

At last, Damodaran (2002) recommends another approach when the company debt rate is not available: the interest coverage ratio. This ratio can be computed as follows:

$$Interest\ Coverage\ Ratio = \frac{EBIT}{Interest\ expense} \qquad (7)$$

After estimating the company's interest ratio, we can assign a synthetic rating (Damodaran, 2002) and thus obtain the default spread, which we can add to the risk-free rate and reach the pre-tax cost of debt.

1.1.1.1.5. Cost of Equity

The cost of common equity, or commonly referred as the cost of equity, is the rate of return required by a company's shareholders. A company can increase the equity through the reinvestment of earnings (retained earnings) or through the issuance of new shares of stock. Usually, the cost of equity is higher than the cost of debt since the shareholders bear greater risk than lenders—i.e., the company has a contractual obligation to repay the debt back to its lenders.

Furthermore, the most commonly model used to estimate the cost of equity is the capital asset pricing model (CAPM). Other commonly used approaches include the dividend discount model, and the bond yield plus risk premium method. Goedhart et al. (2010) also include Fama-

French three-factor model and the arbitrage pricing theory model as alternative models to compute the cost of equity.

1.1.1.1.5.1. Capital Asset Pricing Model

The CAPM was developed by Sharpe, Lintner, and Mossin between 1964 and 1966 and built on the model of portfolio choice developed by Markowitz in 1959 (Fama & French, 2004). In this model, we use the relationship from the capital asset pricing model theory where the cost of equity—in this case, the expected return a company's stock ($E(R_i)$)—is the sum of the risk-free rate, r_f, and a premium for bearing the stock's systematic risk, $\beta_i(E(R_m) - r_f)$:

$$E(R_i) = r_f + \beta_i [E(R_m) - r_f] \quad (8)$$

where,

$\beta_i = Return\ sensitivity\ of\ security\ i\ to\ changes\ in\ the\ market\ return$

$E(R_m) = Expected\ return\ of\ the\ market$

$E(R_m) - r_f = Expected\ market\ risk\ premium$

The first element of the relationship, the risk-free asset, is defined as an asset that has no default risk, which is, as a common proxy, the yield on a default-free government debt instrument. Usually, the 10-year treasury yield rate is used as the risk-free rate instead of the 30-year yield rates because the former is more liquid, making it easier to build yield curves.

The expected market risk premium, or $E(R_m) - r_f$, is the premium that investors demand for investing in a market portfolio relative to the risk-free rate. The reason for being the market portfolio is because it includes all traded assets in the market (Damodaran, 2002).

The only company's specific element of the model is its equity beta (β_i), or the levered beta, and is determined by both the company's financial leverage and business risk. Furthermore, it represents how the return of a stock and its market move together (Goedhart et al., 2010):

$$\beta_i = \frac{Cov_{im}}{\sigma_m^2} \quad (9)$$

where,

$Cov_{im} = Convariance\ of\ stock's\ i\ with\ market\ portfolio$

$\sigma_m^2 = Variance\ of\ the\ market\ portfolio$

Regarding equity beta, stocks that are riskier than the market portfolio have a beta higher than 1; stocks that are less risky than the market portfolio have a beta less than 1; and stocks that are riskless have a beta of zero (Damodaran, 2002).

Even though this model is the most trusted one to estimate the cost of equity, it still reveals theoretical problems due to its simplifying assumptions and difficulty in implementing valid tests of the model, resulting in analysis with the referred model invalidated (Fama & French, 2004).

Moreover, Damodaran (2002) describes another way to estimate the levered beta that is commonly used for companies that are not publicly traded, which is often described as pure-play method. The pure-play method requires the analyst to find comparable firms that have a similar business risk to the target company, and then adjust to account for differences in the degrees of financial leverage.

The first step requires "unlevering" the levered beta of the comparable companies. This unlevered beta is often referred as the asset beta since it assumes no debt risk, or in other words, a debt beta equal to zero, and reflects only business risk. After "unlevering", we relever the asset beta to adjust for the capital structure of the target company, arriving at an estimate for the equity beta for the company of interest. The following equation shows inputs needed for "unlevering" of the comparable companies' levered beta (the inverse operation can be done to estimate the relevered beta), assuming the beta of debt is zero:

$$\beta_{unlevered} = \frac{\beta_{levered}}{1 + \ D/E \times (1 - Tax\ rate)} \qquad (10)$$

1.1.1.2. Adjusted Present Value

Another approach that is on par with the cost of capital approach in terms of wide academic and professional acceptance is the Adjusted Present Value (APV). Even though the cost of capital approach can be useful in many circumstances, it makes the process of valuing a company with a changing debt-to-value ratio rather difficult because the true reality is that many companies opt to change their capital structure over time, leading to an understatement of expected tax shields. Furthermore, the WACC does not properly handle financial side effects, apart from simple capital structures (Luehrman, 1997b). In such cases, the APV approach can be a good alternative to WACC.

$$Firm\ Value = \sum_{i=1}^{t=n} \frac{FCFF_t}{(1+K_e)^t} + \frac{TV_n}{(1+\ K_e)^n} + PV(Tax\ Shields) - PV(FC) \quad (11)$$

This approach consists of valuing the company as if it were financed only and entirely by equity—unleveraged value. Then, the analyst should add the present value of the interest tax shields to the unleveraged value and subtract the present value of the financing side effects such as costs of financial distress, subsidies, hedges, issue costs, and other financing costs (Luehrman, 1997b). Usually, analysts only analyze individually the interest tax shields and neglect the other effects of using corporate leverage. The value of the interest tax shields can be computed with the following equation:

$$PV(Tax\ Shields) = \sum_{i=1}^{t=n} \frac{Interest_t\ \times\ Tax\ rate_t}{(1+K_d)^t} + \frac{TV_n}{(1+\ K_d)^n} \quad (12)$$

According to Luehrman (1997b), the importance of interest tax shields "arise because of the deductibility of interest payments on the corporate tax return". Nevertheless, the sum should lead us to the same results as in the cost of capital approach.

1.1.2. Equity Valuation Models

1.1.2.1. Free Cash Flow to the Equity

To value the equity securities of a company, an analyst could start by directly analyzing the company from the perspective of the equity investors. In this case, we should start by determining the expected Free Cash Flow to the Equity (FCFE). Vishwanath (2007, p. 188) affirms that this type of cash flow is the "residual cash flow after meeting investment requirements and contractual payments". It can be computed as follows:

$$FCFE = NI + NCC + Int(1 - Tax\ rate) - CAPEX \pm Changes\ in\ WC + Net\ borrowing \quad (13)$$

where,

$NI = Net\ income$

$Int = Interest\ expense$

In the case of the net borrowing being negative, debt repayments exceed receipts of borrowed funds. In this case, the computation should be:

$$FCFE = NI + NCC + Int(1 - Tax\ rate) - CAPEX \pm Changes\ in\ WC - Net\ debt\ repayment \quad (14)$$

Having the forecasts of the FCFE, one must also determine the proper discount to compute the present value of the company's equity. That discount rate is the cost of equity—also as known as the minimum required rate of return by equity investors in the firm. The reason for the FCFE to be discounted at this rate is because since equity investors are capital providers, they undertake the risk of ownership and therefore demand a minimum compensation for their invested capital.

The formula for computing the present value of equity is the following:

$$Value\ of\ the\ equity = \sum_{i=1}^{t=n} \frac{FCFE_t}{(1+K_e)^t} + \frac{TV_n}{(1+K_e)^n} \quad (15)$$

1.1.2.2. Dividend Discount Model

A unique case of equity valuation is the Dividend Discount Model (DDM). Simply put, the two cash flows that an investor receives from her stock ownership are the dividend and the expected price at the end of the holding period (Damodaran, 2002). Nonetheless, this expected price is determined by the future dividends. Hence, we can claim that the stock is the value of future dividends throughout infinity (Damodaran, 2002).

The same present value rationale from the DCF framework applies to the DDM model—the value of the stock is expected to be its cash flows discounted at a rate that reflects their riskiness. As said before, the main inputs of this model are the dividends (as the cash flows), and the discount rate is the cost of equity.

Moreover, there are different versions of the DDM, but the main ones are the Gordon Growth Model and the two-stage DDM.

1.1.2.2.1. Gordon Growth Model

The underlying of the Gordon Growth model is that the next expected dividend will grow at a fixed rate in perpetuity, thus it is limited to firms that are growing at a stable rate. Hence, this model is extremely sensitive to the discount rate and has two drawbacks regarding the relationship between the earnings and dividends' growth.

The first drawback is that is not reasonable to use this model assuming a perpetual growth in dividends higher than the growth in the company's earnings, meaning that the dividends will exceed earnings at some in the future. The second drawback is the fact that if we assume the converse inequality—earnings growing at a faster pace than dividends—, it will cause the payout ratio to converge to zero, meaning there will exist an unstable state (Damodaran, 2002).

Generally, analysts prefer to use this type of dividend discount model to value firms that are in the mature growth phase. This well-established companies have more capability and consistency in their dividend policies to maintain a stable state. Therefore, assuming a constant growth rate, the share value can be computed as follows:

$$V_0 = \frac{D_1}{K_e - g} \tag{16}$$

where,

$V_0 = Share\ value$

$D_1 = Next\ expected\ dividend\ per\ share$

$g = Dividend\ growth\ rate$

1.1.2.2.2. Multi-stage Dividend Discount Model

The main multistage model used by analysts is the two-stage DDM and it avoids the fixed rate growth problem of the first model by assuming two different stages of growth. In a multistage DDM, the initial phases (short to mid-term) assume a higher growth in the payout ratios, whereas the perpetuity phase assumes that the company will stabilize its dividends' growth in the long-term.

This specific model is often used to value fast growing companies that are in their initial phases of the business-cycle. Thus, the two-stage DDM can be determined using the following equation:

$$V_0 = \sum_{t=1}^{n} \frac{D_0(1+g_s)^t}{(1+k_e)^t} + \frac{V_n}{(1+k_e)^n} \quad (17)$$

where,

$D_0 = Current\ dividend\ per\ share$

$g_s = Short - term\ growth\ rate$

$V_n = Terminal\ value\ at\ time\ n$

1.2. Relative Valuation

Ultimately, valuations are relative because the value of most assets that can be bought in the market is based upon what other similar assets are priced (Damodaran, 2002). Accordingly, Goedhart et al. (2010) state that multiples' analysis, which is comparing a company's multiple with those of similar companies, can be a useful complement to the forecasts and to the DCF valuations they generate. These authors also affirm that this type of analysis can "help test the plausibility of cash flow forecasts, explain mismatches between a company's performance and those of its competitors, and support useful discussions about which companies the market believes are strategically positioned to create more value than other industry players". In addition, analysts like to use this valuation technique because it is more likely to reflect the market mood, faster to implement, and easier to present to the clients.

1.2.1. Comparable Multiples

Analysts usually use EV/EBITDA, P/E, and P/BV as a base comparison unless there are industry specific measures that may be more appropriate. According to Fernandez (2002), the multiples can be divided into three groups on which they can be based: the company's capitalization, the company's value, and growth-referenced multiples. In the table 1 are presented some examples of the most popular multiples used in each group.

Multiples Based on Capitalization	P/E (Price-to-Earnings) P/S (Price-to-Sales) P/BV (Price-to-Book Value)
Multiples Based on Company's Value	EV/EBITDA (Enterprise Value-to-EBITDA) EV/Sales (Enterprise Value-to-Sales) EV/FCF (Enterprise Value-to-Free Cash Flow)
Growth-referenced Multiples	P/EG (Price-to-Earnings / growth of earnings per share in the next few years) EV/EG (Enteprise Value-to-EBITDA (historic) / growth of EBITDA in the next few years)

Table 1: Groups of comparable multiples
Source: Fernandez (2002)

Even though this method of valuation can lead to faster results and make financial forecasts more accurate, Koller et al. (2005) point out a few problems with the use of comparable multiples. The first one is the fact that "investors have different expectations about each company's ability to create value going forward" (Koller et al., 2005, p. 8), which may lead to multiples having a wide range of values; thus, making it harder to choose the appropriate comparable companies.

These authors also affirm that using different multiples may suggest different conclusions. For instance, multiples based on the company's value can imply that the target company is trading at premium in relation to its benchmark, but, at the same time, multiples based on capitalization can imply that the company is trading at discount. Finally, they state that multiples can lead analysts to misrepresent the relation between growth and higher P/E, for example, since these two usually do not move in lockstep. Therefore, analysts must pay attention to what drives growth and to return on capitals, and forfeit the benefits of higher P/E (Koller et al., 2005)

1.2.2. Peer Group

The first step and the crucial one is to choose the right peer group before proceeding into the analysis of the comparable multiples. Yet, there is still no consensus among different authors on what should be the right method of selection.

On one hand, Goedhart et al. (2010) argue that the sample selection should have similar prospects for growth and return on invested capital (ROIC). On the other, Damodaran (2002) claims that the conventional way of choosing comparable firms—from the same industry—has its pitfalls (e.g., low sample size for narrowly defined sectors); and the sample selection should be based on a wider industry definition; while at the same time the selected companies should have the same risk, growth, and cash flow profiles.

1.3. Excess Return Models

The line of thought behind these models is that the value created by a firm does not come from the fact that it generates positive earnings, but instead from the fact that it generates earnings that are superior to the required return on the capital invested. As a result, cash flows can be split into two categories: normal cash-flows, those the investors expect and require upon investing, and excess cash flows, those that surpass the required return on capital. Thus, the value of a firm can be expressed by the sum of the capital invested today and the present value of excess returns from existing and future projects (Damodaran, 2002).

1.3.1. Economic Value Added

One of the most widely used variant among this valuation category is the Economic Value Added (EVA), popularized by the consulting firm Stern Stewart. It is computed as the product of the excess return made on an investment or investments and the capital invested in that investment(s). Damodaran (2002) claims that EVA "measures the dollar surplus value created by a firm on its existing investment". Moreover, EVA can be computed with three basic inputs—the ROIC, the cost of capital for those specific investments, and the invested capital (Damodaran, 2002):

$$EVA = (ROIC - Cost\ of\ Capital) \times Invested\ Capital \qquad (18)$$

The EVA approach is based on the same principles of the DCF framework as it uses the present value rule to compute the value of the firm. In this approach, we use book values in instead of market values that will correspond to the capital invested in the existing assets. Additionally, the firm value will be the sum of the capital invested in the existing assets, the present value of the EVA generated by these assets, and the present value of the EVA that will be added by future investments (Damodaran, 2002).

$$Firm\ Value = \ Capital\ Invested_{Assets\ in\ Place} + \sum_{t=1}^{t=\infty} \frac{EVA_{t,Assets\ in\ Place}}{(1 + Cost\ of\ Capital)^t} + \sum_{t=1}^{t=\infty} \frac{EVA_{t,Future\ Projects}}{(1 + Cost\ of\ Capital)^t} \quad (19)$$

The main limitation of this firm valuation approach is that we use book values instead of market values. This is due to the difficulty in estimating the market value of all the company's existing assets. Besides, by using book values we will end up understating the cost of capital and thus overstating EVA.

1.4. Asset Based Valuation

One of the very first popular valuation methods in the finance world was the asset-based approach, closely related to the well-known value investing popularized by Benjamin Graham. The rationale for this approach is that the firm's value is equal to the market or fair value of its total assets minus total liabilities or, in other words, its net asset value.

