



Netflix Inc. Equity Valuation

José Pedro Alves

Dissertation written under the supervision of José Tudela Martins

Dissertation submitted in partial fulfilment of requirements for the MSc in Finance,
at the Universidade Católica Portuguesa, 24th of May 2018.

Netflix Inc.

Netflix is the number one streaming content provider in the world, having over 117,5 million subscribers worldwide. The firm has been able to systematically increase the price of its streaming packages without compromising subscriber growth and has yielded its investors remarkable returns in 2018, with its price per share increasing 68,88% YTD.

A simultaneous growth in price and subscriber base of this order is only possible in a market with minimal competition, which is a consequence of Netflix's first mover advantage. Naturally, this growth didn't go unnoticed by the media and technology giants, such as Amazon, Apple, Google, Facebook or Disney, which have shown their interest in expanding their operations into the streaming content business.

Being so, one critical question that poses is whether the market is accurately pricing the threat of competition into Netflix's stock price or whether it is overvalued as a consequence of this risk being overlooked.

The conclusion of this dissertation is that the market is overlooking this risk and that the Netflix's stock is overpriced. As a result, the underlying recommendation is that investors should sell this stock.

Equity Research Report

Internet & Media

15th of May 2018

Price Target: \$239,35

Price (15-05-2018): \$328,53

Recommendation: SELL

Ticker: NFLX

Company Data

Market Cap. (\$ million): 141.910

Shares Outstanding (million): 448,1

Free Float (%): 440,32

Price % Change YTD: 68,88%

52-week Range: \$144,25 – \$338, 82

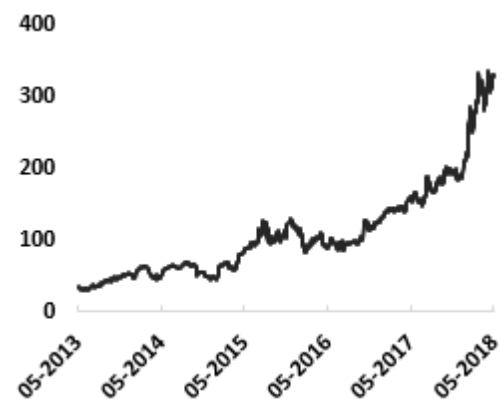
Morgan Stanley's Valuation

Recommendation: BUY

Price Target: \$275

Price (22-01-2018): \$227,58

Stock Price Performance



Abstract

Title: Netflix Inc. Equity Valuation

Author: José Pedro Alves

Keywords: Valuation, Discounted Cash-Flow, Multiples

The aim of this dissertation is estimating the fair value of one unit of Netflix's common stock, at the end of the year 2018. Two valuation methodologies are utilized, the first being the Discounted Cash-Flow (DCF) approach and the second being the relative valuation methodology, being the multiples used the P/E, EV/EBITDA and EV/Sales. The valuation output is then compared to the equity research report of Morgan Stanley on Netflix.

The valuation output is that Netflix is overvalued in the market, being the fair value of one unit of common stock estimated to be \$239,35 at the end of 2018, while the stock is trading at \$328,53 on the 15th of May 2018. Hence, the recommendation produced in this dissertation is a sell recommendation. This recommendation is only a function of the DCF approach, since the relative valuation outputs were not consistent across the different multiples used nor with the value computed through the DCF approach. Morgan Stanley estimates the value of one unit of common stock at the end of 2018 to be \$275, which is a higher valuation than the one estimated in this dissertation and also yields an opposite recommendation, as Netflix's stock was trading at \$227,58 at the time of valuation. This difference is mainly explained by different assumptions regarding the evolution of Netflix's FCFs, as the WACC in both valuations differs only 12 basis points and the perpetual growth rate differs only 17 basis points.

-

Esta dissertação pretende estimar o justo-valor de uma ação da Netflix no final de 2018. Para tal, dois métodos de avaliação são utilizados, sendo o primeiro o método de Discounted Cash-Flow (DCF) e o segundo o método de relative valuation, sendo os múltiplos utilizados o P/E, EV/EBITDA e o EV/Sales. O resultado obtido nesta avaliação é posteriormente comparado com o equity research report produzido pela Morgan Stanley sobre a Netflix.

A avaliação realizada estima que as ações da Netflix estão sobreavaliadas no mercado. O justo-valor de uma ação é estimado ser \$239,35 no final de 2018, no entanto, as mesmas estão a ser transacionadas no mercado a 15 de Maio de 2018 por \$328,53. Assim, a recomendação produzida é de que os investidores devem vender as ações em questão. Esta recomendação é feita apenas em função do método DCF, dado que os resultados obtidos através da relative valuation são inconsistentes entre os diferentes múltiplos usados e inconsistentes com o resultado obtido através do método DCF. A Morgan Stanley estima o justo-valor de uma ação da Netflix no final de 2018 em \$275. Este valor é superior ao estimado nesta dissertação e resulta numa recomendação oposta, dado que, à data da avaliação realizada pela Morgan Stanley, as ações da Netflix transacionavam a \$227,58. A diferença entre as avaliações é essencialmente explicada por diferentes pressupostos relativos à evolução dos FCFs, visto que o WACC e a taxa de crescimento em perpetuidade diferem apenas 12 e 17 pontos base entre as avaliações, respetivamente.

Acknowledgments

The conclusion of this dissertation represents the end of a five-year journey at Católica-Lisbon, in which I completed my BSc in Business Administration and now my MSc in Finance. It is my belief that joining this prestigious school was the right choice for me, as I feel the rigor, hard-work and integrity culture taught during this process has prepared me to face the upcoming challenges of my professional career.

I would like to thank my parents for their unconditional support, not only during the past months, during which this dissertation was completed, but also during the past five years in which I was granted the opportunity to study at a top-tier business school with no concern other than focusing on my studies. I was provided every condition needed to walk this path, for which I am extremely grateful.

Gratitude is also owed to the Dunas Capital investment team, Pedro Fernandes, Pedro Alves and Bernardo Moreira, for the valuable lessons they have taught me during the time I spent interning at the firm, as well as the advice related to the completion of this dissertation.

To my girlfriend and friends I also express my gratitude for helping me maintain a healthy work-life balance during the period of completion of this dissertation, as well as for your support and kind words during the difficult times faced.

At last, I would like to thank Professor José Tudela Martins for his availability and valuable advice.

Table of Contents

1. Introduction	1
2. Literature Review	2
2.1. Cash-Flow Based Models.....	2
2.2. Discounted Cash-Flow Model (DCF)	2
2.2.1. Enterprise Value Methods.....	2
2.2.2. DCF – Weighted Average Cost of Capital (WACC)	2
2.2.2.1. Free-Cash Flow to Firm (FCFF)	3
2.2.2.2. Weighted Average Cost of Capital (WACC).....	3
2.2.2.2.1. Cost of Debt (Kd).....	4
2.2.2.2.2. Cost of Equity (Ke)	4
2.2.2.2.2.1. Capital Asset Pricing Model (CAPM)	4
2.2.2.3. Terminal Value (TV).....	5
2.3. Adjusted Present Value Model (APV).....	5
3. Equity Valuation Models	7
3.1. Free Cash-Flow to Equity	7
3.2. Dividend Discount Model (DDM)	8
3.2.1. Gordon Growth Model	8
3.2.2. Two-stage Growth Model	8
4. Profitability Models.....	9
4.1. Economic Value Added (EVA).....	9
4.2. Dynamic Return on Equity Methodology (RoE)	10
5. Relative Valuation.....	10
5.1. Peer Group.....	11
5.2. Multiples.....	11
6. Option Pricing Theory.....	13
7. Conclusion.....	13
8. Business Overview	15
8.1. Content Sources.....	16
8.2. Business Segment Evolution.....	17

8.3. Consolidated Operating Results	18
8.4. Strengths & Opportunities.....	19
8.4.1. Subscriber Base Evolution	19
8.4.2. Platform Quality	20
8.5. Risks & Threats	21
8.5.1. Competition.....	21
8.5.1.1. Pricing Power	25
8.5.1.2. Disney-Fox Merge.....	25
9. Net Neutrality	26
10. Valuation	27
10.1. Discounted Cash-Flow Model - Assumptions	27
10.2. Earnings Before Interest and Taxes (EBIT).....	27
10.2.1.1. Average Monthly Revenue per Paid Subscriber	28
10.2.1.2. Market Size	29
10.2.1.3. Market Penetration	29
10.3. Revenue	31
10.4 Cost of Revenue	31
10.5. Other Operating Costs.....	34
10.5.1. Marketing	34
10.5.2. General & Administrative Costs	34
10.5.3. Technology & Development	35
10.6. Taxes	35
10.7. Streaming Content Expenses.....	36
10.8. Non-Cash Charges.....	36
10.9. Capital Expenditures (CAPEX)	36
10.10. Changes in Working Capital	37
11. Discounted Cash-Flow – Valuation	37
11.1. Free Cash-Flow to the Firm (FCFF)	37
11.2. Weighted Average Cost of Capital (WACC).....	38
11.3. Net Debt	38
11.4. Fair Value of Equity.....	38