This method is best suited for tangible-asset-intensive companies or asset holding companies, where the value of the assets can be easily determined based upon what similar assets are priced at in the market (Kirk & Wishing, 2018).

However, nowadays the asset-based approach is not more commonly used due to the better efficiency and reliability of the other approaches. The main reason behind the fall of its popularity is related to the fact that most companies own a substantial number of intangible assets for which the fair value cannot be easily determined (e.g., property, R&D). Also, their market values can differ significantly from carrying values in hyper-inflationary environments. Besides that, Kirk and Wishing (2018) state that analysts need more data and time to perform this approach than they may otherwise need to perform other valuation methods.

1.5. Contingent Claim Valuation

Companies can create opportunities today (e.g., expenditures in R&D and marketing) that can be exploited in the future, depending on how sound the reinvestments are expected to be. These opportunities create options for the managers—the right but not the obligation—to whether

undertake or not certain strategical decisions. However, companies do not evaluate opportunities formally until they mature to the point where an investment decision can no longer be postponed. This may lead to undervalue the future and thus, to underinvest in their current projects (Luehrman, 1997a).

For these reasons, Black and Sholes (1972) established the main model to value call and put options. Eventually, the Black-Sholes model was modified to allow to value options where its underlying asset paid dividends and the exercise date occurred before the maturity date (Damodaran, 2002). While this model is a continuous-time variant, another model named Binomial option pricing was developed to value options in a discrete-time variant manner. Monte Carlo iterative method is also another more sophisticated way to evaluate options when there are multiple sources of uncertainty or whenever more complicated features exist.

In theory, this approach is better suited for oil and mining as they have undeveloped natural reserves that can be developed if they choose to do so. These undeveloped reserves are seen as call options since they are more likely to be developed if the price of the resources goes up (Damodaran, 2002). Another advantage is that these companies can come up with a reasonable measure of development cost, which can be viewed as the exercise price of the option (Damodaran, 2002).

2. Company Profile

Netflix, Inc. is the leading SVoD company. The company provides TV series, movies (on-demand), documentaries, and a plethora of different video content across different genres and languages. It was founded in 1997 by Reed Hastings (current chairman and co-CEO), and its headquarters is in Los Gatos, California (US).

Netflix started being a public company back in 2002 when it launched its IPO selling 5.5 million shares at $15 under Nasdaq ticket "NFLX" (Netflix, 2020). The share price has been soaring since then, reaching a 52-week all-time high of $555.88 on July 5, 2020, an increase of 3,706% since it first became available to the public. As of December 31, 2020, the closing price was $540.73, and Netflix had no dividend payout nor plans on having a dividend policy in the future.

Figure 1: Netflix and S&P 500 one-year historical market prices (in USD)
Source: Yahoo Finance and MarketWatch

In 2007, the company started its popular subscription-based business model that lets its customers access a wide variety of content in different internet-connected devices (e.g., TVs, mobile devices, laptops) by paying a monthly subscription fee. Netflix's subscription model has three plans: basic, standard, and premium (Table 2). The main differences between these three tiers are the streaming video quality and the number of devices streaming at a time. While Netflix offers the same streaming video service worldwide, the price of the subscription's plans can vary a lot from country to country. The monthly flat fee in the US ranges from $8.99 to $17.99 which can represent a US dollar equivalent price swing of $3.28 to $22 internationally

(Netflix, 2021). Besides the subscription plans, it still provides DVDs and Blu-ray membership services to domestic customers since 1998.

Subscription plan	Monthly price	Streaming quality	Simultaneous streams
Basic	$ 8.99	Standard definition (not HD)	One
Standard	$ 13.99	High definition (HD)	Two
Premium	$ 17.99	HD and 4K Ultra HD	Three

Table 2: Netflix's streaming subscription plans
Source: Netflix's Website

In 2010, the company made its first international expansion to Canada, and in the same year, it expanded further to Latin America and the Caribbean (Netflix, 2021). By the end of 2020, the company was offering entertainment services to over 200 million paid subscribers spreading in more than 200 countries.

3. Industry Overview

3.1. Entertainment and Media Industry

Netflix operates in the SVoD market, which is part of the broader industry sector classification—the entertainment and media (E&M) industry. The E&M industry is a unique vertical combination of different segments, each one competing, complementing, and combining to fulfill the growing demand for entertainment and information worldwide. The main five segments of this industry are: traditional TV and video; cinema; over-the-top (OTT) video; video games and esports; and internet advertising.

This industry is highly subject to technology innovations and consumer behavior, especially from the younger age groups. In the most recent years, more entertainment companies are adopting artificial intelligence technology to drive investment for the upcoming years and to deliver high-quality digital content that can attract more audiences.

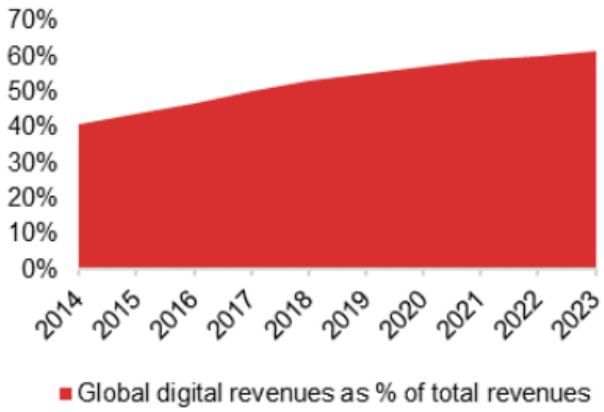


Figure 2: Digital revenues in the E&M industry (2014-2023)
Source: PwC's Website

With increasing digital transformation in the E&M industry, the digital revenues are expected to be over 60% of the total revenues by the end of 2020 (PwC, 2020) (Figure 2). In the future, the main two factors that will contribute to the growth of the digital revenues will be the internet accessibility worldwide and the increase of the mobile data allowance on smartphones. By 2024, the amount of mobile data consumed is forecast to be 50% greater than the broadband data consumed (PwC, 2020).

The global E&M revenue has been growing at a steady pace from 2015 until 2019. In 2015, the revenues amounted to a total of $1.7 trillion, growing to an amount of $2.1 trillion by the end of 2019, representing a compound annual growth rate (CAGR) of roughly 4.3% during this period (Figure 3).

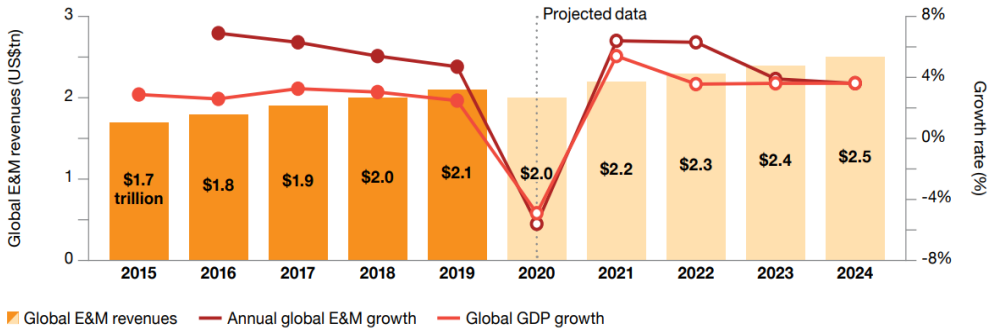


Figure 3: Global E&M revenues (2015-2024)
Source: PwC Global Entertainment & Media Outlook 2020–2024

Due to the health crisis, global E&M revenues are projected to fall by 5.6% in 2020 to around $2 trillion. Additionally, consumer spending in E&M is going to fall only by 2.3% (PwC, 2020) compared with a contraction of 4.9% in the global economy, as forecast by the International Monetary Fund (2020). The global revenues are expected to pick up its historical growth pace back again in 2021, reaching a total of $2.5 trillion in 2024, which indicates a 2.8% CAGR between 2019 and 2024 (PwC, 2020).

Even though the current pandemic will hurt global revenues, many E&M's digital segments are expected to thrive while others are going to follow a downward path (Figure 4). On one hand, virtual reality, OTT video and video games, and esports are the segments projected to have the highest annual growth for 2019-2024. On the other hand, traditional TV and home video, cinema, and newspapers, and consumer magazines are the segments expected to decline in revenues for the same period (PwC, 2020).

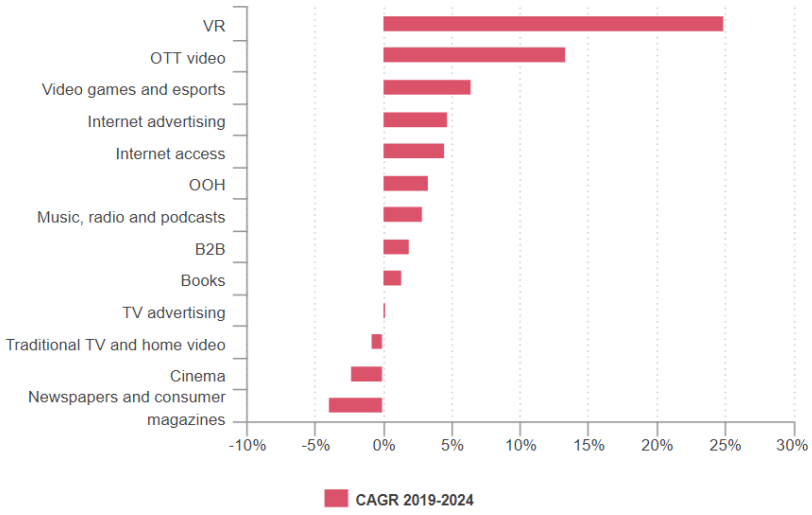


Figure 4: Revenue growth rate in the E&M's business segments (2019-2024)
Source: PwC's Website

Historically, consumer spending in this industry has been discretionary and closely tied to macroeconomic conditions (PwC, 2020). However, consumers are starting to shift their habits and regard their digital E&M spending as a non-discretionary expense, on par with water and electricity, hence making the digital-oriented segments more likely to succeed in the future.

3.2. Over-the-top Video Segment

In the E&M industry, over-the-top (OTT) video refers to the offering of videos and content over the internet that can be viewed on different infrastructures such as smartphones, smart TV, and gaming consoles, by way of an alternative to the traditional broadband, cable or satellite provider. These services include transactional video on demand (TVoD), subscription video on demand (SVoD), and advertising-based video on demand (AVoD). While TVoD (e.g., iTunes) delivers entertainment via the internet and does not require any subscription, the SVoD services (such as Netflix) require a subscription. The AVoD services are free from any charge, but, unlike AVoD and SVoD, consumers must watch advertisements to access entertainment and media content.

The global revenues of the OTT video market have been increasing exponentially from $6.1 billion in 2010 to more than fifteenfold in 2019 (over $100 billion). The market size of the OTT segment is forecast to reach $160 billion by 2024, growing at a CAGR close to 10% (2019-2024) (Figure 5).

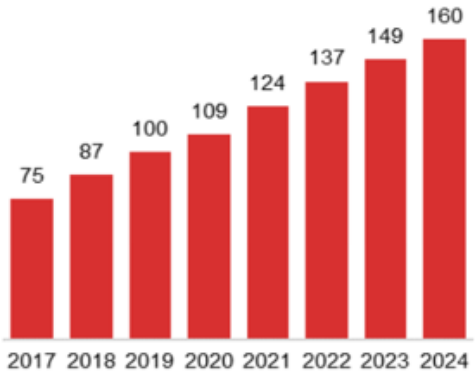


Figure 5: Global revenues in the OTT video segment (2017-2024)
Source: Statista's Website

The ongoing commoditization of entertainment services coupled with the rising competition among OTT providers is driving the OTT video segment up (Business Wire, 2020). Furthermore, smartphone video users dominated the OTT video segment by a large margin in 2019. Its market share is expected to grow further with the increase of available smartphones in developing countries. According to the data collected by the mobile trader GSM Association (2020), over 3.8 billion people were mobile internet users in 2019; and it is expected to reach around 5 billion by 2025, with a penetration rate of 61% and a 4.1% CAGR (2019-2025). The increase in mobile internet users is mainly due to the adoption of 5G networks, which in turn is caused by the higher digital content consumption (Business Wire, 2020).

Region-wise, North America has been dominating the OTT video segment in the last few years because the region is well equipped with high broadband access and has seen an increase in traction of new services provided by companies like AT&T, ESPN, and Turner Sports (Allied Market Research, 2020). In 2019, the US market accounted for 34.3% of the total global OTT video revenues (Statista, 2020).

In the Asia-Pacific region, telecommunication companies are providing more OTT services. Further, it is forecast to be the region to grow at the highest pace for the upcoming years, surpassing North America in total revenues by 2021 (Allied Market Research, 2020).

3.3. Streaming Video on Demand Market

The SVoD market is a subset of the OTT video segment that allows consumers to access media content by paying a flat subscription fee per month. This type of business model—the paid membership subscriptions—is the source of revenues for Netflix.

In 2019, the global SVoD revenue was close to $24.25 billion, and it is projected to reach $32.45 billion by 2024 (Figure 6). The CAGR for the period between 2019 and 2024 is forecast to be 6%, while the user penetration is expected to grow from 15.2% in 2020 to 16.9% in 2024, representing an increase to roughly 1.25 billion SVoD users worldwide (Statista, 2020). Nevertheless, it is important to note that SVoD revenues are driven by the average revenue per user (ARPU). In 2020, the global ARPU was $22.92 per month (Statista, 2020).

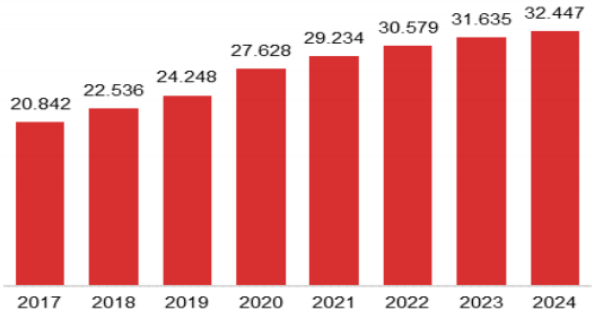


Figure 6: Global SVoD revenues (in millions USD) (2017-2024)
Source: Statista's Website

The region with the highest revenue generated is UCAN (North America). The total number of SVoD users in the UCAN region has been increasing at a steady pace since 2017, from 121 million to 126.1 million in 2019 (Figure 7). Thanks to the pandemic, that base number is expected to climb to 137.4 million in 2020 and reach 144.6 million by 2024, with an annual growth of 1.29% (CAGR 2019-2020). Country-wise, the US is the country with the highest SVoD revenue, amounting to $11.95 billion in 2020 (Statista, 2020).

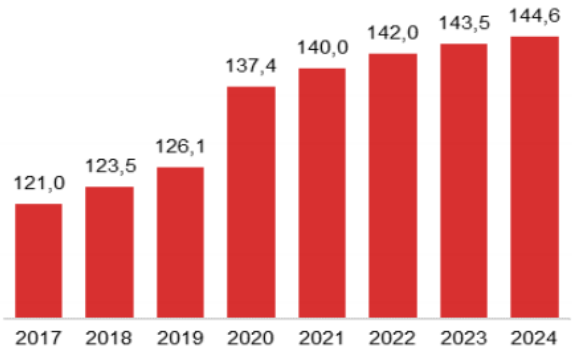


Figure 7: SVoD users in the UCAN region (in millions) (2017-2024)
Source: Statista's Website

The region with the highest SVoD user base is EMEA (Europe, Africa, and the Middle East). Europe has the largest number of users among the three zones, but its growth pace is projected to stagnate in the forthcoming years. Overall, the region is forecast to have a total of

408.1 million by 2024, depicting a growth of 5.45% (CAGR 2020-2024) (Figure 8). Nonetheless, the growth rate in total SVoD revenue is going to be offset by the slow increase in the regional weighted average revenue per user (0.40% in nominal terms) (Statista, 2020).

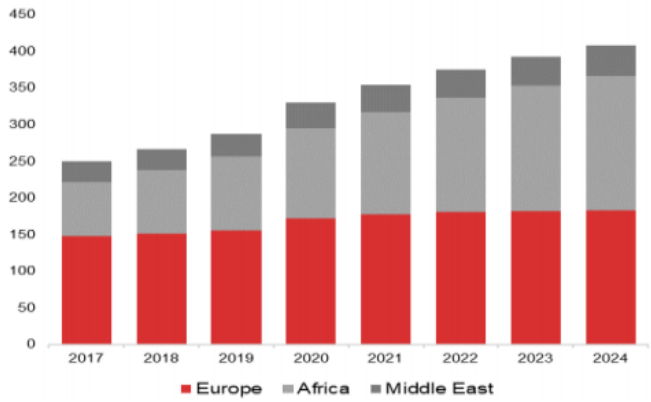


Figure 8: SVoD users in the EMEA region (in millions) (2017-2024)
Source: Statista's Website

LATAM (Latin America) is by far the lowest region in terms of SVoD users. Even though it is dominated by US players (Netflix, Amazon Prime Video, Disney+, Apple TV+, and HBO Max), who account for 87% of SVoD subscribers in 2020, it falls short in comparison to the other regions. LATAM is projected to have only 134.8 million SVoD users by 2024, depicting a 5.67% CAGR (2019-2024) (Figure 9). Overall, the region is estimated to generate the least amount of revenue of all regions in 2024 since it will maintain both the lowest ARPU and number of SVoD users (Statista, 2020).

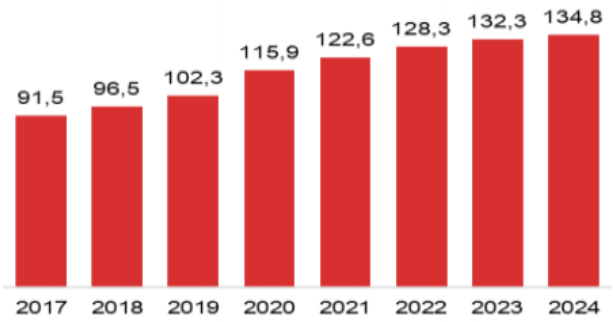


Figure 9: SVoD users in the LATAM region (in millions) (2017-2024)
Source: Statista's Website

Although the success of the SVoD market has been predominantly in western countries, Asia-Pacific (APAC) is emerging as the most recent successful market. The region has had a surge in technological improvements and digitalization, thus increasing internet access and connectivity. This, in turn, has made these regional customers crave more for video streaming platforms overall. Moreover, the number of total users is expected to grow to 261.2 million

users by 2024, indicating a CAGR of 5.89% (2020-2024) (Figure 10). However, the weighted average revenue per user is only predicted to grow at a nominal 0.54% CAGR, from $15.47 in 2020 to $15.81 in 2024. The low implied nominal growth rate can be explained by the fact that South Asia—forecast to have an ARPU of only $6.64—is going to have the greatest increase in SVoD users (Statista, 2020).

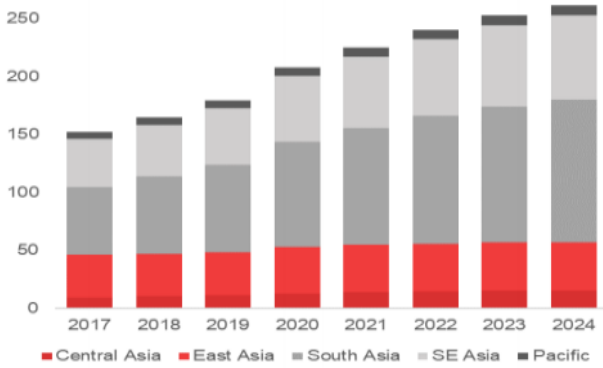


Figure 10: SVoD users in the APAC region (in millions) (2017-2028)

Source: Statista's Website

3.4. Competition

Netflix is a veteran in the streaming industry and has had great success over the years. However, success in a popular industry like this always brings inevitable competition. The company faces constant and increasing competition from streaming services like Amazon Prime Video, Hulu, Disney+, and Apple TV+.

This tough competition became known as "Streaming Wars". More recently, AT&T's HBO Max and NBCUniversal's Peacock entered the market in May 2020 and July 2020, respectively, disrupting the industry once more and taking the Streaming Wars a step further (Wired, 2020).

3.4.1. Streaming Wars Overview

In the Streaming Wars, the most important factor for bringing and retaining consumers is having a large and diverse amount of original content; and Netflix is the leader when it comes to the number of exclusives titles (Table 3). At the end of 2020, it had over 2,000 exclusive movies and series to choose from, while the second company with the most exclusive titles—Disney+—only had half of Netflix's original content. In terms of price, Apple TV+ is the cheapest. However, its number of subscribers is nowhere near its competitors, given how small

its library is. HBO Max has the highest number of titles and is, similarly to Disney+, increasing its original content creation expenditures to try to surpass Netflix's number of original titles.

Streaming platform	Monthly price	Number of titles	Number of originals	Ad tier
Netflix	$8.99 - $17.99	5,000+	2,000+	No
Amazon Prime Video	$8.99	26,000+	70+	No
Disney+	$7.99	1,000+	1,000+	No
HBO Max	$9.99 - $14.99	2,000+	100+	Yes
Hulu	$5.99 - $64.99	3,000+	80+	Yes
Apple TV+	$4.99	55+	55+	No
Peacock Premium	$4.99 - $9.99	15,000+ hours	unknown	Yes

Table 3: Comparison of the most popular streaming platforms
Source: Various sources

As the projections show, Netflix is expected to have the biggest share of users among the players of the Streaming War by 2024, with around 300 million subscribers worldwide —with 180 million domestic users and 120 million international users, growing at 9.56% CAGR (2020-2024) (Figure 11).

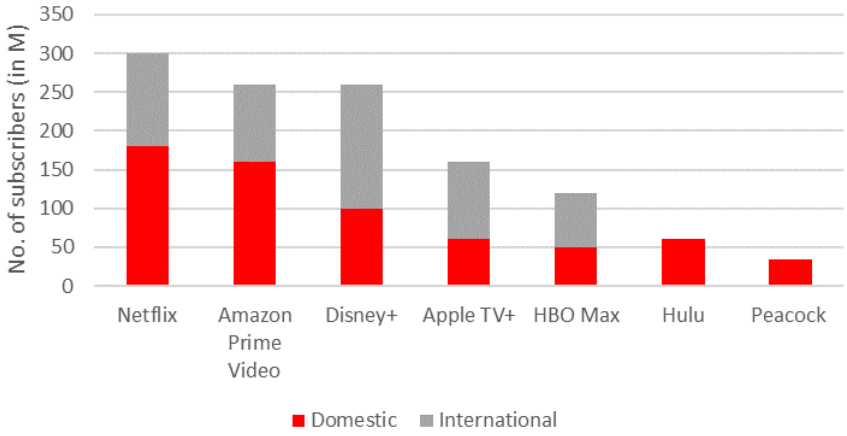


Figure 11: Expected number of subscribers by 2024 in each streaming platform
Source: Various sources

Behind Netflix comes Amazon Prime Video and Disney+, both reaching a total of 260 million subscribers worldwide by that year. Amazon Prime Video is expected to grow at a CAGR of 6.78%, while Disney+ will grow at the highest rate of 28.66% (CAGR 2020-2024). Disney's growth is going to be primarily driven by its international streaming strategy: the company plans to attract more audience from Europe with new adult-focused content, while in Latin America, they plan to do the same but with sports content (Business Insider, 2020).

Furthermore, the number of Apple TV+ subscribers is expected to increase because of the rising demand for Apple products, which include a one-year free subscription for the streaming platform. Apple TV+ is forecast to have 60 million and 100 million domestic and international users, respectively, by 2024. In comparison, HBO Max is expected to have 50 million domestic users and 70 international users. Lastly, Hulu and Peacock are the two streaming platforms expected to have the lowest number of users by 2024 since they have not announced any plans to expand the service outside of the US.

4. Netflix Overview

4.1. Business Segments

When the company launched its popular on-demand video service back in 2007, the service was meant to be a supplement to its original DVD service. However, in 2011, the company decided to split the services into two different operating divisions—the streaming and domestic DVD service. Moreover, since 2017 the company breaks down its streaming division into four broad geographic segments: UCAN, EMEA, LATAM, and APAC.

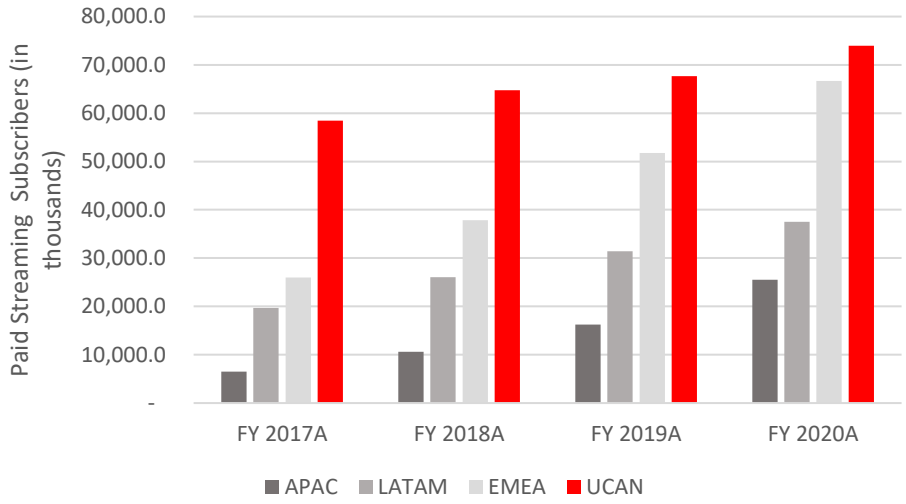


Figure 12: Netflix's evolution of the number of paid streaming subscribers per geographic segment (2017-2020)

Source: Netflix's Form 10-K, Own Estimates

In terms of paid subscribers on the streaming platform, the region that is leading is the UCAN. The main reason for this is that Netflix was the very first big streaming platform operating in the US, the world-leading SVoD market which makes over 90% of the total paid subscribers in that region. However, because of the increased market saturation and the Streaming Wars' competitive pressure in the most recent years, the paid subscribers have been growing at the slowest pace among the four regions—an increase of 27% between the period of 2017-2020, from 58,442 thousand to 73,936 thousand paid subscribers. The company's second-biggest market is in the EMEA, and it is expected to surpass the UCAN in the number of paid subscribers by 2021. The increased production and the opening of hubs in Europe are expected to retard the decline in the number of paid subscribers in that region (Statista, 2021). The LATAM region is the second-fastest-growing region, climbing from 19,717 thousand in

2017 to 37,537 thousand paid subscribers in 2020. Lastly, even though the APAC has had the fewest number of paid subscribers, it is the region growing at the fastest pace—it had a soar of 392% between 2017 and 2020.

Between 2017 and 2020, the domestic DVD division had an average annual growth rate (AAGR) decline of 19% in revenue, from $450.5M to $239.4M. Thus, we expect this consistent downward trend in the future since only a niche of customers (over 2 million subscribers) prefer to watch content by DVD than by streaming.

4.2. Profitability

Overall, the company has become more profitable during the last four years (Table 4). The revenues have grown at a 28.82% CAGR (2017-2020). Nevertheless, the year-on-year (YoY) revenue growth rate fell from over 30% in 2017 and 2018 to 27.6% and 24% in 2019 and 2020, respectively.

Return on Sales	FY 2017A	FY 2018A	FY 2019A	FY 2020A
Revenues	11,693	15,794	20,156	24,996
YoY % growth	*32.4%*	*35.1%*	*27.6%*	*24.0%*
Gross Profit	3,660	5,827	7,716	9,720
Gross Margin (%)	*31.3%*	*36.9%*	*38.3%*	*38.9%*
Operating Income	839	1,605	2,604	4,585
Operating Margin (%)	*7.2%*	*10.2%*	*12.9%*	*18.3%*
Pre-Tax Income	485	1,226	2,062	3,199
Pre-Tax Margin (%)	*4.2%*	*7.8%*	*10.2%*	*12.8%*
Net Income	559	1,211	1,867	2,761
Net Profit Margin (%)	*4.8%*	*7.7%*	*9.3%*	*11.0%*

Table 4: Netflix's return on sales (2017-2020)
Source: Netflix's Form 10-K, Own Estimates

Even though revenue growth worsened in 2020, the gross margin grew close to the entertainment sector average of 39.25%. The reduced cost of revenues in 2020 was mainly due to pandemic-related delays in the production and licensing of content and associated costs that Netflix had planned for that year.

Likewise, the operating margin had an improvement in 2020 because the pandemic enabled the company to control general operating costs.

The pre-tax income also improved and remained higher than the entertainment sector margin of 9.73%. Lastly, the net profit margin also ended up improving from 9.3% in 2019 to 11% in 2020.

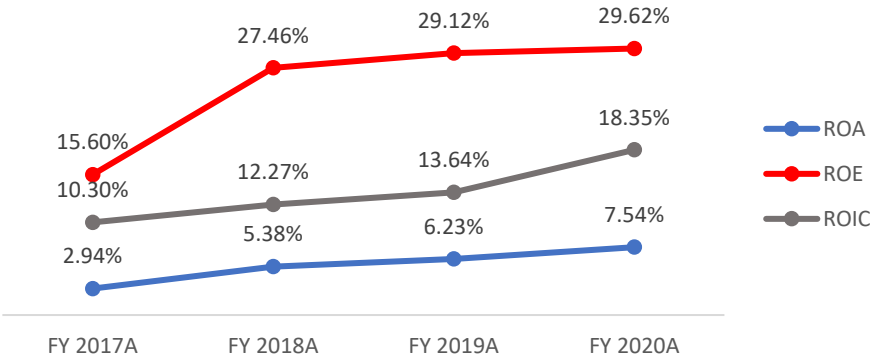


Figure 13: Netflix's return on investment ratios (2017-2020)
Source: Netflix's Form 10-K, Own Estimates

Concerning return on the investment ratios, the return on equity (ROE) and return on assets (ROA) increased slightly in the last three years. However, from 2019 to 2020, ROA increased 1.31%, whereas ROE only increased 0.5%, which means that the better efficiency of the company was, to some extent, offset by the less effective use of financial leverage.

Another positive sign of performance was the consistent increase of the ROIC. This ratio increased 8.05% in the last four years, confirming that the company is becoming more profitable and making better fund allocations.

4.3. Solvency

In the last few years, Netflix has been incurring new debt to finance the licensing and production of content. The debt levels had increased from $6,499.4M to $16,309M between 2017 and 2020. Furthermore, the only debt (long-term interest-bearing liabilities) that the company has in its balance sheet are senior notes, which have an average cost of 4.79% and an average maturity of 12.15 years.