12. Sensitivity Analysis.....	39
13. Relative Valuation.....	41
13.1. Peer Group Selection.....	41
13.2. Multiples Valuation.....	44
14. Valuation Comparison.....	45
15. Conclusion.....	47
Appendixes.....	48
Appendix 1 – Subscribers and Contribution Profit Evolution per Segment	48
Appendix 4 - World Economy Outlook	54
Appendix 5 - Subscriber Evolution per Geography and Segment	55
Appendix 6 – Revenue and Paid Subscribers * Monthly Revenue per Paid Subscriber * 12 Comparison	57
Appendix 7 – Corporate Tax Rate.....	58
Appendix 8 – Equity Risk Premium	59
Appendix 9 – Levered Beta Calculation	61
Appendix 10 – Cost of Debt and Market Value of Debt.....	63
Appendix 11 – Perpetual Growth Rate	65
Appendix 12 – Forecasted Financial Statements	67
References	71

Table of Figures

Figure 1 – Relative Valuation Multiples.....	11
Figure 2 – Business Model.....	15
Figure 3 – Streaming Packages.....	15
Figure 4 – DVD Packages.....	16
Figure 5 – Revenues per Business Segment (in \$ millions)	17
Figure 6 – Netflix Subscriber Evolution and Operating Results (in millions, except Avg. Revenue per subscriber)	18
Figure 7 – Gross Margin and Operating Margin Historical Evolution.....	19
Figure 8 – Netflix Subscriber Base Evolution (in millions)	19
Figure 9 – Subscriber Base Comparison (in millions)	22
Figure 10 – Content Expenditure (in \$ billions)	23
Figure 11 – Netflix vs Amazon: Content Expenditure (in \$ billions)	23
Figure 12 – US Monthly Prices Comparison.....	24
Figure 13 – Average Monthly Revenue per Paid Subscriber (\$).....	28
Figure 14 – Forecasted Subscriber Evolution per Operating Segment (in \$ million)	30
Figure 15 – Forecasted Revenue per Operating Segment (in \$ million)	31
Figure 16 – Forecasted Additions to Streaming Content (in \$ million)	32
Figure 17 – Forecasted Amortization of Streaming Content (in \$ million).....	33
Figure 18 – Forecasted Cost of Revenue (in \$ million)	33
Figure 19 – Forecasted Marketing Expenditures (in \$ million)	34
Figure 20 – Forecasted General & Administrative Costs (in \$ million)	34
Figure 21 – Forecasted Technology & Development Expenditures (in \$ million)	35
Figure 22 – Forecasted Streaming Content Expenses (in \$ million)	35
Figure 23 – Forecasted Corporate Tax Rate (in \$ million)	36
Figure 24 – Forecasted Non-Cash Charges (in \$ million)	36
Figure 25 – Forecasted Capital Expenditures (in \$ million)	36
Figure 26 – Changes in Working Capital (in \$ million)	37
Figure 27 – Forecasted Free Cash-Flow to the Firm (in \$ million)	37

Figure 28 – Forecasted Weighted Average Cost of Capital (WACC)	38
Figure 29 – Estimated Net Debt (in \$ million)	38
Figure 30 – Estimated Fair Value of Equity.....	38
Figure 31 – Beta across different periods of analysis.....	39
Figure 32 – Sensitivity Analysis of WACC and Perpetual Growth Rate (in \$, except WACC and Perpetual Growth Rate)	40
Figure 33 – Sensitivity Analysis of the main drivers of FCFF.....	40
Figure 34 – Broad Peer Group.....	42
Figure 35 – Final Peer Group.....	44
Figure 36 – Multiples Valuation.....	44
Figure 37 – FCFF Comparison.....	45
Figure 38 – DCF Assumptions Comparison.....	46
Figure 39 – Recommendations Comparison.....	46
Figure 40 – Netflix Subscribers and Contribution Profit in the US (in millions, except Avg. Revenue per Paid Sub.)	48
Figure 41 – Netflix Subscribers and Contribution Profit outside the US (in millions, except Avg. Revenue per Paid Sub.)	49
Figure 42 – Netflix Subscribers and Contribution Profit for DVDs (in millions, except Avg. Revenue per Paid Sub.)	50
Figure 43 – Broadband Homes Evolution (in millions)	52
Figure 44 – Penetration of Broadband Homes Evolution (in %)......	53
Figure 45 – Subscriber Evolution per Geography and Segment (in millions)	55
Figure 46 – Revenue and Paid Subscribers*Monthly Revenue per Paid Subscriber*12 Comparison.....	57
Figure 47 – Corporate Tax Rate per Country.....	58
Figure 48 – Equity Risk Premium per Country.....	59
Figure 49 – Estimated 5Y Beta.....	62
Figure 50 – Interest Coverage Ratios and Ratings: High Market Capitalization Firms.....	63
Figure 51 – Market Value of Debt Computation.....	64
Figure 52 – Perpetual Growth Rate.....	65
Figure 53 – Forecasted Income Statement.....	67

Figure 54 – Forecasted Balance Sheet.....68
Figure 55 – Forecasted Cash-Flow Statement.....69

1. Introduction

Every rational investor's aim is to maximize the value of its investments. In order to do so, investors attempt to make informed, wise decisions, based on unbiased and thrust worthy data and studies. The objective of this dissertation is to provide such a study, specifically, an equity valuation on a well-known firm for every teenager and young adult, Netflix Inc. Therefore, the research question this thesis aims to answer is: what is the fair value of one unit of Netflix's common stock, at the end of the year 2018?

This study is of the highest importance as the whole stock market system is based upon equity valuation. From an investor's point of view, since stock prices fluctuate every minute, especially with the development of information channels, it is more important than ever to understand which price movements are associated with the firm's potential to create value and the ones that are speculative or market over reactions. From a firm point of view, a proper equity valuation enables firms with sound business models to command a premium in the market, while those with weak fundamentals see their prices dropping over the long-term.

This dissertation starts with the Literature Review, in which the most relevant equity valuation models are presented, alongside with an explanation of their applicability, advantages and drawbacks. The second stage consists of an overview of Netflix's business, highlighting its business model and operating performance over the recent past as well as its strengths and the risks it faces. On the third stage the methods that are considered the most suitable to evaluate the company are applied and the last stage consists of the comparison of the valuation built on this dissertation with the equity research report produced by Morgan Stanley on Netflix.

This project is not, however, free of limitations, as equity valuation is not an exact science. The process of valuing a firm is long, subjective and there is no recipe or pre-defined standard process generally accepted by all for valuing a firm. Furthermore, during this dissertation it was not possible to contact anyone from Netflix to access any additional information, which also consists of a limitation to this study.

2. Literature Review

2.1. Cash-Flow Based Models

Cash-flow based models are widely used and perceived as accurate and trustworthy. This dissertation will follow with a description of what cash-flows are and how they can be used to value an asset.

2.2. Discounted Cash-Flow Model (DCF)

The DCF valuation model, invented in the 1970's, came to be used in any corporate asset valuation process (Luehrman, 1997). It is the most commonly used method among investment banks when evaluating firms and projects, as it is considered a precise and flexible method (Koller, et al., 2005). The premise behind this model is that the value of a firm derives from free cash-flows. As a result, cash movements are key in this type of valuation (Goedhart, et al., 2010).

In order to perform this valuation, we need to estimate, as precisely as possible, three variables: future cash-flows, the discount rate and the terminal value. By doing so, we can then determine the value of an asset, in our case, a firm, by the present value of the future expected cash-flows, discounted at a risk-adjusted rate (Damodaran, 2005)

The Discounted Cash-Flow methodology allows us to either estimate the value of the whole firm, known as Enterprise Valuation Methods, or to estimate the value of a firm's equity.

2.2.1. Enterprise Value Methods

There are two cash-flow based methods that allow investors to evaluate entire enterprises: the Discounted Cash-Flow method, using the WACC as the discount rate and the Adjusted Present Value (APV) method.

2.2.2. DCF – Weighted Average Cost of Capital (WACC)

$$Enterprise\ Value = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + WACC)^t} + \frac{Terminal\ Value}{(1 + WACC)^t}$$

In this valuation method, the value of the firm is computed by discounting the future expected cash-flows at the risk-adjusted rate, which, in this case, is the WACC. However, since it is impossible to estimate all cash-flows *ad infinitum*, computing the Terminal Value is also necessary. The explanation of each parameter of the formula above follows.

2.2.2.1. Free-Cash Flow to Firm (FCFF)

$$FCFF = EBIT(1 - T) + Non\ Cash\ Charges - CAPEX - \Delta NWC$$

(Pinto, 2010) defines FCFF as “the part of the cash-flow generated by the company’s operations that can be withdrawn by bondholders and stockholders without economically impairing the company”. It is formally defined as a measure of performance, based on the net amount of cash generated by a company, including expenses, taxes, investments for the year and variations in working capital, as shown above. FCFF reflects all the cash-flows available for all financial parties.

2.2.2.2. Weighted Average Cost of Capital (WACC)

$$WACC = \frac{D}{D + E} * Kd * (1 - T) + \frac{E}{D + E} * Ke$$

(Gilbert, 1990) defines a discount rate as “the rate of return an investor would require to be induced to invest in the cash-flow stream being discounted”, meaning, the rate that fairly compensates the cash-flow risk taken by the investor. In this approach, that discount rate is the WACC, which combines the required return by the company’s debt and equity holders (Goedhart, et al., 2010).

The WACC is a weighted average of two different variables, the first being the cost of debt (Kd) and the second being the cost of equity (Ke). What produces the weights is the underlying firm capital structure. The tax rate is included in the formula to allow the WACC to measure the impact of leveraging a firm, the tax shields (Luehrman, 1997). (Fernandez, 2010) thus defines the WACC as being neither a cost nor a required return, but a weighted average of both.

2.2.2.2.1. Cost of Debt (Kd)

Cost of debt measures the effective rate that a firm has to pay for its current debt. On the WACC computation it is considered the after-tax cost of debt. The reason for this lies on the fact that interest payments are a tax-deductible expense. (Goedhart, et al., 2010) states that analysts should compute this cost in different ways, depending on the different types of firms being analyzed. The author suggests that, for firms with publicly traded debt, analysts should consider the cost of debt to be equal to the Yield to Maturity (YTM), computed by the present value of the bond price and the promised cash-flows. However, if the firm's debt is not traded often, the author suggests that the firm's debt rating is used instead, as to produce a more accurate estimation of the YTM, using the firm's marginal tax rate to keep the cost of debt on an after-tax basis. (Damodaran, 2001) states that, for firms without rating, a good estimate of their cost of debt would be computing the firms' interest coverage ratio, since it puts more emphasis on the borrowings incurred in a recent past.

2.2.2.2.2. Cost of Equity (Ke)

According to (Goedhart, et al., 2010), the cost of equity can be derived from the Fama & French 3 Factor Model, the Arbitrage Pricing Theory (APT) and Capital Asset Pricing Model (CAPM) (Sharpe, 1964). (Damodaran, 2001) argues that the CAPM is the most commonly used method in the industry to reach the cost of equity.

2.2.2.2.2.1. Capital Asset Pricing Model (CAPM)

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

In this model, first proposed by (Sharpe, 1964), the cost of capital can be seen as a function of risk determined by three variables: the risk-free rate (r_f), beta (β) and the market risk-premium, which is the difference between the market return (R_m) and the risk-free rate (r_f). Beta is the only firm specific factor within the model, as it determines the degree of correlation of a firm with the market itself (Goedhart, et al., 2010). Beta cannot be reduced by diversification.

2.2.2.3. Terminal Value (TV)

It is not possible to estimate all cash-flows *ad infinitum*. As a result, analysts must decide on the forecasted timeline, also known as explicit period, which is understood by the time a firm takes to reach a steady growth rate. Analysts' explicit period tends to range between six and ten years, but this value can vary a lot depending on firm specificities. The next step consists of calculating the firm's terminal value, i.e., calculating the firm value, in perpetuity, beyond the explicit period.

(Damodaran, 2012) suggests three different approaches to estimate terminal value: liquidation value, multiples and stable growth model. The liquidation value approach estimates that the terminal value equals the estimated value of the sale of all the firm's assets after repaying the debt. The multiples methodology considers that the value of the firm will be a multiple of its future earnings or book value. The third, and by far the most commonly used, the stable growth model, assumes that, after the explicit period, the firm will be growing at a stable growth rate which should be lower than the growth rate of the economy in which the firm operates. According to this last model, the terminal value of a firm goes by:

$$Terminal\ Value_t = \frac{Free\ Cash\ Flow_{t+1}}{Cost\ of\ Capital - Perpetual\ Growth\ Rate}$$

Finally, it is vital to refer the importance of the Terminal Value. (Schill, 2013) states that it is usually the largest component of value of a firm, representing, on average, between fifty and eighty percent of the total firm value, depending on how many years we have in annual forecasts.

2.3. Adjusted Present Value Model (APV)

Even though the WACC is highly practical, keeping the calculations required to a minimum, it comes with drawbacks. The most common criticism to the WACC, presented by (Luehrman, 1997), is that it is applicable only to simple and static capital structures and that its application requires not only project by project, but also period by period adjustments, even within each project.

Given the drawbacks regarding the DCF-WACC methodology, another method emerges that also has acceptance among the literature: the Adjust Present Value Model.

$$Enterprise\ Value = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + Re)^t} + \frac{Terminal\ Value}{(1 + Re)^t} + PV(TS) - E(FD\ Costs)$$

According to this methodology, as shown on the formula above, the value of a firm is computed discounting its FCFF at the Cost of Equity (Re), adding the present value of the expected tax benefit of debt financing, also known as Tax Shield (TS), and subtracting the expected costs of bankruptcy associated with debt financing, also known as financial distress costs (FD costs).

The first step of this methodology is, therefore, the calculation of the Unlevered Firm Value, i.e., valuing the firm as if it was financed exclusively using equity (Damodaran, 2012).

The second step consists of measuring the benefit resulting from debt financing.

$$PV (Tax Shields) = \sum_{t=1}^{t=n} \frac{Interest * Tax Rate}{(1 + Rd)^t} + \frac{Terminal Value}{(1 + Rd)^t}$$

Finally, regarding the third step, the expected costs of bankruptcy, (Damodaran, 2005) suggests that it is computed as follows:

$$E(Bankruptcy Costs) = Probability of Default * Bankruptcy Costs$$

(Graham, 2001) states that the optimal amount of debt varies from firm to firm. According to the author a firm should issue debt as long as the benefits of this issuance outweigh its costs. The third equation of this process estimates the costs associated with financial distress, which occurs when payment promises to creditors are broken or honored with difficulty (Brealey, et al., 2011). This equation is the one there is the most lack of consensus about. (Damodaran, 2005) argues that it is the larger issue with the APV methodology, as bankruptcy costs represent a vast portion of the valuation and they are difficult to quantify. Regarding the first term, probability of default, (Damodaran, 2012) suggests using publicly traded bond ratings as a proxy for the probability of default. In respect to the second term, the bankruptcy costs, (Damodaran, 2005) splits these costs into direct costs, composed by legal and administrative costs, and indirect costs, such as brand damage, loss of key employees of costumers or loss of investment opportunities. (Branch, 2002) suggests that these costs should be about 28% of the pre-distressed company's value.

3. Equity Valuation Models

There are two cash-flow based methods that allow investors to measure the value of equity of enterprises: discounting the Free Cash-Flow to Equity (FCFE) at the Cost of Equity method and the Dividend Discount Model (DDM).

3.1. Free Cash-Flow to Equity

$$\text{Value of Equity} = \sum_{t=1}^{t=n} \frac{FCFE_t}{(1 + Re)^t} + \frac{\text{Terminal Value}}{(1 + Re)^t}$$

The reasoning behind this method is exactly the same as the one of the FCFF. The expected future cash-flows are being discounted at the risk-adjusted discount rate. In this case, the discount rate is the cost of equity, since it is the required return investors demand for bearing the risk associated with the firm's equity. Just as previously explained, since the estimation of the future cash-flows is impossible *ad infinitum*, calculating the terminal value is once again necessary.

$$FCFE = FCFF - \text{Interest} * (1 - t) + \Delta \text{Net Debt}$$

One way to compute the FCFE is by, following the steps in the formula, converting the FCFF into the FCFE. In theory, due to the direct relations between the two methods, the equity value of a firm should be the same applying either method. In reality, however, the values usually marginally differ from one another.

Alternatively, one may compute the FCFE directly by applying the following formula:

$$FCFE = \text{Net Income} + \text{Non Cash Charges} - \text{CAPEX} - \Delta \text{NWC} + \Delta \text{Net Debt}$$

(Pinto, 2010) argues that an analyst should choose the FCFF approach if a firm is levered, has a negative FCFE or a changing capital structure, due to the fact that the cost of equity is more sensible to changes in the capital structure.

3.2. Dividend Discount Model (DDM)

The Dividend Discount Model (DDM) is the oldest of all valuation methods. (Damodaran, 2012) describes this method as one that evaluates a business such that the value of a stock is the present value of the expected dividends on it.