Solvency Ratios	FY 2017A	FY 2018A	FY 2019A	FY 2020A
Debt-to-Assets	34%	40%	43%	42%
Debt-to-Capital	64%	66%	66%	60%
Debt-to-Equity	1.81	1.98	1.95	1.47
Interest Coverage	3.52x	3.82x	4.16x	5.97x

Table 5: Netflix's solvency ratios (2017-2020)
Source: Netflix's Form 10-K, Own Estimates

On all the metrics above, except for debt-to-assets, the company's leverage decreased from 2017 to 2020. As for the capital structure, the increase in net income, translated into an equal increase in retained earnings, which improved the debt-to-equity ratio. Additionally, the higher interest coverage ratio means that the company can better service its debt.

Nevertheless, the increase of debt levels has not put the company at risk of insolvency because Netflix has been generating steady cash flows, and the business and operating risk are not high.

4.4. Stock Performance

Overall, Netflix's share price has been moving in the same direction as the earnings (Figure 14). In the decade, investors have been valuing the profitability of the company and its potential growth higher, translating in them placing high multiples on EPS, except for 2011, when the price fell, while earnings rose.

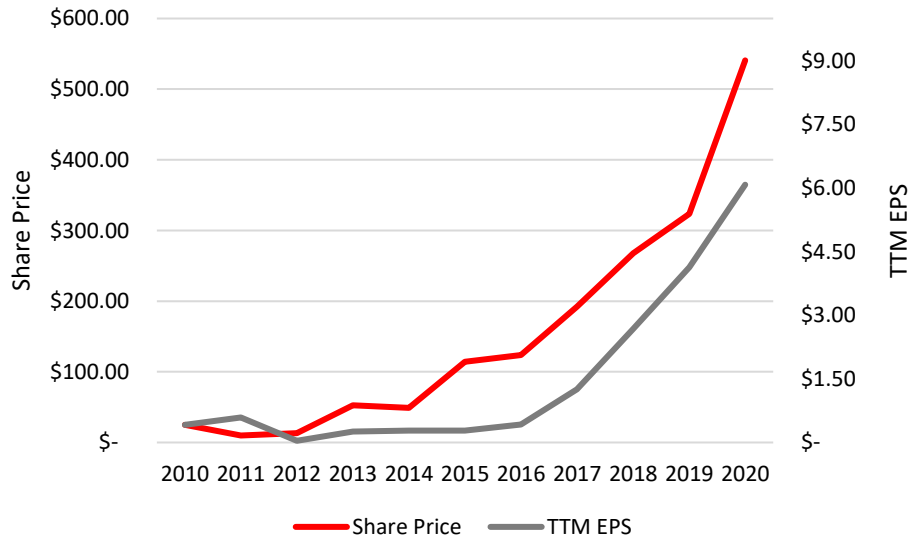


Figure 14: Netflix's share price and TTM EPS evolution (2010-2020)
Source: Yahoo Finance and Netflix Quarterly Reports

In 2015, after great four consecutive quarterly results, the company reached an all-time high trailing twelve months (TTM) P/E of 408.50x. In 2019, on the other hand, the company was not able to meet its paid net membership additions expectations by a significant margin and that resulted in the lowest 5-year (2015-2020) TTM P/E of 78.30x.

Furthermore, Netflix is part of the FAANG stocks, a group constituted by the most popular and best performing American technology stocks: Facebook, Apple, Amazon, Netflix, and Alphabet (known as Google). At the end of 2020, the average (TTM) P/E ratio of these tech giants was approximately 51.88x. Netflix had the highest TTM P/E of 88.94x, while the second-highest, Amazon, had a TTM P/E of 77.86x.

Concerning the SVoD and the US market, the company has been outperforming both. Its main direct competitors, The Walt Disney Company and Comcast Corporation had, in 2020, a negative EPS and a TTM P/E of 37.66x, respectively. When it undertook its IPO back in 2002, an investment of $990 (owning 66 shares) at that time would provide a return on the investment (ROI) of 397% (owning 132 shares), at the date of the two-to-one stock split (February 14, 2004), with a closing price of $37.30. The same investment would provide a 9,058% ROI (owning 924 shares) at the time of the seven-to-one stock split (July 15, 2015), with a closing price of $98.13. As of December 31, 2020, that investment would deliver an ROI of 50,388% and be worth around $499,635. The cumulative return of Nasdaq and S&P 500 was 830% and 399%, respectively, for the same investment period (Netflix, 2021).

5. Forecasts

5.1. Revenue

To forecast Netflix's revenue, we used a bottom-up approach. Further, the projection of the total revenue was separated into streaming revenue and domestic DVD revenue. The subscription revenue was broken down into four geographic segments. Since Netflix only started providing quarterly and annual regional financial data at the beginning of 2017, the number of data points (n = 16, for quarterly data) is low; therefore, we opted to make projections based on descriptive analysis.

We created a subscription revenue model that would consider the following drivers:

1. Existing paid subscribers and their renewal rate.
2. Paid net subscribers' addition and their renewal rate.
3. Monthly subscription fee and price increases.

Most of Netflix's revenue comes from the first driver. The rationale is that a certain number of existing paid subscribers at the beginning of a given year will renew their membership plan during that whole year. The renewal rate of the existing subscribers allowed us to estimate the number of subscribers that kept paying their monthly fees until the end of a given year.

The company does not let the public know its global (nor regional) churn rate—the contrary of the renewal rate. However, a report from Antenna (2020) shows that Netflix had the lowest churn rate, around 3% during the third quarter of 2020, whereas the industry average was 6.2%. Therefore, we assumed that the renewal rate in 2021 would start at 97% for each region. After that, we assumed that the renewal rates would decline continuously because of the increase in the member's base in each region.

In the US, Netflix is the on-demand service with the most users of other services (over 80% per service) also subscribing to the platform (Statista, 2021). Thus, Netflix is seen more as a complement service than a substitute in the US. Therefore, we project an existing subscriber's renewal rate YoY decline of 0.5% in the UCAN from 2021 until 2028, the lowest among all regions. The EMEA region is expected to have the second-lowest renewal rate YoY percentage decline of 1%. The LATAM region is assumed to have the third-lowest decline, at a YoY 1.5% decline. Lastly, the APAC region is going to have the highest YoY decline of 2%.

The second driver—the paid net subscriber's addition, and their respective renewal rate—is the main factor of revenue growth in the subscription business model of the company. The paid net subscriber's addition is the difference between the new subscribers and the existing

ones that canceled their subscription. Generally, new subscribers are more likely to cancel their memberships than the existing subscribers during their first year.

Hence, for each region, we decided to project the new subscribers' renewal rate from the existing subscribers' renewal rate figures. For each projected year, we assumed that they would be 2% lower than the existing subscribers' renewal rate. Besides, we assumed that after the first year the new subscribers would have a renewal rate equal to the existing subscribers.

To avoid unrealistic growth rates in the paid net subscribers' additions, we projected them as a percentage of the year-end subscribers. We decided that in 2021 the proportion of paid net subscriber's additions would be slightly higher than in 2020 to account for the pandemic effect on subscription's cancelations.

Both the UCAN and EMEA region will have a declining net paid subscriber's addition as a percentage of the year-end subscribers of 0.5% YoY since these are the biggest markets of the platform. In the LATAM region, this figure will decline at 0.75% YoY. Lastly, the APAC region will have the highest decline of 2% YoY because of the dramatic increase in the number of local OTT companies entering the market in the upcoming years.

For the monthly fees, we assumed that they are reflected in the monthly ARPU that is shown in the company's Form 10-K. Overall, the increase in ARPU is mainly associated with the increase in price of the subscription plans and the favorable fluctuations in foreign exchange rates. We did not consider the return from the foreign exchange rates since it depends on macroeconomic factors that are unpredictable.

Additionally, since Netflix has high pricing power, we presumed that inflation is going to pass onto their subscribers. Therefore, we used IMF inflation rates' projections to estimate monthly ARPU per region (see Appendix A).

Having our three drivers of revenue projected, we computed the average between the beginning and ending subscribers of each region and multiplied by the annual ARPU to estimate the revenues (Figure 15).

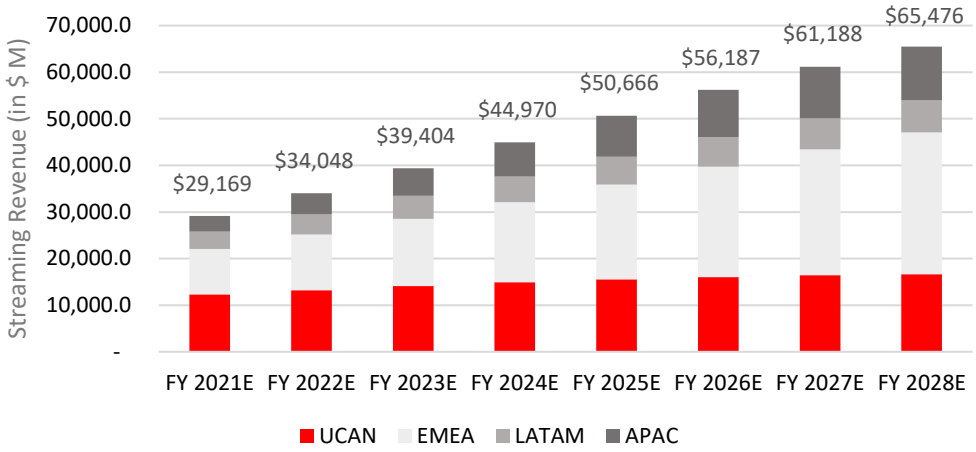


Figure 15: Netflix's projected streaming revenue (2021-2028)
Source: Own Estimates

Regarding the domestic DVD revenue, we assumed the revenues would keep decreasing YoY at its 2017-2020 AAGR of -19% (Figure 16). This assumption seems reasonable because the domestic DVD division is becoming less profitable as fewer people are subscribing to this service and renewing their memberships.

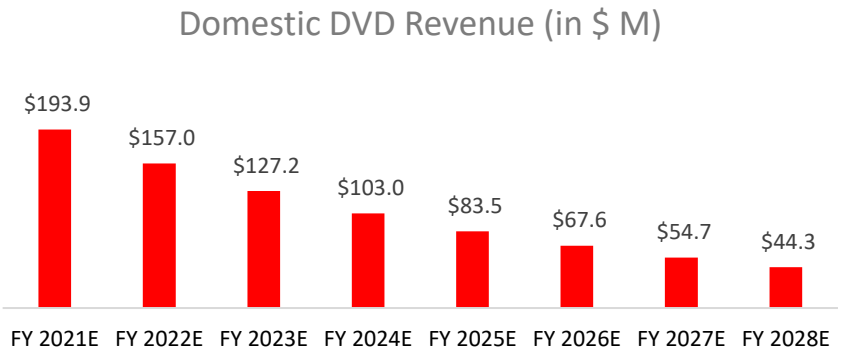


Figure 16: Netflix's projected domestic DVD revenue (2021-2028)
Source: Own Estimates

5.1.1. Scenarios Analysis

We decided to build two more different scenarios to assess how favorable and unfavorable outcomes would affect Netflix's value. Firstly, we wanted to check how changes in the key drivers would affect Netflix's streaming revenues and, ultimately, the implied share price in the DCF model; thus, bringing a more dynamic perspective to our case study, rather than a static one. Secondly, having the best and worst-case scenarios allows us to have realistic upper and lower limits for our target share price.

Therefore, we created an upside and downside case scenario, where the former corresponds to increases of quantity in the three streaming revenue key drivers' assumptions and the latter corresponds to decreases. In the upside/downside case scenario, both the existing and the new subscribers have a 0.5% increase/decrease in the renewal rates equally for all the regions and throughout the years. The subscribers' additions as a percentage of the year-end subscribers increase/decrease by 1%. Lastly, the monthly ARPU growth rates increase/decrease by 0.5%.

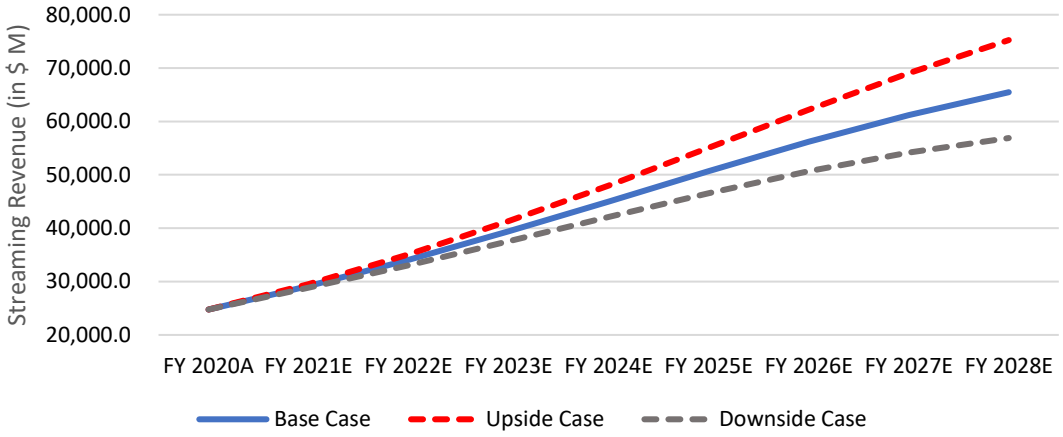


Figure 17: Case scenarios of the streaming revenue (2020-2028)
Source: Own Estimates

As we can conclude, the streaming revenue for our base case scenario shows that Netflix has entered a decelerated growth stage, since the company will start to struggle to maintain its historically high growth rate due to increased competition and market saturation. The expected YoY growth rate in 2028 is 7% for our base scenario.

In the upside case scenario, we can conclude that Netflix will maintain a consistently high growth rate, projected to have in 2028 a YoY growth rate of 9%.

Conversely to the upside case scenario, the downside case scenario displays a streaming revenue treading to a stagnating growth trend, similar to a company entering a mature stage. In the last year of the forecasted period for this case scenario, the YoY growth rate is expected to be 5%.

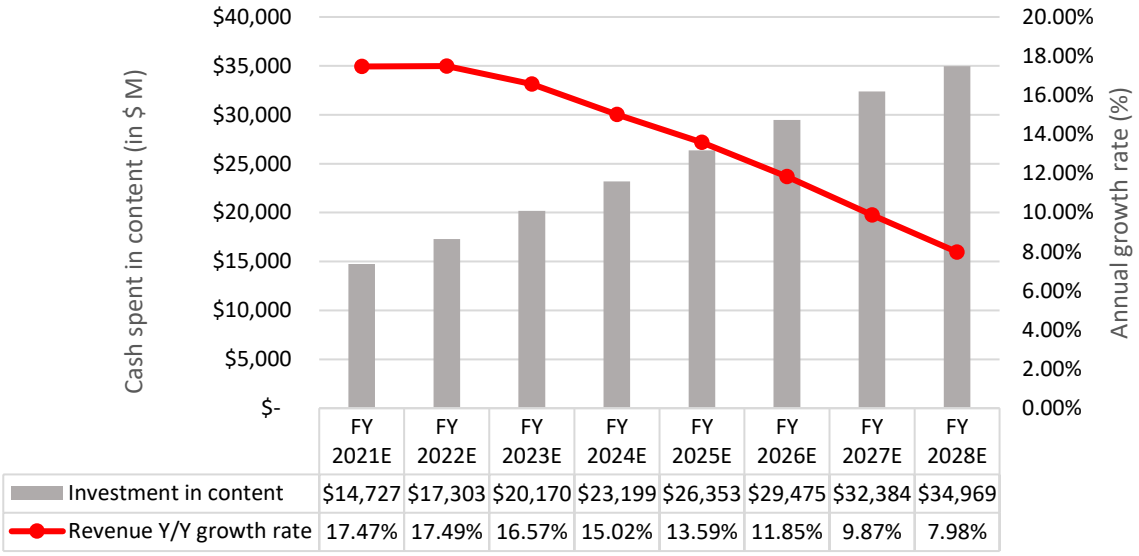
5.2. Cost of Revenues

The main contributing expense for the annual cost of revenues is the amortization of the content assets. On average, from 2017 until 2020, the amortization of the content assets made up roughly 74% of the total cost of revenues.