The price per share of a company is simply the value of the expected future dividend payments discounted at the cost of equity (Re). The complexities of this model come from the need to estimate the future dividends the firm will pay as well as the rate at which these will grow. In order to tackle this problem, one of two paths is usually taken: the Gordon Growth Model or the Two-stage Growth Model.

3.2.1. Gordon Growth Model

$$Price\ per\ Share = \frac{E(Dividend\ per\ Share_{t+1})}{Re - Perpetual\ Growth\ Rate}$$

The underlying assumption of this model is that the dividend a firm pays will grow at a fixed rate in perpetuity. (Damodaran, 2012) states that the usage of this model only makes sense for firms that are growing at a stable pace. Furthermore, (Pinto, 2010) notes that this method is extremely sensitive to the inputs for the discount rate (the cost of equity and the growth rate), making this method extremely exposed to valuation errors.

3.2.2. Two-stage Growth Model

$$Price\ per\ Share = \sum_{t=1}^{t=n} \frac{E(Dividend\ per\ Share_t)}{(1 + Re)^t} + \frac{Terminal\ Value}{(1 + Re)^t}$$

Alternatively, the two-stage growth model allows analysts to incorporate two different “stages” of dividend growth forecasts in the model, i.e., one may estimate a dividend growth rate for the near future and another the growth rate for the dividends to grow at in perpetuity. This model is an improvement from the Gordon Growth Model in the sense that it allows analysts to adapt it to shocks that may occur before the firm becomes stable.

4. Profitability 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 rather from the fact that it generates earnings that are superior to the required return on the capital invested. As a result, cash-flows are split into two categories: normal cash-flows, those the investor expects and requires upon making an investment, and excess cash-flows, those that surpass the required return on capital. As a result, (Damodaran, 2012) states that 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. The two models that follow, the Economic Value Added Model (EVA) and the Dynamic Return of Equity (ROE) are the most popular within this category.

4.1. Economic Value Added (EVA)

The EVA methodology is an enterprise value methodology. The first step towards the usage of this model consists of defining EVA.

$$EVA = (Return\ on\ Invested\ Capital - WACC) * Invested\ Capital$$

As depicted above, EVA consists of the excess return on invested capital over the required return on capital (the WACC). In order to generate economic profit, the Return on Invest Capital (ROIC) should be higher than the WACC.

$$Enterprise\ Value = Invested\ Capital + \sum_{t=1}^{t=n} \frac{EVA_t\ assets\ in\ place}{(1 + WACC)^t} + \sum_{t=1}^{t=n} \frac{EVA_t\ future\ projects}{(1 + WACC)^t}$$

In order to compute the enterprise value of the firm, one must follow the formula above, suggested by (Damodaran, 2012). As shown, the value of the firm derives from the sum of the invested capital in assets, the present value of the EVA of these same assets and the EVA of future projects.

4.2. Dynamic Return on Equity Methodology (RoE)

The Dynamic RoE methodology is similar to the EVA methodology, being the major difference regarding the interpretation of the output. While the first method provides an enterprise value of the firm, the second provides the value of equity.

$$Equity\ Value = E_0 * \sum_{t=1}^{t=n} \frac{E_{t-1} * (RoE_t - Re)}{(1 + Re)^t}$$

As we can see from the formula above, the underlying logic here is similar to the one explained in the EVA methodology: there will be value creation if the return on equity is higher than the cost of equity.

Both profitability models analyzed are essentially built on accounting-based data. If the inputs of the model are not accurately reported, the underlying valuations will be poor and misleading. Furthermore, these models are more often used for short-term forecasting horizons, opposite to the cash-flow based methods.

5. Relative Valuation

The objective in this type of valuation is not to determine a firm's intrinsic value, but rather to comprehend its position in relation to its peers. (Damodaran, 2012) states that it is a simple approach and its results are easier to interpret for all stakeholders than the ones from a DCF analysis.

“Properly executed, such an analysis can help a company to stress-test its cash-flow forecasts, to understand mismatches between its performance and that of its competitors, and to hold useful discussions about whether it is strategically positioned to create more value than other industry players are” (Goedhart, et al., 2010).

A relative, or multiples valuation, consists essentially of a two steps process, the first one being the selection of a peer group and the second deciding which multiples to use.

5.1. Peer Group

The selection of a proper peer group is not an easy task, as it is not clear at which point should a company be considered “similar” to another.

(Damodaran, 2005) suggests that the firms from the peer group should belong to the same industry. The underlying assumption is that firms in the same sector are exposed to the same risks, growth and cash-flows. Finding such firms is not easy, therefore, there are other variables that could be considered, such as betas, earnings per share (EPS) or return on equity.

(Koller, et al., 2005) argues that the selection of the peers should lie essentially on statistics, such as Return on Invested Capital (ROIC) and long-term growth rates. Sometimes, however, such information is not available. According to the author, the process of selecting the right peer group is the one that distinguishes veteran analysts from newcomers. In order to do so successfully the author recommends that, after getting a preliminary list of the firms that operate in the industry, the analyst should proceed to study what are the reasons that explain the different multiples across the peer group. The analyst should fully understand the firm’s operations and financial specificities and only then will he be able to create an adequate peer group, which will provide a much better valuation than the simple average of many firms within the industry would.

5.2. Multiples

In respect to the second point, the multiples to use, (Fernandez, 2002) offers a wide range of multiples that can be used to value a firm on a relative basis.

Fig. 1 – Relative Valuation Multiples

P/E,	Price earnings ratio	P/output	Price to output
P/CE	Price to cash earnings	EV/EBITDA	Enterprise value to EBITDA
P/S	Price to sales	EV/S	Enterprise value to sales
P/LFCF	Price to levered free cash flow	EV/FCF	Enterprise value to unlevered free cash flow
P/BV	Price to book value	EV/BV	
P/AV	Price to asset value	PEG	
P/Customer	Price to customer	EV/EG	
P/units	Price to units		

Source: (Fernandez, 2002)

Among the multiples above, according to the author, the most popular are the Price to Earnings Ratio (P/E) and the EV/EBITDA. The popularity of the first comes from its simplicity on relative

valuation or even on pricing Initial Public Offerings (IPO) (Damodaran, 2012). Other advantages are the fact that the P/E ratio links the firm value to profits and it also takes into account risk and EPS growth. (Koller, et al., 2005) identifies two drawbacks to the usage of this ratio. The first is the fact that it is dependent on capital structure. Managers can intentionally increase the P/E ratio by replacing debt with equity. The second is the fact that it is earnings based, meaning that it may include one-time events such as write-offs, and other non-operating items. Moreover, many firms have negative EPS, making the ratio useless to them. As a result, this ratio should be used for stable firms, with small growth and where big changes are not expected.

Enterprise value multipliers, such as EV/EBITDA or EV/EBIT, are very popular as well since they measure the corporation capacity to have a positive cash-flow. Both ratios perform an asset valuation, therefore, to find equity value net debt must be deducted. With the assumption that the market value of debt can be priced with reliability, one can even assess the correct value for equity by this multiple (Pinto, 2010). (Liu, et al., 2002) states that enterprise value multiples yield more precise pricing than the P/E ratio since the first minimizes the problem related to the different capital structures. However, enterprise multiples have flaws of their own, by not including or reflecting variations that can happen either by changes in working capital requirements or capital expenditures (Fernandez, 2002).

Multiples can be divided into three groups: current, trailing and forward. (Liu, et al., 2002) and (Kim & Ritter, 1999) recommend the usage of forward-looking multiples, due to increased valuation accuracy. (Koller, et al., 2005) also recommends the usage of forward multiples, rather than historical multiples. The author suggests that only if there are no reliable forecasts available should one use historical data and, if doing so, the data used should be as recent as possible and one-time events should be eliminated.

At last, it is important to notice that multiples can be misleading. Managers and CEO's are aware that multiples are a very important tool used by the market to value their businesses, for which it is in their interest to manipulate the numbers.

6. Option Pricing Theory

(Damodaran, 2012) states that option pricing theory can be useful to evaluate assets whose value varies depending on the intrinsic characteristics of options, such as a finite lifetime and value dependence on an underlying, and cannot be reached conventionally. As a result, it is used essentially to value oil, gas or mining companies, as their value is based upon the decision of drilling, or mining.

There are two models to value assets within this methodology: the Black & Scholes model and the binomial model. (Luehrman, 1997) defends the usage of the Black & Scholes model rather than the binomial as it shares more inputs with the DCF methodology, which allows for a more logic comparison between the two. (Goedhart, et al., 2010) states that option pricing theory can be useful as a complement to other methodologies and that it should not be used in isolation.