The remainder of the expenses are associated with the acquisition, licensing, and production of content, streaming delivery costs, and other operations costs (Netflix, 2020). Likewise,

Netflix allocates the amortization of property and equipment (P&E) into the cost of revenues since they are naturally related to the acquisition, licensing, and production of content. Hence, we treated the D&A of P&E as "other costs" in the cost of revenues like every other cost, excluding the amortization of content assets.

Because Netflix subscriber's base growth is dependent on the distribution of high-quality content, we assumed that the content expenditures would grow at the same rate as the projected revenues (Figure 18).



	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E	FY 2026E	FY 2027E	FY 2028E
Investment in content	$14,727	$17,303	$20,170	$23,199	$26,353	$29,475	$32,384	$34,969
Revenue Y/Y growth rate	17.47%	17.49%	16.57%	15.02%	13.59%	11.85%	9.87%	7.98%

Figure 18: Investment in content (2021-2028)
Source: Own Estimates

Having projected the investment in content assets, we moved on to estimate the annual amortization expenses. Management spreads out the amortization expenses over the years using the accelerated basis method. Netflix (2021) states that, on average, "over 90% of a licensed or produced content asset is expected to be amortized within four years after its month of first availability". Because of this method of recognition, and the fact that the company acquires and produces every year a plethora of content with different expected useful lives, we decided to use the following formula to compute the amortization of the content as a percentage of the accumulated investment during the last three years:

$$Amortization\ as\ a\ \%\ of\ the\ 3y\ Acc.Investiment_t = \frac{Amortization_t}{Investment_{t-2} + Investment_{t-1} + Investment_t} \quad (20)$$

By applying the formula 20, we believe that we got a fair approximation of the annual amortization expenses since, on average, in the last year of the content's useful life the amortization will be very low because of the accelerated amortization recognition. We computed the amortization as a percentage of the accumulated investment of the last three years for the years 2019 and 2020. After that, we averaged those 2-years percentages and applied formula 20 to compute the amortization for the forecasted period. Below is the figure with the total cost of revenues, and the proportion of the two main components.

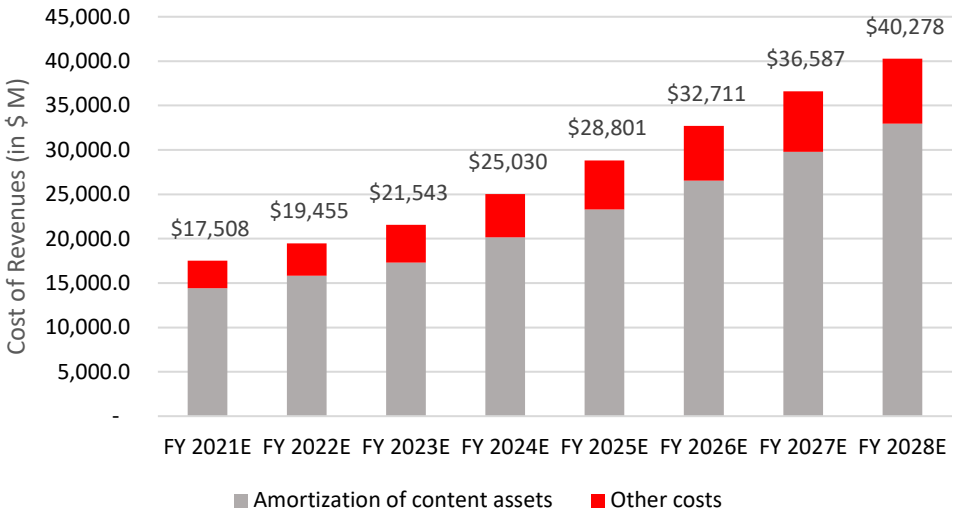


Figure 19: Netflix's expected cost of revenues (2021-2028)
Source: Own Estimates

"Other costs" were estimated as a percentage of the investment made in the respective years. The predicted proportion was the 3-year average (2017-2019) of 20.96%. We excluded 2020 since the costs were unusually high due to the pandemic in that year.

5.3. Other Income and Expense

For the operating items, the selling, general, and administrative (SG&A) and the research and development (R&D) expenses were projected as a constant percentage of revenues and as a percentage of the investment in content assets, respectively.

For the non-operating items, the "interest and other income (expense)" was estimated as a percentage of revenues. The interest expense was the last item estimated since we integrated the three financial statements (income statement, balance sheet, and cash flow statement). To

do so, we had to create a debt schedule with all the company's senior notes. The annual interest expense was computed based on the opening and closing average balance of each senior note.

5.4. Income Tax Expense

Netflix's operating deferred income taxes are primarily driven by the Federal and California R&D tax credits. The annual R&D credit provision for companies headquartered in the State of California is equal to 15% of qualified expenses that exceed a base amount (Franchise Tax Board, 2021). We assumed that there are no basic research expenses, thus the total R&D expenses are equal to qualified expenses.

To project the R&D credit provisions we applied the simplified alternative credit method. Firstly, we estimated the 3-year average R&D expenses. Next, our base amount was computed as half of that 3-year average. Finally, the R&D credit is equal to 15% of the difference between the R&D expenses and that base amount (see Appendix D).

The "current income tax" is the sum of the benefit from the excess of the stock-based compensation and the expected tax expense. The stock-based compensation is arbitrary to the board of governors' decision making; hence we only estimated a trend using a 2-year simple moving average. Furthermore, we applied a Federal Statutory marginal tax rate of 21% on the Earnings Before Taxes (EBT) to estimate the base tax expense. There were no other tax effects considered in our projections.

5.5. Working Capital

To estimate the FCFF, we needed to project two groups of items in the balance sheet: current assets and current liabilities, and their net change. The only current asset item that will be used to compute the changes in the working capital (WC) is "other current assets". Moreover, Netflix's business model is subscription-based—it does not lend to customers and records every subscription fee as cash, and so, it does not have accounts receivable.

The current liabilities used for the changes in WC were "current content liabilities"; "accounts payable"; "accrued expenses and other liabilities"; and "deferred revenue".

For the "other current assets", we first estimated it as a percentage of revenues for 2020 (6.2%), and then we assumed that the proportion would increase at an annual rate of 8.16%. The "current content liabilities" were projected as a percentage of the investment equal to the 2-year average (2019-2020) of 32.8%. Next, the "accounts payable" were estimated assuming

a constant payables turnover of 21.6, equal to the 3-year average (2018-2020) payables turnover. For both the “accrued expenses and other liabilities” and “deferred revenue”, we assumed that they would be projected as a percentage of revenue equal to 4.3% and 4.8%, respectively.

6. Peer Group

Before moving onward to the valuation, it is important to first refer to the peer group used in our further analysis.

We decided to include in the first stage of our peer group selection high-technology public companies that operate in similar business areas, such as entertainment or broadcasting.

Furthermore, we considered the following criteria to choose Netflix's final peer group:

- By the end of 2020, the company cannot have a market capitalization lower than $100 billion, or else it is excluded;
- For the 3-year revenue growth rate, and capital structure, the company must have these two financial metrics equal or above the group's median. For the ROE, it must be equal to or above the 1st quartile. If the company does not meet these conditions two or more times, it is excluded.

The table 6 displays the companies that we chose for the peer group selection. The ones that are colored in light beige are excluded from our final peer group.

Company	Industry	Market Cap (Value) $B	3Y Revenue Growth (%)	ROE (%)	Capital Structure (D/E)
Netflix	Entertainment	248.1	28.82%	29.62%	1.47
The Walt Disney Company	Entertainment	328.0	10.22%	-5.47%	0.60
Amazon	E-commerce	1,630.0	29.47%	27.07%	0.34
Facebook	Internet	778.0	28.35%	25.25%	0.24
Alphabet	Software	1,190.0	18.08%	19.03%	0.06
Comcast Corp	Telecommunications	239.8	10.37%	12.15%	1.15
Charter Communications	Telecommunications	132.2	4.97%	9.40%	2.70
ViacomCBS	Entertainment	23.0	2.94%	16.32%	1.23
Dish Network	Telecommunications	17.0	10.53%	14.02%	0.99
Fox Corporation	Entertainment	17.3	7.44%	14.58%	0.73
AT&T	Telecommunications	204.9	5.89%	-2.81%	0.86
BCE	Telecommunications	38.6	2.97%	11.57%	1.12
1st Quartile		23.0	4.97%	9.40%	0.34
Median		204.9	10.22%	14.02%	0.86
2nd Quartile		778.0	18.08%	19.03%	1.15

Table 6: Comparable companies' selection
Source: Own Estimates

In brief, Netflix's peer group is composed by three high-performing companies, Amazon, Facebook, and Alphabet; two direct competitors from the Streaming Wars, The Walt Disney Company, and Comcast Corporation; and one mature cable TV company, Charter Communications.

7. Valuation Methodologies

7.1. Discounted Cash Flow Valuation

7.1.1. Free Cash Flow to the Firm

After forecasting all three financial statements, we were able to estimate the FCFF for the forecasted period (2021-2028) (see Appendix G).

We first computed the net operating profit less adjusted taxes (NOPLAT). By using NOPLAT, we excluded the effects of debt financing from the earnings, making it a better financial measure of Netflix's core operating performance, net of adjusted taxes. Next, we added back non-cash charges, which include the amortization of content assets and P&E. Moreover, the operating cash flow is expected to grow at a fast pace, at a CAGR of 11.87% (2021-2028) (Figure 20).

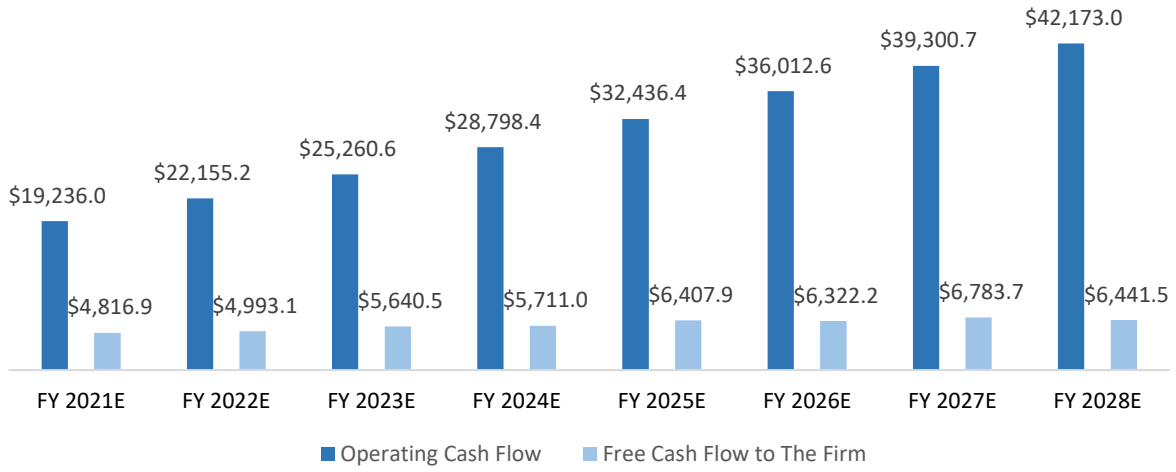


Figure 20: Projected Operating Cash Flow and FCFF (2021-2028)
Source: Own Estimates

However, since Netflix is a very capital-intensive company, the projected rise of the cash expenses in content assets is going to offset the cash inflows increase from the operations, making the FCFF grow at a CAGR of 4.24%.

7.1.2. Cost of Capital

7.1.2.1. Cost and Market Value of Equity

The model used to determine the cost of equity was the CAPM. The inputs needed to compute the cost of equity are referenced in the literature review.

The first input of the model—r_f— was taken from the US Department of the Treasury website. We decided to use the US 10-year treasury yield rate of 0.93% (as of December 31, 2020) as an approximation to the rate of interest that investors would earn by investing in a zero-risk investment in the US market.

Secondly, levered beta (β), was estimated using the pure-play method. Furthermore, for each comparable company, we used the 5-year levered beta that is provided in Yahoo Finance.

By applying formula 10, the projected average unlevered beta was equal to 0.77, close to Damodaran's estimate of 0.84 for the entertainment sector. Then, by computing the inverse operation of formula 10 and applying Netflix's capital structure, we reached an estimate of 1.67 for β (Table 7), which means that the stock price is expected to swing more dramatically than the overall market.

Pure-Play Method Company	5Y Levered Beta	Marginal Tax Rate	D/E	Unlevered Beta
The Walt Disney Company	1.19	21.0%	0.60	0.81
Amazon	1.15	21.0%	0.34	0.91
Facebook	1.30	21.0%	0.24	1.09
Alphabet	1.01	21.0%	0.06	0.96
Comcast Corp	1.04	21.0%	1.15	0.54
Charter Communications	0.99	21.0%	2.70	0.32
Average				0.77
Netflix	**1.67**	21.0%	1.47	0.77

Table 7: Pure-play beta computations
Source: Yahoo Finance, Own Estimates

Lastly, $E(R_m)$ was taken from Damodaran's academic website. We used the implied market risk premium for equities of 4.72% for the year 2020.

The following table summarizes the inputs we established to estimate the cost of equity by applying formula 8. Further, we estimated a cost of equity of 8.82%.

Cost of Equity (K_e)	
Risk-Free Rate (10y Treasury)	0.93%
Levered Beta	1.67
Market Risk Premium	4.72%
Cost of Equity	**8.82%**

Table 8: Netflix's cost of equity

Source: IMF, Damodaran's Academic Website, Own Estimates

Regarding the market value of equity, we used the implied number of diluted outstanding shares at the end of 2020 for our estimation. We used the number of diluted outstanding shares because we assume that option holders are rational, meaning they would exercise the in-the-money option contracts in either an acquisition or stand-alone scenario. The next table shows the millions of implied additional shares that would be outstanding if option holders were to exercise them.

Netflix Diluted Shares		
Share price (31/12/2020)	$	540.73
Number of basic shares outstanding		442.90
Number of outstanding options (ITM)		19
Average option strike price	$	80.40
Total options proceeds	$	1,501.6
Treasury stock method		2.8
Additional shares outstanding		15.9
Total diluted outstanding shares		**458.79**

Table 9: Computation of Netflix's diluted outstanding shares at the end of 2020 (in million)

Source: Yahoo Finance, Netflix's Form 10-K, Own Estimates

With a total of implied diluted outstanding shares of around 459 million and a market price of $540.73, we estimated a market capitalization of $248,084M for Netflix at the end of 2020.

7.1.2.2. Cost and Market Value of Debt

The pre-tax cost of debt was projected using the YTM approach. As stated before, the debt of the company is only constituted by senior notes (interest payable semi-annually). Moreover, Netflix provides in its Form 10-K the Level 2 fair value of the senior notes. Netflix (2021) states that the "Level 2 category is based on observable inputs, such as quoted prices for similar assets at the measurement date; quoted prices in markets that are not active; or other inputs that are

observable, either directly or indirectly". Hence, we used the company's estimates for the Level 2 fair value as an approximation for the market value of debt.

Having the market value of each senior note, we could, in turn, estimate each notes' YTM. Finally, we assumed that the pre-tax cost of debt was the weighted average YTM. The weights are the proportion of each senior note's par value to the total par value.

The table 10 summarizes all the computations needed to estimate the pre-tax cost of debt where: PV is the market value (cash outflow); FV is the par value; PMT is the semi-annual interest payment; N is the number of semesters until maturity.

Senior Notes Rates	PV	FV	% of total FV	PMT	N	YTM	YTM Adj
5.375%	(502)	500	3.05%	13.4	2	2.48%	4.96%
5.500%	(735)	700	4.26%	19.3	4	1.45%	2.91%
5.750%	(449)	400	2.44%	11.5	8	1.26%	2.51%
5.875%	(921)	800	4.87%	23.5	10	1.31%	2.63%
3.000%	(616)	574	3.50%	8.6	10	0.74%	1.48%
3.625%	(535)	500	3.05%	9.1	10	1.07%	2.14%
4.375%	(1,110)	1,000	6.09%	21.9	12	1.20%	2.40%
3.625%	(1,776)	1,588	9.67%	28.8	14	0.91%	1.82%
4.875%	(1,807)	1,600	9.75%	39.0	16	1.52%	3.04%
5.875%	(2,280)	1,900	11.57%	55.8	16	1.52%	3.04%
4.625%	(1,630)	1,344	8.19%	31.1	18	1.01%	2.03%
6.375%	(995)	800	4.87%	25.5	18	1.62%	3.23%
3.875%	(1,700)	1,466	8.93%	28.4	18	0.97%	1.93%
5.375%	(1,061)	900	5.48%	24.2	18	1.54%	3.08%
3.625%	(1,533)	1,344	8.19%	24.4	20	1.03%	2.06%
4.875%	(1,155)	1,000	6.09%	24.4	20	1.53%	3.06%
Total	**(18,805)**	**16,416**	**100.00%**	**Weighted Average YTM**			2.57%

Table 10: Estimation of Netflix's cost of debt using the weighted average YTM

Source: Netflix's Form 10-K, Own Estimates

In sum, we evaluated the market value of debt at $18,805M, and we computed a weighted average YTM of 2.57% that is equal to our pre-tax cost of debt. After applying a marginal tax rate of 21%, we reached an after-tax cost of debt of 2.03%.

7.1.2.3. Weighted Average Cost of Capital

After computing the after-tax cost of debt, the cost of equity, and the capital structure, we arrived at a WACC that yields a rate of 8.34% (Table 11).

Cost of Capital		
Cost of Equity (K_e)		8.82%
After-Tax Cost of Debt (K_d)		2.03%
Market Cap (E)	$	248,084.20
E/(E+D)		0.93
Market Value of Debt (D)	$	18,805.00
D/(E+D)		0.07
WACC (%)		**8.34%**

Table 11: Computation of Netflix's WACC

Source: Netflix's Form 10-K, Own Estimates

In comparison to Damodaran's estimate for the entertainment sector, this cost of capital is higher by 3.56 percentage points mainly due to the high leverage in Netflix's capital structure: the sector yields an average cost of capital 4.78% with a debt-to-equity ratio of 0.15; while Netflix yields a cost of capital of 8.34% and a debt-to-equity ratio of 1.47.

7.1.2. Exit Multiple

We decided to use an exit multiple to project the Terminal Value. In the last year of our projections, Netflix will be in a declining growth phase (in our base case scenario). Therefore, applying an exit multiple should yield an implied perpetuity growth rate higher than a company at the mature stage (i.e., between the historical inflation and the average GDP growth rate).

We decided not to use the next twelve months (NTM) EV/EBITDA of 13.71x (see Appendix L) because the company's operating expenses are mainly composed of non-cash charges. Thus, the EV/EBITDA exit multiple would lead to a biased upward valuation.

The exit multiple used to estimate the Terminal Value was the average next twelve months NTM EV/EBIT of the comparable companies, excluding the outliers. Moreover, the estimated EV/EBIT of 20.91x was assumed to be the best approximation of the Terminal Value. Further, this multiple was multiplied by the forecasted EBIT in the last year (2028) of our projections.

7.1.3. Fair Value

Considering the base case scenario and a WACC of 8.34%, we estimated that the accumulated present value of the 8-year projected FCFF would amount to $32,751.7M. Additionally, with an EBIT amounting to $10,428.2M in 2028 and an exit multiple of 20.91x, the present value of the Terminal Value is estimated to be $114,879.1M (see Appendix H).

Furthermore, the implied perpetuity growth rate for the exit multiple that we chose was 6.68%, meaning that if we used the perpetuity growth rate approach instead of the exit multiple, this growth rate would yield the same results in the DCF.

The sum of the accumulated present value of the FCFF is equal to the implied Enterprise Value of $147,630.8M. Then, to arrive at the implied Equity Value, we had to adjust for the long-term debt and current portion of the long-term, and the cash and cash equivalents; and divide by the number of diluted outstanding shares (Table 12).

Base Scenario Target Price	
Present Value of 1-8 Years FCFF	32,751.7
Present Value of Terminal Cash Flow	114,879.1
Total Present Value of FCFF	147,630.8
Minus: Debt and debt equivalents	16,309.0
Plus: Cash and cash equivalents	8,205.6
Implied Equity Value	**$139,527.4**
Million of Diluted Shares Outstanding	458.8
Implied Intrinsic Share Price	**$ 304.12**

Table 12: Netflix's implied intrinsic share price as of December 31, 2020 in the base scenario

Source: Netflix's Form 10-K, Own Estimates

With an estimated implied Equity Value of $139,527.4M, we arrived at an implied intrinsic share price for our base scenario of $304.12. Relative to the market price of $540.73 at the end of 2020, this target price has a downside of 43.78%.

In the downside case scenario, we estimated a target price of $246.93 with a downside relative to the market price of 54.33%. In the upside case scenario, we estimated a target price of $371.25 with a downside of 31.34%. Thus, the largest range of the target prices for DCF-WACC approach is $124.32.

Lastly, we decided to estimate the target price for our DCF model based on the probability of the implied share price of the three scenarios (Table 13).

Scenarios	Share Price	Probability
Base Case	$ 304.12	50%
Downside Case	$ 246.93	25%
Upside Case	$ 371.25	25%
Selected Target Price	**$ 306.60**	

Table 13: Expected Netflix's target price as of December 31, 2020

Source: Own Estimates

The selected target price was $306.60 for the DCF-WACC approach. This expected target price ponders the more likely scenario of a slowdown in Netflix's growth, and the less likely scenarios of a sustained high growth and stagnation in the future growth of the company.

7.1.3.1. Sensitivity Analysis

Apart from the fact that we wanted to check the robustness of our DCF model, it was important to analyze the sensitivity of the target share price to its key inputs.

The single most important input in our DCF model is the EBIT exit multiple because the present value of the terminal value made up 77.82% of the implied Enterprise Value (in the base case scenario). The second most important input is the WACC since it also greatly impacts the implied share price by discounting back the FCFF. Therefore, we measured how the changes in these two valuation inputs would affect the implied share price and implied perpetuity growth rate of our base case scenario.

We chose an incremental and decremental change from our base estimations for the exit multiple and WACC of 1.0x and 1%, respectively, since both the SVoD industry and Netflix are not yet in a stable stage of their life cycle (Table 14).

EBIT Exit Multiple	WACC					WACC					EBIT Exit Multiple
	6.34%	7.34%	8.34%	9.34%	10.34%	6.34%	7.34%	8.34%	9.34%	10.34%	
18.91x	$ 322.64	$ 300.55	$ 280.16	$261.34	$ 243.95	6.22%	6.37%	6.50%	6.63%	6.75%	18.91x
19.91x	$ 336.54	$ 313.45	$ 292.14	$272.47	$ 254.30	6.32%	6.46%	6.60%	6.72%	6.83%	19.91x
20.91x	$ 350.44	$ 326.34	$ 304.12	$283.60	$ 264.64	6.42%	6.55%	6.68%	6.79%	6.90%	20.91x
21.91x	$ 364.35	$ 339.24	$ 316.09	$294.73	$ 274.99	6.50%	6.63%	6.75%	6.86%	6.97%	21.91x
22.91x	$ 378.25	$ 352.14	$ 328.07	$305.85	$ 285.33	6.58%	6.71%	6.82%	6.93%	7.02%	22.91x

Table 14: Sensitivity analysis of the implied share price and perpetuity growth rate
Source: Own Estimates

In the light of the above outputs, the implied perpetuity growth rate seems reasonable since it remains within the boundaries of a company in a decelerated growth stage—between a minimum of 4% for mature companies to a maximum of 8% for early-stage companies.

Moreover, the implied share price ranges from a maximum of $378.25 to a minimum of $243.95. These share prices' limits for our base case scenario are not reasonable because they are slightly higher and lower than the upside and downside scenarios' target prices, respectively. Therefore, we assumed that our variables (EBIT exit multiple/WACC) could vary between 19.91x/9.34% to 21.91x/7.34%, reflecting a target share price that could range from a minimum of $272.47 to a maximum of $339.24.

We performed an additional sensitivity analysis on the implied share price and perpetuity growth rate to evaluate how high the EBIT exit multiple should be for our DCF's results to be close to the market price of $540.73 (see Appendix I). By maintaining WACC within the established limits (7.34%—9.34%), we concluded that for our DCF model to provide results that approximate to the market price, the EBIT exit multiple should be around twice (over 40x) our base multiple of 20.91x. Usually only start-ups in an acquisition scenario are valued at such a high multiple. Most importantly, the implied perpetuity growth rate would have to be higher than 8%, which is not realistic for a company in a decelerated growth stage like Netflix.

7.2. Relative Valuation

As a second stage valuation, we compared and evaluated Netflix's performance with its benchmark using a comparable company analysis.

The multiples we decided to assess were the LTM and NTM of the P/E, EV/EBITDA, and EV/EBIT. Before that, we prepared simple consolidated income statements for the years 2020 and 2021 for each company. Moreover, the revenue was projected based on CNN Business' forecasts for revenue growth, and the other income and expense items were estimated as a percentage of the revenue. Besides that, we also computed the diluted outstanding shares and Enterprise Value for the end of 2020 for each company.

In the table below we summarized the estimates for all the LTM and NTM comparable multiples.

Company	Price / Earnings		EV / Revenue		EV / EBITDA		EV / EBIT	
	LTM x	NTM x	LTM x	NTM x	LTM x	NTM x	LTM x	NTM x
Netflix	88.46x	72.49x	10.68x	9.09x	17.25x	13.44x	58.21x	50.13x
The Walt Disney Company	-	60.54x	5.28x	5.10x	48.61x	36.47x	255.62x	87.84x
Amazon	77.87x	61.88x	4.52x	3.56x	36.21x	28.51x	76.13x	59.96x
Facebook	27.07x	20.07x	8.45x	6.27x	18.37x	13.65x	22.23x	16.51x
Alphabet	29.89x	23.50x	6.04x	4.67x	20.78x	16.07x	26.72x	20.66x
Comcast Corp	22.34x	20.49x	3.22x	2.94x	10.90x	9.97x	19.07x	17.43x
Charter Communication	37.66x	35.32x	4.56x	4.30x	12.11x	11.43x	26.10x	24.63x
Low	22.34x	20.07x	3.22x	2.94x	10.90x	9.97x	19.07x	16.51x
Median	28.48x	29.41x	4.92x	4.48x	19.58x	14.86x	26.41x	22.64x
High	77.87x	61.88x	8.45x	6.27x	48.61x	36.47x	255.62x	87.84x

Table 15: LTM and NTM comparable multiples
Source: Companies' Financial Reports, CNN Business, Own Estimates

Overall, the comparable multiples are dispersed due to the different performances of the companies in the market. Further, we could categorize these companies into two sub-groups.

One has very high performance (The Walt Disney Company and Amazon) and the rest has a lower performance.

In comparison to the peer group, Netflix's P/E and EV/Revenue multiples are higher. Besides, EV/EBITDA is slightly lower than the median, and EV/EBIT is above the median. Consequently, just by comparing to the benchmark, we can conclude that Netflix may be trading at premium.

To account for the large dispersion, we decided to limit the range of multiples that could be used to estimate Netflix's implied share price. We established that the multiples should be within the average of the multiples plus/minus one standard deviation (see Appendix L). In the table 16, we display the average NTM multiples (excluding the ones that do not meet the previous criteria) and the adjustments made to compute the implied share price of Netflix using the comparable multiples.

Comparable Multiples	Price / Earnings	EV / Revenue	EV / EBITDA	EV / EBIT
Average NTM Multiple	**24.85x**	**4.41x**	**13.71x**	**20.91x**
Multiplying by:				
Net Income	3,422	-	-	-
Revenue	-	29,363	-	-
Adjusted EBITDA	-	-	19,865	-
EBIT	-	-	-	5,324
(=) Implied Enterprise Value	-	**129,363**	**272,431**	**111,305**
(-) Net Debt	-	-	-	-
(=) Implied Equity Value	**85,039**	**129,363**	**272,431**	**111,305**
Diluted Outstanding Shares	459	459	459	459
(=) Implied Share Price	**$ 185.35**	**$ 281.96**	**$ 593.80**	**$ 242.60**

Table 16: Netflix's implied share price computation using comparable multiples
Source: Owns Estimates

In sum, the implied share price from our relative valuation analysis should be between $167.69 and $264.30. We did not consider the implied share price from the NTM EV/EBITDA because, as we stated before in the section 7.1.2, the non-cash expenses of Netflix make up most of its operating expenses; hence the implied share price is biased upward. Nevertheless, the average of the NTM P/E, EV/Revenue, and EV/EBIT is $236.64, which is 23% below the selected target price of $306.60 of our DCF model and has a downside of 56% relative to the closing market price at the end of 2020.

7.3. Valuation Summary

We created a chart that shows all the possible ranges of implied share prices that Netflix could be valued at with our DCF and relative valuation analysis, and the 52-week market close price range.