7. Conclusion

Equity valuation is not an exact science. Resulting, there are several methods to evaluate the value of a business and no consensus among analysts as to which is the best. After the overview presented, regarding the different methods used across the industry, it is now time to select those that best fit Netflix's specificities.

The first method presented, the DCF-WACC, will be the main method used to evaluate Netflix. As previously mentioned, (Luehrman, 1997) states that this method is ideally applicable for firms with static capital structures, which is the case of Netflix. The firm's investor relations department stated that it will continue to finance its growth through debt, as it is more efficient than issuing equity, given the low market interest rates and the tax deductibility of debt. Moreover, the company's debt to equity ratio, in market values, is extremely low, 5,85% in 2017, for which the company does not expect to face financial distress costs even with some increase in its leverage.

The dividend discount model will not be used as Netflix does not pay nor ever paid a dividend to its shareholders.

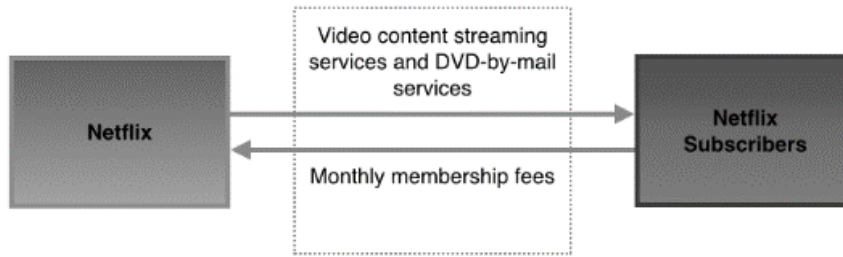
The returns based models described will also not be used to value Netflix as they are essentially accounting based and their acceptance is not universal.

Option Pricing Theory also does not apply to Netflix as its assets do not have the intrinsic characteristics of options, such as a finite lifetime and value dependence on an underlying.

At last, relative valuation will be used as a complement to the DCF methodology. Three multiples will be used. The first being the P/E multiple, the most widely used multiple according to (Fernandez, 2002). Despite the fact that this multiple yields the best results when applied to stable firms, with small growth and where big changes are not expected, this is a straightforward multiple to use, which is easy to understand by every party. Moreover, as the firm's capital structure is not expected to change significantly in the future, the results from this multiple are expected to be reasonable. The two other multiples to be used will be enterprise value multiples: EV/EBITDA and EV/Sales. The EV/EBITDA is considered appropriate to measure Netflix's value as the costs added back to the firm's earnings, depreciations, amortizations, taxes and interest, do not truly reflect the costs of operating the business. Taxes are a function of tax rule and therefore unrelated to the profitability of the business. Interest payments are based on the firm's financing rather than how it is managed and depreciations and amortizations are based on the management D&A policies, hence subjective. Moreover, using EV multiples allow the comparison of businesses with different capital structures, which is important given that Netflix's peer group has companies that are very different from one another both in terms of business models and leverage policies. At last, the EV/Sales multiple will be also used. Unlike earnings, which are heavily influenced by accounting decisions on depreciation and amortization, R&D and extraordinary charges, revenue is relatively difficult to manipulate. Moreover, sales multiples are not as volatile as earnings multiples, making this multiple reliable for usage in valuation. The multiples used in this valuation will be forward multiples, as suggested by (Liu, et al., 2002), (Kim & Ritter, 1999) and (Koller, et al., 2005).

8. Business Overview

Fig. 2 – Business Model



Source: revenuesandprofits

Netflix is a provider of streaming media services through which subscribers can access a wide range of television shows and movies over the internet. As depicted above, Netflix generates revenue from two sources, video content streaming services and DVD-by-mail services.

Both are subscription based businesses. Using the first, subscribers pay a fixed monthly fee to access and stream as much content as they would like to watch. The content is available on a multitude of screens, among which smartphones, PCs, MACs, tablets, TV set-top boxes and Smart TVs are the most popular. Netflix offers three possible packages for this service.

Fig. 3 – Streaming Packages

Plan	Number of screens at once	Blu-Ray Price
Starter	1	SD
Standard	2	HD
Premier	4	HD + Ultra HD

Source: Netflix Annual Report 2017

These packages are the same across all the markets Netflix operates at. The price does change, ranging from \$7,99 to \$13,99 in the US and from the US dollar equivalent of approximately \$4 to \$20 outside the US. The standard package is the most popular choice for new memberships.

Using the second, DVD-by-mail, subscribers pay a monthly fee to be able to rent DVDs and Blu-Rays online and have them delivered to their place. Despite being one single firm, the DVD segment a totally separated from the streaming business: it has its own website, management team, benefits package for employees and headquarters.

Fig. 4 – DVD Packages

Plan	DVD Price	Blu-Ray Price	Total discs per Month	Number of discs out at once
Starter	\$4,99	\$5,99	2	One
Standard	\$7,99	\$9,99	Unlimited	One
Premier	\$11,99	\$14,99	Unlimited	Two

Source: Netflix Annual Report 2017

This service is only available on the US, being the prices on the table are the only ones practiced.

8.1. Content Sources

Netflix gets content from two sources, licensing agreements and development of original content. A licensing agreement consists of a written agreement under which the creator of the content gives Netflix permission to use that property under specified parameters. Through this source of content, Netflix has been both acquiring long-tail content, from studios, at relatively cheap prices to build the size of its content offering and more expensive content to attract mainstream costumers from traditional entertainment sources. Historically, this was the model Netflix based its business upon. It was advantageous for studios given that it allowed them to have an alternative revenue stream to the traditional windows. However, with the increasing popularity of streaming services, studios have started noticing cannibalization of their standard revenue streams. As a consequence, studios started being less willing to license content to Netflix at reasonable prices. Furthermore, by only using content from third parties, Netflix would find itself with no chance of having more valuable content than its competitors, as content developers can license their content to plenty of distributors.

Faced with these issues, Netflix has recently shifted its strategy towards the development of original content, in place of further investing into increasingly expensive licensing deals. In this field, its strategy can be broken down into three pieces. The first being the creation of content based on prior intellectual property, such as developments or continuations of old stories beloved by the public, which is a low risk investment in original content. The second being betting on brand new original content to clearly distinguish itself from its competition and the third the creation of

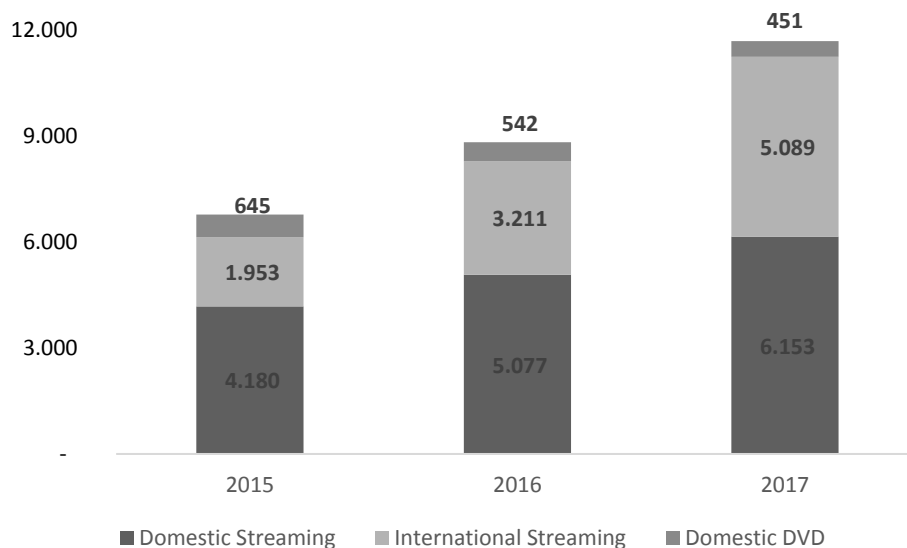
original content specific to a certain geography, to capture that audience and further expand their influence abroad.

This recent focus of Netflix on the development of original content has issues of its own. Filmmakers usually desire to see their productions debut on “the big screen”, which has not been the destination of Netflix’s originals. Furthermore, Netflix does not share with the actors and producers the upside of a hit the same way a traditional studio does, as there are no box office revenues nor syndication revenues to share, i.e., whether the show is watched by 50 million people or 50 people, the staff does not get their share of the proceeds. This policy makes it very difficult for Netflix to capture talent in the competitive cinematographic industry.

8.2. Business Segment Evolution

Netflix has three revenue streams: Domestic Streaming, referring to the content streaming service in the US market; International Streaming, referring to the content streaming service outside the US market and Domestic DVD, referring to the DVD-by-mail services in the US.

Fig. 5 – Revenues per Business Segment (in \$ millions)



Source: Netflix Annual Report 2017

Figure 5 illustrates Netflix’s revenue per business segment from 2015 to 2017. Netflix’s Domestic Streaming segment contributed to 53% of the firm’s revenue in 2017, therefore being the largest source of revenue. This segment has, however, been decreasing in relative importance. It corresponded to 62% of total revenue in 2015 and, in 2017, it only amounted to 53%. Regarding

International Streaming, it is the sector with the largest growth, increasing its weight on Netflix's revenues from 29% in 2015 to 44% in 2017. At last, the Domestic DVD is the only sector whose revenue has been decreasing in both absolute and relative terms. Its weight was of about 9% in 2015 and it fell to 4% in 2017.

8.3. Consolidated Operating Results

Fig. 6 – Netflix Subscriber Evolution and Operating Results (in millions, except Avg. Revenue per subscriber)

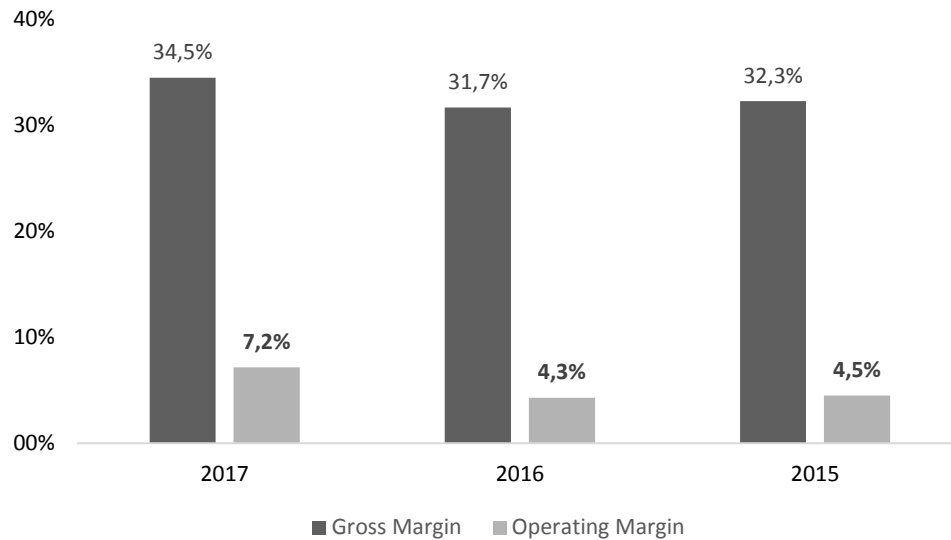
<i>Subscribers</i>	2015	2016	2017
Net Additions	16,51	18,24	23,06
Subscribers	79,67	97,91	120,97
Paid Subscribers	74,76	93,80	117,58
Average Revenue per Paid Subscriber	\$8,15	\$8,61	\$9,43
<i>Operation Results</i>	2015	2016	2017
Revenue	\$6.780	\$8.831	\$11.693
(-) Cost of Revenue	\$4.591	\$6.030	7.660
Gross Profit	\$2.188	\$2.801	\$4.033
(-) Marketing	\$824	\$991	\$1.278
(-) Technology & Development	\$651	\$852	\$1.053
(-) General & Administrative	\$407	\$578	\$864
Operating Income	\$306	\$380	\$839

Source: Netflix Annual Report 2017

Global subscribers to Netflix's services, streaming and DVD-by-mail, has achieved over 117,5 million in the end of 2017. This growth has been driven by the acquisition of domestic and international subscribers, having Netflix acquired over 18 million international subscribers and over 5 million subscribers in the US in 2017 alone. The growth in the average revenue charged is explained by changes in plan mix and prices both in the US and abroad. Both these effects have been negatively affected by the DVD segment, in which the subscriber base and the average revenue charged per client have decreased.

Consolidated revenues increased by 32% from 2016 to 2017, driven by the growth in revenues registered in both the domestic and international segments.

Fig. 7 – Gross Margin and Operating Margin Historical Evolution



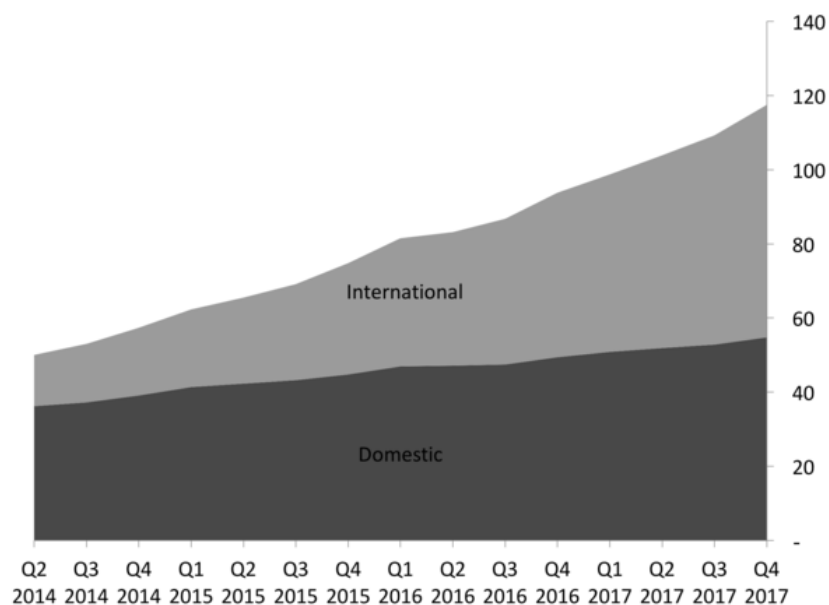
Source: Netflix Annual Report 2017

Figure 7 depicts that, despite the great increase in revenues from 2015 to 2016, both the gross margin and the operating margin decreased year-on-year, as a consequence of the aggressive expansion plan of Netflix and all its inherent costs. In 2017, both metrics have increased as revenue growth outpaced the growth in costs. The analysis of each individual segment, domestic, international and DVD-by-mail can be found in Appendix 1.

8.4. Strengths & Opportunities

8.4.1. Subscriber Base Evolution

Fig. 8 – Netflix Subscriber Base Evolution (in millions)



Sources: Business Insider

Netflix's most valuable asset is its subscriber base, as it is the driver that allows the firm to generate revenues. The subscriber growth rate has been particularly impressive in the International segment, boosted by Netflix's aggressive growth strategy, its investment in creating content in languages other than English, having content in over 24 languages, and its free first month subscription policy. Moreover, the company believes it will continue adding more subscribers as the trend for binge watching grows in popularity.

Chasing its goal of being the world leader content provider, Netflix is working not only on increasing its subscriber base but also on having a widely diverse one. To do so, the firm is undertaking initiatives such as creating more kids and family-oriented content. Moreover, in order to tackle the talent acquisition issues previously mentioned, in late 2016, Netflix stroke a deal with iPic Entertainment. According to the deal, Netflix originals will debut on iPic Entertainment theaters at the same time the movies are released online (Roettgers, 2017). The underlying logic is that this exposure improves Netflix's ability to capture talent, as the movies will now appear on the big screen as it is the filmmakers' wish. Most importantly, it will increase the visibility of the brand as well as opening these movies up for Oscar and Emmy nominations, which will ultimately boost subscriptions. Following this deal, Netflix went from 9 awards and 54 nominations in 2016 to 20 awards and 91 nominations in 2017. Furthermore, Netflix hired Scott Stuber, a veteran Hollywood producer to be the head of its movie division (Netflix Media Center, 2018). Capitalizing on the success of its content, the firm has also developed show related games. It is not clear whether the firm will continue developing those nor how successful they were.

8.4.2. Platform Quality

Netflix considers providing excellent accessibility to be vital. Unlike any of its competitors, Netflix collects and utilizes extensive amounts of data to, based on its costumers search profiles, suggest other content it considers appropriate for the user. Out of about 6.000 titles that constitute the firm's portfolio, each costumer is shown the 50 to 75 titles that Netflix's algorithm forecasts to be those the costumer is most likely to enjoy. Moreover, once one logs into the platform, it will never automatically log-off. These facts are particularly remarkable given that competitor platforms, like HBO Now, log users out frequently and require user authentication through the computer or smartphone, involving missing passwords and troubles that will not be found with Netflix. Moreover, none of Netflix's competitor platforms uses any sort of data collection or

analysis either to measure user preferences or study the type of shows that should be developed (Ekanadham, 2018).