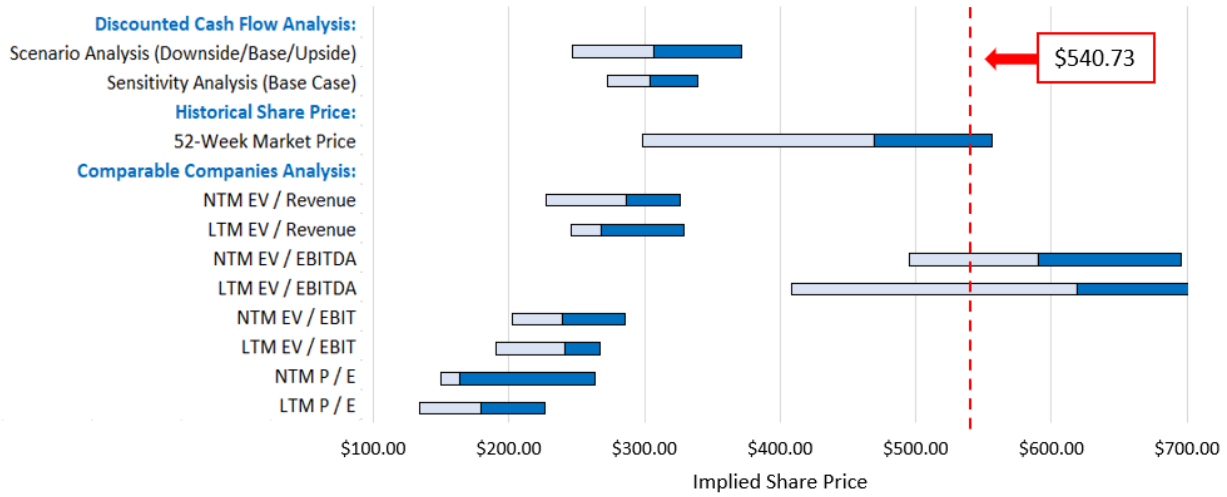


Figure 21: Price ranges of all the applied valuation methodologies
Source: Yahoo Finance, Own Estimates

Firstly, we can conclude that our DCF estimates for the implied share price are higher than the ones from the relative valuation. The reason for this is because in the DCF valuation we assumed that the company's profitability would keep increasing and so did the FCFF. Therefore, this optimistic view, in addition to a high implied perpetuity growth rate, translated in higher implied share prices—ranging from $246.93—$371.25 for the scenarios' analysis, and $272.47—$339.24 for the base case scenario's sensitivity analysis.

Regarding the comparable multiples' analysis, we can see that the implied share prices are higher for the EV/Revenue (ranging from $227.61—$328.84). Even though this multiple does not reflect the expense structure of the companies, it indicates that Netflix is appropriately valued given that it has higher revenue growth than the comparable companies used to compute this multiple. The implied share prices that derived from the EV/EBIT (ranging from $190.55—$285.79) and P/E (ranging from $134.46—$263.49) are the lowest in our analysis, mostly because Netflix has lower profit margins than the benchmark.

Overall, both DCF and comparable multiples' analysis indicate that Netflix is overvalued. However, by comparison to the 52-week market price range, the target price and upside results from the DCF analysis are within the range of the lower half of market prices.

Conclusion

Following the soaring of the market price over the last few years and overall market uncertainty, this case study had the goal to present a faithful estimate for Netflix's share price as of December 31, 2020 and compare it with the closing price of $540.73 to determine whether the company was overvalued or not at that time.

To accomplish that, we decided to value Netflix using two approaches. The main one was the DCF approach, where we projected the FCFF for eight years into the future and discounted them back at WACC. Our projections were mostly based on assumptions about the future of the industry and company. The key findings from the industry analysis were that Netflix will have increased competition pressures from its Streaming Wars' rivals in the upcoming years, and that the SVoD market is becoming highly saturated in most regions, except in EMEA. This will lead Netflix to have a diminishing growth in its subscription membership base, and therefore entering a decelerated growth phase at the end of our forecasted period.

In the process of building our DCF model, we reached a target price for the end of 2020 of $306.60, which translates into a downside of 43% relative to the market price.

As a second stage valuation, the comparable multiples' analysis resulted in coherent results with those of the DCF approach—both valuation approaches resulted in implied share prices that are lower than the market price. Hence, we concluded that Netflix's share price was overvalued, and our final recommendation is to sell the shares.

Nonetheless, it is important to bear in mind that both valuation methodologies have their own drawbacks. First and most importantly, the DCF analysis relies heavily on our streaming revenues' assumptions, and thus our results are very sensitive to changes on those assumptions.

Secondly, the Terminal Value, which was computed by applying an exit multiple, makes over 77% of the implied Enterprise Value. Furthermore, this method yielded an implied perpetuity growth rate of 6.68%, which is considerably high for a perpetual rate. Anyhow, we believe that Netflix can sustain such a high growth rate forever, similar to what the other FAANG companies have been doing for a long time.

Finally, the comparable multiples' analysis is flawed for two reasons. The first one is that having a static view of Netflix's value may not be a good representation of its potential growth nor the dynamic nature of the SVoD market and its competition. The second corresponds to the fact that this methodology depends on correctly valued peers to be useful. If we end up realizing the stock market is in fact in a "bubble", then the peer group is unproperly valued and the resulting multiples will also be misvalued.

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Appendixes

Appendix A – Forecasted inflation rate per region and sub-region (2021-2028)

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
UCAN:								
United States and Canada	1.06%	1.98%	2.32%	2.23%	1.90%	1.90%	1.90%	1.90%
EMEA:	3.54%	2.92%	2.93%	2.92%	3.08%	3.08%	3.08%	3.08%
Europe	1.87%	1.71%	1.87%	1.97%				
MENA	3.45%	2.65%	3.10%	2.57%				
Africa	5.39%	4.20%	3.91%	3.85%				
LATAM	3.35%	2.86%	3.76%	2.79%	3.19%	3.19%	3.19%	3.19%
APAC:	3.67%	3.00%	3.38%	3.16%	3.30%	3.30%	3.30%	3.30%
Asia	3.73%	3.03%	3.44%	3.20%				
Pacific	2.52%	2.44%	2.31%	2.46%				

Source: International Monetary Fund, Own Estimations

Appendix B – Streaming revenue, average number of paid subscribers and monthly ARPU

	Units:	FY 2017A	FY 2018A	FY 2019A	FY 2020A	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E	FY 2026E	FY 2027E	FY 2028E
Total Streaming Revenue	$ M	11,242.2	15,428.8	19,859.2	24,756.7	29,168.8	34,047.6	39,403.5	44,970.1	50,666.3	56,186.8	61,188.2	65,476.1
% Y/Y change	%	-	*37.24%*	*28.72%*	*24.66%*	*17.82%*	*16.73%*	*15.73%*	*14.13%*	*12.67%*	*10.90%*	*8.90%*	*7.01%*
UCAN	$ M	6,660.9	8,281.5	10,051.2	11,455.4	12,301.5	13,222.3	14,113.8	14,909.4	15,548.2	16,057.7	16,422.1	16,629.3
% Y/Y change	%	-	*24.33%*	*21.37%*	*13.97%*	*7.39%*	*7.48%*	*6.74%*	*5.64%*	*4.29%*	*3.28%*	*2.27%*	*1.26%*
EMEA	$ M	2,362.8	3,963.7	5,543.1	7,772.3	9,772.3	11,965.9	14,447.4	17,221.4	20,329.3	23,646.2	27,033.5	30,474.3
% Y/Y change	%	-	*67.75%*	*39.85%*	*40.22%*	*25.73%*	*22.45%*	*20.74%*	*19.20%*	*18.05%*	*16.32%*	*14.32%*	*12.73%*
LATAM	$ M	1,642.6	2,237.7	2,795.4	3,156.7	3,711.0	4,299.7	4,919.5	5,463.3	5,964.9	6,375.4	6,667.5	6,819.6
% Y/Y change	%	-	*36.23%*	*24.92%*	*12.92%*	*17.56%*	*15.86%*	*14.42%*	*11.05%*	*9.18%*	*6.88%*	*4.58%*	*2.28%*
APAC	$ M	575.9	945.8	1,469.5	2,372.3	3,384.0	4,559.7	5,922.8	7,376.1	8,823.8	10,107.5	11,065.1	11,552.8
% Y/Y change	%	-	*64.22%*	*55.37%*	*61.43%*	*42.65%*	*34.74%*	*29.89%*	*24.54%*	*19.63%*	*14.55%*	*9.47%*	*4.41%*
UCAN:													
Average Annual Paid Subs.	K	-	61,589.5	66,209.5	70,799.0	76,154.1	80,264.9	83,734.2	86,524.7	88,552.0	89,750.8	90,078.2	89,515.9
Monthly ARPU	$	$ 9.97	$ 11.16	$ 12.57	$ 13.32	$ 13.46	$ 13.73	$ 14.05	$ 14.36	$ 14.63	$ 14.91	$ 15.19	$ 15.48
EMEA													
Average Annual Paid Subs.	K	-	31,911.0	44,798.0	59,238.0	73,367.8	87,287.7	102,393.4	118,585.3	135,806.1	153,246.8	169,967.3	185,879.1
Monthly ARPU	$	$ 9.17	$ 10.45	$ 10.33	$ 10.72	$ 11.10	$ 11.42	$ 11.76	$ 12.10	$ 12.47	$ 12.86	$ 13.25	$ 13.66
LATAM:													
Average Annual Paid Subs.	K	-	22,897.0	28,747.0	34,477.0	40,164.6	45,242.4	49,888.5	53,898.5	57,028.6	59,068.9	59,865.3	59,338.3
Monthly ARPU	$	$ 8.09	$ 8.19	$ 8.21	$ 7.45	$ 7.70	$ 7.92	$ 8.22	$ 8.45	$ 8.72	$ 8.99	$ 9.28	$ 9.58
APAC:													
Average Annual Paid Subs.	K	-	8,554.0	13,420.0	20,862.5	29,825.6	39,018.1	49,025.9	59,185.6	68,538.2	75,999.4	80,540.6	81,402.5
Monthly ARPU	$	$ 9.11	$ 9.33	$ 9.24	$ 9.12	$ 9.45	$ 9.74	$ 10.07	$ 10.39	$ 10.73	$ 11.08	$ 11.45	$ 11.83

Source: Antenna, International Monetary Fund, Own Estimations

Appendix C – Netflix's consolidated income statements (2020-2028)

(In Millions of USD)	FY 2020A (Actual)	FY 2021E (Projected)	FY 2022E (Projected)	FY 2023 (Projected)	FY E2024 (Projected)	FY 2025E (Projected)	FY 2026E (Projected)	FY 2027E (Projected)	FY 2028E (Projected)
Revenue	$ 24,996	$ 29,363	$ 34,205	$ 39,531	$ 45,073	$ 50,750	$ 56,254	$ 61,243	$ 65,520
Streaming	24,757	29,169	34,048	39,404	44,970	50,666	56,187	61,188	65,476
Domestic DVD	239	194	157	127	103	83	68	55	44
Cost of Revenue	$ 15,276	$ 17,508	$ 19,455	$ 21,543	$ 25,030	$ 28,801	$ 32,711	$ 36,587	$ 40,278
Streaming	15,162	17,390	19,338	21,430	24,917	28,693	32,613	36,505	40,197
Domestic DVD	115	118	117	113	113	108	98	82	81
Gross Profit	**$ 9,720**	**$ 11,854**	**$ 14,750**	**$ 17,988**	**$ 20,043**	**$ 21,949**	**$ 23,544**	**$ 24,656**	**$ 25,243**
Operating Expenses	5,134	6,530	7,624	8,831	10,093	11,391	12,656	13,813	14,815
SG&A	3,305	4,836	5,633	6,511	7,424	8,358	9,265	10,087	10,791
Research & Development	1,830	1,694	1,991	2,321	2,669	3,032	3,391	3,726	4,024
Operating Income	**$ 4,585**	**$ 5,324**	**$ 7,125**	**$ 9,156**	**$ 9,950**	**$ 10,558**	**$ 10,887**	**$ 10,843**	**$ 10,428**
Non-Operating (Income) Expense	1,386	1,462	1,549	1,662	1,787	1,875	1,948	2,021	2,003
Interest Expense	767	735	703	684	672	619	556	506	382
Interest and other Income (Expense)	618	726	846	978	1,115	1,256	1,392	1,515	1,621
Pre-Tax Income	**$ 3,199**	**$ 3,862**	**$ 5,576**	**$ 7,495**	**$ 8,163**	**$ 8,683**	**$ 8,939**	**$ 8,822**	**$ 8,425**
Income Tax Expense (Benefit)	438	440	719	1,108	1,209	1,295	1,319	1,272	1,168
Current Income Tax	368	567	879	1,306	1,434	1,550	1,600	1,577	1,493
Deferred Income Tax	70	(127)	(161)	(198)	(226)	(254)	(281)	(305)	(325)
Net income	**$ 2,761**	**$ 3,422**	**$ 4,858**	**$ 6,387**	**$ 6,955**	**$ 7,388**	**$ 7,620**	**$ 7,550**	**$ 7,257**
Basic Shares Outstanding	440.9	441.5	442.2	442.9	443.7	444.5	445.2	445.9	446.5
Basic Earnings per Share	$ 6.26	$ 7.75	$ 10.99	$ 14.42	$ 15.67	$ 16.62	$ 17.11	$ 16.93	$ 16.25

Source: Netflix Annual Report, Own Estimations

Appendix D – Netflix's income tax expense projections (in millions of USD)

R&D credit projection

		FY 2018	FY 2019	FY 2020	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E	FY 2026E	FY 2027E	FY 2028E
	R&D expenses	1,221.8	1,545.1	1,829.6	1,694.4	1,990.8	2,320.7	2,669.3	3,032.1	3,391.4	3,726.0	4,023.5
STEP 1	Average 3-year expenses				1,689.7	1,838.3	2,002.0	2,326.9	2,674.0	3,030.9	3,383.2	3,713.6
STEP 2	Half of the above amount				844.9	919.1	1,001.0	1,163.5	1,337.0	1,515.5	1,691.6	1,856.8
STEP 3	Difference between R&D and step 2				849.6	1,071.7	1,319.7	1,505.8	1,695.1	1,875.9	2,034.4	2,166.7
STEP 4	**R&D credit: 15% of the step 3**				**(127.44)**	**(160.75)**	**(197.96)**	**(225.87)**	**(254.27)**	**(281.38)**	**(305.16)**	**(325.00)**

Current income tax projection

	FY 2018	FY 2019	FY 2020	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E	FY 2026E	FY 2027E	FY 2028E
US Federal Statutory tax rate	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Earnings Before Taxes	1,226.5	2,062.2	3,199.3	3,861.9	5,576.4	7,494.9	8,163.2	8,683.5	8,939.0	8,822.0	8,425.1
Expected tax expense	257.6	433.1	671.9	**811.0**	**1,171.0**	**1,573.9**	**1,714.3**	**1,823.5**	**1,877.2**	**1,852.6**	**1,769.3**
Stock-based compensation (excess)	(191.3)	(148.7)	(339.4)	**(244.1)**	**(291.8)**	**(267.9)**	**(279.8)**	**(273.9)**	**(276.8)**	**(275.4)**	**(276.1)**
Current income tax				**566.9**	**879.3**	**1,306.0**	**1,434.5**	**1,549.7**	**1,600.3**	**1,577.3**	**1,493.2**
Effective tax rate	1.2%	9.5%	13.7%	**11.4%**	**12.9%**	**14.8%**	**14.8%**	**14.9%**	**14.8%**	**14.4%**	**13.9%**

Source: Franchise Tax Board, Own Estimations

Appendix E – Netflix's consolidated balance sheets (2020-2028)