8.5. Risks & Threats

8.5.1. Competition

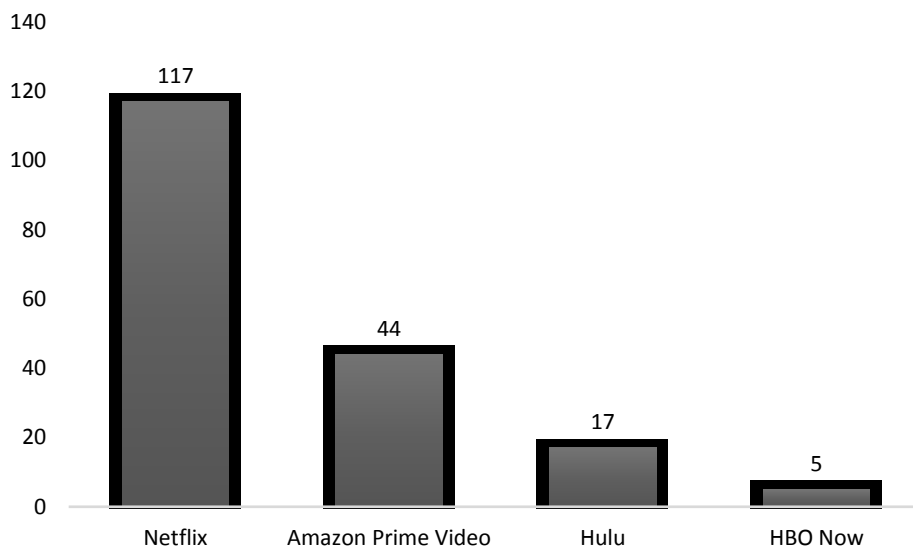
Netflix Media Center defines its competition, in a broad sense, as any vehicle through which an individual can spend time relaxing or getting any sort of stimuli, which may include “linear networks, pay-per-view content, DVD watching, other internet networks, video gaming, web browsing, magazine reading, video piracy, and much more.” The firm also acknowledges that, in respect to the source of entertainment they offer, the competition is rapidly increasing, with players such as Facebook, Snapchat, Apple and Twitter working on improving video quality on their platforms. Netflix’s investor relations department distinguishes the firm from these other sources of entertainment, claiming the firm “not to be a generic video company that streams all types of video such as news, user-generated, sports, porn, music video, gaming, and reality but rather as being a movie and TV series entertainment network”. Upon questioned regarding what it considers to be a concrete competitor of their business, the same department responds HBO. This answer is surprising, given that there are many other players in the market that may be considered to be much more of a threat to Netflix, however, it does signal the long-term vision of Netflix as premium content creator rather than a distributor of third party content.

The firm’s vision for the future is that the market will be highly segmented. Customers will not purchase access to one single service where all the content is available, but rather purchase access to various providers in order to be able to watch the original shows from each provider. This is not a convincing arguments, as having everything in one single place rather than having to access different platforms to watch different shows sounds like a simpler, more attractive approach. Furthermore, this market segmentation is what opens space for a substantial issue the industry faces: piracy. Video piracy is free, offers a very broad selection of content and, as a result, is a threat to Netflix.

Piracy is a great issue that the industry faces, but Netflix’s competition does not consist of HBO and piracy alone. There are other players that, for their ability to offer enjoyable and relaxing time to individuals are in a position of being a real threat to Netflix. The most obvious competitors

to Netflix are those who offer products that are direct substitutes to the company's product. In this category are Amazon, offering Amazon Prime Video, Hulu, a joint venture from 21st Century Fox, Walt Disney, Comcast and Time Warner, and HBO, also a Time Warner company, offering HBO Now, which is extremely similar to Netflix. It should be pointed out that only Amazon Prime Video is available both inside and outside the US, being present in over 200 countries. The dissertation will proceed with a brief comparison between Netflix's subscriber base, content expenditure and pricing with that of its most direct competitors.

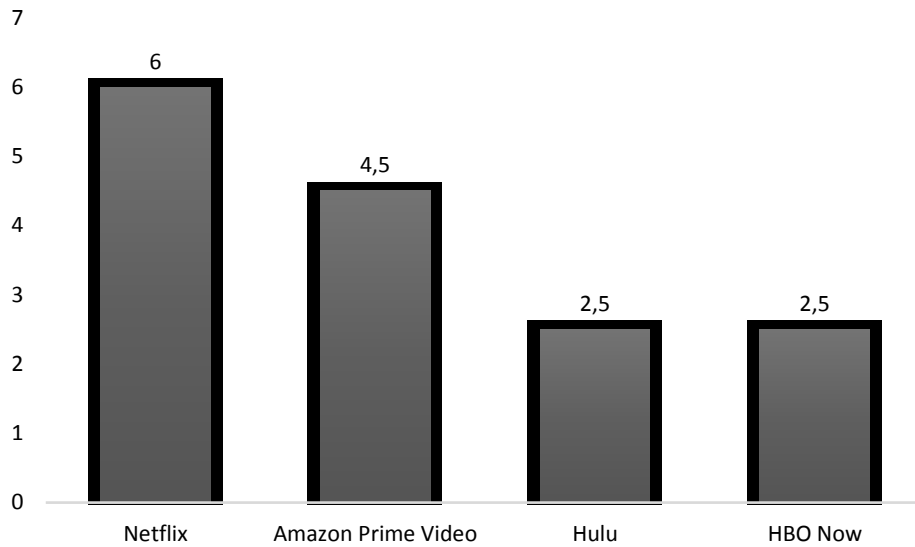
Fig. 9 – Subscriber Base Comparison (in millions)



Sources: Companies Websites

Figure 9 highlights Netflix's superiority regarding subscriber amounts. Amazon Prime Video, coming in second with 44 million subscribers, is the most immediate threat to Netflix. However, the amount of Amazon Prime Video subscribers is different from its actual viewers. By subscribing to the Amazon Prime services, which offers a wide range of benefits, such as free shipping on Amazon products, a streaming-music library and cloud storage, consumers are automatically subscribing to Amazon Prime Video as well. It is not clear, however, how many of these subscribers actually use or value this service as it is part of a larger package.

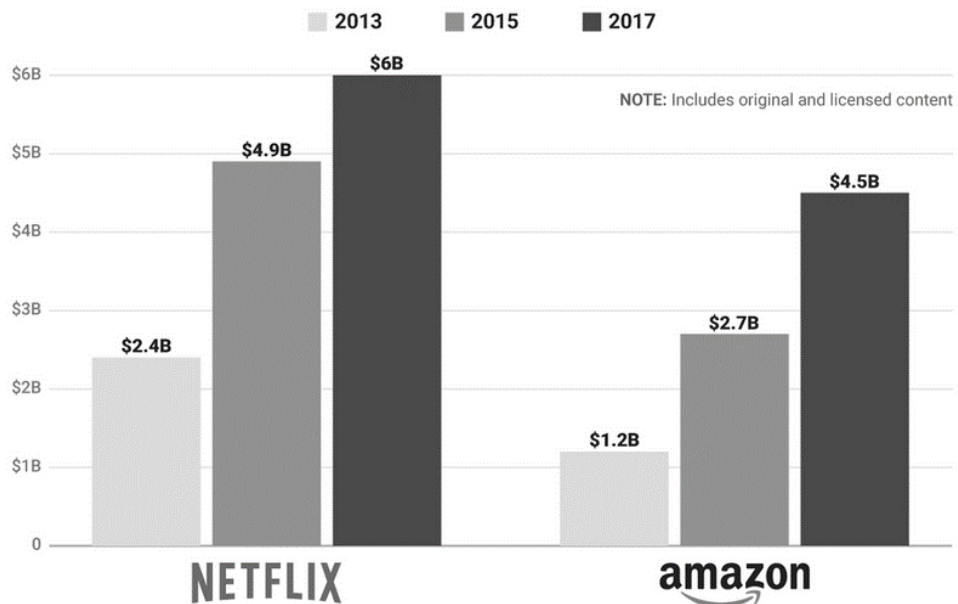
Fig. 10 – Content Expenditure (in \$ billions)



Sources: Companies Websites

In respect to content expenditure, in 2017, Netflix was the firm that registered the largest expenditure, spending over \$6 billion, closely followed by Amazon Prime Video, who spent \$4,5 billion. Hulu and HBO had an expenditure of \$2,5 billion, less than half of Netflix’s investment.

Fig. 11 – Netflix vs Amazon: Content Expenditure (in \$ billions)



Source: Business Insider

Figure 11 compares the video content budget of Netflix and Amazon, the two largest players on the video streaming industry, both in respect to number of subscribers and content expenditure. The graph shows that Netflix has been spending more than Amazon on each of the year of analysis, however, the gap has been closing on a relative basis. In 2013 Netflix spent twice as much on content than Amazon Prime Video but in 2017 it only spent 33% more.

Pricing is one of the most important characteristics for products that are as similar as the ones described. The comparison below only applies to the US, as Hulu and HBO Now only operate in that market.