(In Millions of USD)	December 31, 2020 (Actual)	December 31, 2021E (Projected)	December 31, 2022E (Projected)	December 31, 2023E (Projected)	December 31, 2024E (Projected)	December 31, 2025E (Projected)	December 31, 2026E (Projected)	December 31, 2027E (Projected)	December 31, 2028E (Projected)
Assets									
Current assets:									
Cash and cash equivalents	8,205.6	12,187.0	15,391.8	21,081.0	26,961.3	31,182.0	36,566.5	42,990.6	44,789.6
Current content assets, net	-	-	-	-	-	-	-	-	-
Other current assets	1,556.0	1,977.1	2,491.1	3,114.0	3,840.4	4,677.0	5,607.5	6,603.0	7,640.9
Total current assets	$ 9,761.58	$ 14,164.1	$ 17,882.9	$ 24,195.0	$ 30,801.7	$ 35,859.0	$ 42,173.9	$ 49,593.6	$ 52,430.4
Non-current content assets, net	25,384.0	25,689.8	27,164.8	30,020.2	33,053.4	36,130.7	39,074.3	41,659.8	43,682.8
Property and equipment, net	960.2	1,290.9	1,668.9	2,101.4	2,603.1	3,165.2	3,784.5	4,453.8	5,163.9
Other non-current assets	3,174.6	3,851.2	4,486.3	5,184.8	5,911.8	6,656.3	7,378.3	8,032.6	8,593.6
Total assets	**$ 39,280.36**	**$ 44,995.99**	**$ 51,202.88**	**$ 61,501.40**	**$ 72,369.94**	**$ 81,811.22**	**$ 92,411.07**	**$ 103,739.74**	**$ 109,870.78**
Liabilities and Stockholders' Equity									
Current liabilities:									
Current content liabilities	4,429.5	4,826.0	5,670.1	6,609.7	7,602.5	8,636.0	9,659.0	10,612.2	11,459.5
Accounts payable	656.2	968.0	836.8	1,161.7	1,160.2	1,511.5	1,523.0	1,871.1	1,865.3
Accrued expenses and other liabilities	1,102.2	1,261.4	1,469.4	1,698.2	1,936.3	2,180.2	2,416.7	2,631.0	2,814.7
Deferred revenue	1,118.0	1,407.1	1,639.1	1,894.4	2,160.0	2,432.0	2,695.8	2,934.9	3,139.9
Short-term debt	499.9	700.0	-	400.0	1,374.0	1,000.0	1,588.0	3,500.0	3,166.0
Total current liabilities	$ 7,805.79	$ 9,162.5	$ 9,615.4	$ 11,763.9	$ 14,233.0	$ 15,759.6	$ 17,882.5	$ 21,549.1	$ 22,445.4
Non-current content liabilities	2,618.1	3,218.1	3,781.0	4,407.5	5,069.6	5,758.7	6,441.0	7,076.6	7,641.6
Long-term debt	15,809.1	15,309.2	14,609.2	14,609.2	14,209.2	12,835.2	11,835.2	10,247.2	6,747.2
Other non-current liabilities	1,982.2	2,216.18	2,581.63	2,983.62	3,401.94	3,830.39	4,245.86	4,622.37	4,945.22
Total liabilities	$ 28,215.1	$ 29,906.0	$ 30,587.2	$ 33,764.3	$ 36,913.7	$ 38,184.0	$ 40,404.5	$ 43,495.3	$ 41,779.4
Stockholders' equity:									
Common stock	3,447.7	4,050.0	4,717.8	5,452.5	6,216.9	6,999.9	7,759.2	8,447.2	9,037.2
Accumulated other comprehensive income (loss)	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4
Retained earnings	7,573.1	10,995.57	15,853.41	22,240.22	29,194.88	36,582.96	44,202.98	51,752.86	59,009.80
Total stockholders' equity	$ 11,065.24	15,089.95	20,615.65	27,737.08	35,456.20	43,627.24	52,006.54	60,244.48	68,091.40
Total liabilities and stockholders' equity	**$ 39,280.36**	**$ 44,995.99**	**$ 51,202.88**	**$ 61,501.40**	**$ 72,369.94**	**$ 81,811.22**	**$ 92,411.07**	**$ 103,739.74**	**$ 109,870.78**

Source: Netflix Annual Report, Own Estimations

Appendix F – Netflix's consolidated cash flow statements (2020-2028)

(In Millions of USD)	December 31, 2020A (Actual)	December 31, 2021E (Projected)	December 31, 2022E (Projected)	December 31, 2023E (Projected)	December 31, 2024E (Projected)	December 31, 2025E (Projected)	December 31, 2026E (Projected)	December 31, 2027E (Projected)	December 31, 2028E (Projected)
Cash flow from operating activities:									
Net income	2,761.4	3,422.4	4,857.8	6,386.8	6,954.7	7,388.1	7,620.0	7,549.9	7,256.9
Adjustments from operating activities:									
Investment in content	(12,536.7)	(14,726.8)	(17,302.5)	(20,169.8)	(23,199.4)	(26,353.1)	(29,475.1)	(32,383.7)	(34,969.3)
Amortization of content assets	11,681.5	14,421.0	15,827.5	17,314.4	20,166.2	23,275.8	26,531.5	29,798.3	32,946.3
Amortization of property and equipment	78.8	97.1	120.4	143.5	154.9	177.3	200.4	223.1	244.4
Changes in working capital items:									
Other current assets	(396.0)	(421.0)	(514.0)	(622.9)	(726.4)	(836.6)	(930.5)	(995.6)	(1,037.8)
Current content liabilities	16.0	396.5	844.1	939.6	992.8	1,033.5	1,023.1	953.1	847.3
Accounts payable	(18.2)	311.8	(131.2)	324.9	(1.4)	351.2	11.5	348.1	(5.8)
Accrued expenses and other liabilities	259.2	159.2	208.0	228.8	238.1	243.9	236.5	214.3	183.8
Deferred revenue	193.2	289.1	232.0	255.2	265.6	272.0	263.8	239.1	205.0
Net cash provided by (used in) operating activities	**2,039.2**	**3,949.2**	**4,142.1**	**4,800.6**	**4,845.1**	**5,552.1**	**5,481.1**	**5,946.6**	**5,670.8**
Cash flow from investing activities:									
Purchases of property and equipment	(497.9)	(427.8)	(498.4)	(576.0)	(656.7)	(739.4)	(819.6)	(892.3)	(954.6)
Changes in other non-current assets and liabilities	(625.6)	157.5	293.2	330.0	353.4	373.1	375.7	357.8	326.8
Net cash provided by (used in) investing activities	**(1,123.5)**	**(270.3)**	**(205.1)**	**(246.0)**	**(303.3)**	**(366.3)**	**(443.9)**	**(534.5)**	**(627.8)**
Beginning cash	5,018.4	8,205.6	12,187.0	15,391.8	21,081.0	26,961.3	31,182.0	36,566.5	42,990.6
Additional (less) cash flow for financing	915.7	3,678.9	3,936.9	4,554.6	4,541.8	5,185.7	5,037.2	5,412.1	5,043.0
Net cash available for debt financing	5,934.1	11,884.5	16,123.9	19,946.4	25,622.8	32,147.0	36,219.2	41,978.5	48,033.6
Cash flow from financing activities									
Repayment of debt	499.9	200.1	(700.0)	400.0	974.0	(374.0)	588.0	1,912.0	(334.0)
Issuance (reduction) of long-term debt	1,049.8	(499.9)	(700.0)	-	(400.0)	(1,374.0)	(1,000.0)	(1,588.0)	(3,500.0)
Changes in other comprehensive income	67.9	-	-	-	-	-	-	-	-
Issuance of new equity	653.8	602.3	667.8	734.6	764.5	783.0	759.3	688.1	590.0
Net cash provided by (used in) financing activities	**2,271.4**	**302.5**	**(732.2)**	**1,134.6**	**1,338.5**	**(965.0)**	**347.3**	**1,012.1**	**(3,244.0)**
End of the year net cash	**8,205.6**	**12,187.0**	**15,391.8**	**21,081.0**	**26,961.3**	**31,182.0**	**36,566.5**	**42,990.6**	**44,789.6**

Source: Netflix Annual Report, Own Estimations

Appendix G – Forecasted FCFF (2021-2028) (in millions of USD)

	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E	FY 2026E	FY 2027E	FY 2028E
EBIT	**$ 5,323.8**	**$ 7,125.4**	**$ 9,156.4**	**$ 9,950.4**	**$ 10,558.4**	**$ 10,887.1**	**$ 10,842.8**	**$ 10,428.2**
Effective Tax Rate	11.4%	12.9%	14.8%	14.8%	14.9%	14.8%	14.4%	13.9%
Adjusted Taxes	605.9	918.1	1,353.7	1,473.2	1,575.1	1,606.4	1,563.5	1,445.9
NOPLAT	**$ 4,718.0**	**$ 6,207.3**	**$ 7,802.7**	**$ 8,477.2**	**$ 8,983.3**	**$ 9,280.7**	**$ 9,279.3**	**$ 8,982.3**
Plus:								
Amortization of content assets	14,421.0	15,827.5	17,314.4	20,166.2	23,275.8	26,531.5	29,798.3	32,946.3
Amortization of P&E	97.1	120.4	143.5	154.9	177.3	200.4	223.1	244.4
Operating Cash Flow	**$ 19,236.0**	**$ 22,155.2**	**$ 25,260.6**	**$ 28,798.4**	**$ 32,436.4**	**$ 36,012.6**	**$ 39,300.7**	**$ 42,173.0**
Less:								
Investment in content	14,726.8	17,302.5	20,169.8	23,199.4	26,353.1	29,475.1	32,383.7	34,969.3
Purchases of P&E	427.8	498.4	576.0	656.7	739.4	819.6	892.3	954.6
Changes in working capital	(735.6)	(638.9)	(1,125.7)	(768.7)	(1,064.0)	(604.4)	(759.0)	(192.4)
Free Cash Flow to The Firm	**$ 4,816.9**	**$ 4,993.1**	**$ 5,640.5**	**$ 5,711.0**	**$ 6,407.9**	**$ 6,322.2**	**$ 6,783.7**	**$ 6,441.5**

Source: Own Estimations

Appendix H – Projected present value of the FCFF (2021-2028) (in millions of USD)

	FY 2020A	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E	FY 2026E	FY 2027E	FY 2028E	Perpetuity
Date	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029
WACC (%)	8.34%									
EBIT Exit Multiple										20.91x
Years From Date of Valuation		1	2	3	4	5	6	7	8	
Discount Factor		1.08	1.17	1.27	1.38	1.49	1.62	1.75	1.90	
Present Value of FCFF		**$ 4,446.2**	**$ 4,254.1**	**$ 4,435.8**	**$ 4,145.5**	**$ 4,293.4**	**$ 3,910.0**	**$ 3,872.5**	**$ 3,394.1**	**$ 114,879.1**
IRR FCF	(266,889.2)	$ 4,446.2	$ 4,254.1	$ 4,435.8	$ 4,145.5	$ 4,293.4	$ 3,910.0	$ 3,872.5	$ 3,394.1	$ 114,879.1

Source: Own Estimations

Appendix I – Sensitivity analysis of the implied share price and perpetuity growth rate as an approximation to the market price at the end of 2020

		WACC				
	$ 304.12	7.34%	7.84%	8.34%	8.84%	9.34%
EBIT Exit Multiple	39.00x	$ 559.73	$ 539.87	$ 520.81	$ 502.51	$ 484.94
	40.00x	$ 572.62	$ 552.30	$ 532.79	$ 514.05	$ 496.06
	41.00x	$ 585.52	$ 564.73	$ 544.76	$ 525.60	$ 507.19
	42.00x	$ 598.42	$ 577.16	$ 556.74	$ 537.14	$ 518.32
	43.00x	$ 611.32	$ 589.58	$ 568.72	$ 548.68	$ 529.45

		WACC				
	6.68%	7.34%	7.84%	8.34%	8.84%	9.34%
EBIT Exit Multiple	39.00x	7.83%	8.06%	8.19%	8.26%	8.30%
	40.00x	8.32%	8.33%	8.33%	8.34%	8.34%
	41.00x	8.34%	8.34%	8.34%	8.34%	8.34%
	42.00x	8.34%	8.34%	8.34%	8.34%	8.34%
	43.00x	8.34%	8.34%	8.34%	8.34%	8.34%

Source: Own Estimations

Appendix J – Estimated market values of the comparable companies at the end of 2020

Company	Share price as of 12/31/2020	Market Cap (Value) $M	Enterprise Value $M
Netflix	$ 540.73	248,084	266,889
The Walt Disney Company	$ 153.61	279,293	320,808
Amazon	$ 3,256.93	1,675,966	1,743,287
Facebook	$ 273.16	787,609	726,178
Alphabet	$ 1,751.88	1,224,458	1,101,696
Comcast Corp	$ 51.70	239,785	333,528
Charter Communication	$ 661.55	137,586	219,340

Source: Yahoo Finance, Own Estimations

Appendix K – Estimated LTM and NTM operating statistics of the comparable companies (in millions of USD except per share)

Operating Statistics / Company	Revenue		EBITDA		EBIT		EPS	
	LTM	NTM	LTM	NTM	LTM	NTM	LTM	NTM
Netflix	24,996.1	29,362.7	15,471.0	19,865.2	4,585.3	5,323.8	6.11	7.46
The Walt Disney Company	60,760.0	62,941.3	6,599.0	8,797.0	1,255.0	3,652.0	(2.52)	2.54
Amazon	386,064.0	490,185.5	48,150.0	61,136.1	22,899.0	29,074.9	41.83	52.63
Facebook	85,965.0	115,726.1	39,533.0	53,219.3	32,671.0	43,981.7	10.09	13.61
Alphabet	182,527.0	236,135.2	53,005.0	68,572.6	41,224.0	53,331.5	58.61	74.54
Comcast Corp	103,564.0	113,257.6	30,593.0	33,456.5	17,493.0	19,130.3	2.31	2.52
Charter Communication	48,097.0	50,963.6	18,109.0	19,188.3	8,405.0	8,905.9	17.57	18.73

Source: Companies' Financial Reports, Own Estimations

Appendix L – LTM and NTM comparable multiples

Company	Price / Earnings		EV / Revenue		EV / EBITDA		EV / EBIT	
	LTM	NTM	LTM	NTM	LTM	NTM	LTM	NTM
	x	x	x	x	x	x	x	x
Netflix	88.46x	72.49x	10.68x	9.09x	17.25x	13.44x	58.21x	50.13x
The Walt Disney Company	-	60.54x	5.28x	5.10x	48.61x	36.47x	255.62x	87.84x
Amazon	77.87x	61.88x	4.52x	3.56x	36.21x	28.51x	76.13x	59.96x
Facebook	27.07x	20.07x	8.45x	6.27x	18.37x	13.65x	22.23x	16.51x
Alphabet	29.89x	23.50x	6.04x	4.67x	20.78x	16.07x	26.72x	20.66x
Comcast Corp	22.34x	20.49x	3.22x	2.94x	10.90x	9.97x	19.07x	17.43x
Charter Communication	37.66x	35.32x	4.56x	4.30x	12.11x	11.43x	26.10x	24.63x
Median	29.89x	22.00x	4.92x	4.48x	18.37x	13.65x	24.16x	20.66x
Average	31.54x	24.85x	5.10x	4.41x	17.09x	13.71x	23.53x	20.91x
High	37.66x	35.32x	6.04x	5.10x	20.78x	16.07x	26.72x	24.63x
Low	22.34x	20.07x	4.52x	3.56x	12.11x	11.43x	19.07x	17.43x
Average + SD	61.41x	49.94x	7.35x	5.62x	29.80x	23.33x	57.78x	46.07x
Average - SD	23.80x	17.96x	3.48x	3.35x	11.77x	10.61x	20.54x	16.77x

Source: Own Estimations