Fig. 12 – US Monthly Prices Comparison

Netflix	Amazon Prime Video	Hulu	HBO Now
Basic: \$7,99	Basic: \$8,99	Basic: \$7,99	Basic: \$14,99
Standard: \$10,99		Premium: \$11,99	
Premier: \$13,99			

Sources: Companies Websites

Amazon Prime offers unlimited streaming of tens of thousands of movies and TV shows. Unlike its main competitors, Amazon Prime also allows the rental of individual items. One can also choose to subscribe to Prime Video only for \$8,99 a month or, for \$99 a year, one can have access to the whole Amazon Prime package. Amazon’s 50%-off student discount, making the Amazon Prime service \$49,50, has been a huge success, being by far the best option for students.

Hulu’s service is priced at \$7,99 for the basic package and \$11,99 for the premium package, which is exactly the same of as the basic package, but advertisement free. HBO Now’s package costs almost two times more than Netflix’s basic package and the advantages do not seem obvious. HBO is known as being a premium content provider, having created some of the best shows around, like Game of Thrones, The Sopranos or Silicon Valley. However, Netflix’s content is renowned itself, with names like House of Cards, Orange is the New Black and Stanger Things.

From the analysis of the three points above, subscriber base, content expenditure and pricing, Netflix seems to hold the leading position on the video streaming market regarding the first two, having been able to capture a wider subscriber base and highly invest to produce quality content.

In respect to pricing, Netflix's packages also appear to be priced competitively. Is there room for the firm to further increase its prices?

8.5.1.1. Pricing Power

Upon the start of Netflix's streaming service there was no benchmark as to which price would be reasonable for its services, other than linear TV services, which are often sold as a bundle. Resulting, Netflix's pricing power over the past years has been remarkable, with the company raising the price on its standard package by over 35% in three years for new subscribers and, simultaneously, witnessing a 143% growth in its subscriber base, according to the firm's annual report.

It is expected that, as other products are launched in the following years, at lower or comparable prices, some potentially supported by ads (as is the case of Hulu), that Netflix's price elasticity is unlikely to remain static. Moreover, Netflix's service is dependent on its users having good internet connection. Lack of control over broadband prices is a limitation to Netflix's ability to increase its prices. This should not apply to some countries where Netflix has only recently started operating, in which it is priced as a luxury product, for which price elasticity shouldn't be as strong. At last, one more risk that Netflix is subject to regarding its pricing ability is bundling risk. Currently, Netflix is aligned in terms of pricing with services like Hulu, Amazon Prime Video or HBO Now, however, if it is to continue increasing its prices, it risks having to compete with bundles of services, which may include television access plus a streaming service for a similar price of Netflix's streaming service alone. This is already the case with Amazon Prime, in which the streaming video platform comes as an extra to the accelerated delivery, music and cloud platforms, and the threat is expected to increase with the merge of Disney and Fox.

8.5.1.2. Disney-Fox Merge

The Disney-Fox merge is expected to affect Netflix in several aspects, potentially being its biggest present threat. Disney is the number one provider of Netflix's content for kids, content Disney has announced to be withdrawing in 2019. Moreover, through this deal, Disney will be the majority shareholder in Hulu. Fox is also the owner of the largest media network platform in India, Star Entertainment, therefore extending Disney's influence to this large emerging market Netflix has just recently penetrated. Beyond this, this merge may include Fox's 40% stake of Sky, which

would allow Disney access to over 22 million customers in the UK, Ireland, Germany and Italy (Garrahan, 2017). This is, however, not certain yet, as Comcast has made a counter-offer to acquire Sky as a whole (Khan, 2018). Given the direct consequences of this merge, Disney is in an ideal position to either expand Hulu globally or to launch its own streaming content platform, leveraging on Fox's distribution assets, or bundling this platform with a paid television subscription. In either scenario it is clear that this merge poses an eminent threat to Netflix's business and it is unclear what the firm may do to respond.

9. Net Neutrality

Competition is, without a doubt, Netflix's most clear source of risk. As to net neutrality, it is not clear whether it is an opportunity or a risk for Netflix. Net neutrality is defined as "the principle that Internet service providers should enable access to all content and applications regardless of the source, and without favoring or blocking particular products or websites" (Oxford Dictionary, 2018) This has been the situation in most countries in Europe and the US, one with net neutrality, meaning that, by purchasing access to the internet one has access to everything within the internet without having to pay anything extra to access any website. Moreover, net neutrality ensures that internet speed for all websites is the same, being impossible for Internet Service Providers (ISPs) to negotiate with companies tariffs in which consumers would experience faster internet speed when accessing to certain websites. In the US, the Federal Communication Commission (FCC) has, on the 14th of December 2017, approved a law to repeal net neutrality. What are the implications for Netflix? In the past, the major internet companies have been extremely vocal regarding their opposition to a net neutrality repeal, as this repeal is seen as a great risk to their business. The argument was that repealing net neutrality would give unfair advantages to ISPs own content and offer a narrower range of options for consumers to access in the internet (Kastrenakes, 2017). An example of how this repeal could adversely impact Netflix would be in the event of a merge between AT&T and Time Warner, which is in discussion. In a world without net neutrality this would mean that an extremely large ISP would own a streaming service provider, HBO, and would have the option to either block or highly slow down the streaming speed of Netflix, making HBO much more appealing to individuals who have access to the internet from them. Recently however, Netflix and the other very large internet companies, like Alphabet or Amazon do not seem to be as worried about this net neutrality repeal as they have been in the past. The underlying

logic seems to be that they do not think ISPs have the bargaining power to negotiate harmful terms with them anymore given the size that they have reached. Moreover, given their current bargaining power, they perceive it as an opportunity to establish dominance over the smaller players in the market. Given the risks mentioned and Netflix's current attitude regarding the issue, it is not clear whether the company regards this change in regulation as a risk of an opportunity nor is it clear how will this impact the firm's operations.

10. Valuation

Netflix was valued in this dissertation using, as the main valuation methodology, the Discounted Cash-Flow Model, being the discount rate the WACC. Relative valuation was used as a complementary method to test the consistency of the DCF valuation. This dissertation will proceed with the explanation of each of the methods used, as well as the underlying assumptions of the models. At last, the valuation produced will be compared with the equity valuation on Netflix produced by Morgan Stanley on the 22nd of January 2018.

10.1. Discounted Cash-Flow Model - Assumptions

10.2. Earnings Before Interest and Taxes (EBIT)

EBIT, or operating income, consists of the firm's revenues minus all of its operating expenses. These operating expenses are classified as cost of revenue, marketing expenses, technology & development expenses and general & administrative expenses. The dissertation will follow with the underlying assumptions for the evolution of each variable into the future.

10.2.1. Drivers of Revenue

Netflix's future revenue was estimated as is the sum of the revenues from its three business segments. The revenue for each of the segments consists, with minor variations, of the product of the average revenue charged from each paid subscriber and the number of subscribers. The assumptions for the forecasts of the future revenue charged from each paid subscriber and the number of subscribers follows.

10.2.1.1. Average Monthly Revenue per Paid Subscriber

Fig. 13 – Average Monthly Revenue per Paid Subscriber (\$)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Domestic	8,50	9,21	10,18	11,71	13,17	13,83	14,31	14,67	14,96	15,19	15,34	15,46	15,53	15,61
<i>Growth YoY</i>		8,4%	10,5%	15,0%	12,5%	5,0%	3,5%	2,5%	2,0%	1,5%	1,0%	0,5%	0,5%	0,5%
International	7,48	7,81	8,66	10,18	11,60	12,47	13,09	13,55	13,89	14,17	14,38	14,52	14,63	14,71
<i>Growth YoY</i>		4,4%	10,9%	17,5%	14,0%	7,5%	5,0%	3,5%	2,5%	2,0%	1,5%	1,0%	0,8%	0,5%
DVD	10,3	10,22	10,17	10,12	10,08	10,12	10,09	10,05	10,02	9,99	9,97	9,94	9,92	9,92
<i>Growth YoY</i>		-0,78%	-0,49%	-0,45%	-0,40%	0,40%	-0,35%	-0,35%	-0,30%	-0,30%	-0,25%	-0,25%	-0,20%	-0,20%

Source: Netflix Annual Report for Historical Data

As previously mentioned, Netflix has had tremendous pricing power, having been able to historically increase its prices without compromising subscriber growth. As depicted above, the Domestic and International segments' monthly revenue per paid subscriber are have evolved similarly from 2015 to 2017, while the DVD segment revenue per paid subscriber is slowly decreasing

In respect to the Domestic and International segments, the main driver of growth in the revenue per paid subscriber in 2018 is the \$1 increase in Netflix's Standard package from \$10,99 to \$11,99 and the \$2 increase in the Premier package from \$11,99 to \$13,99, which was applied in the US and in most of the International segment on the beginning of 2018. In respect to both segments, the assumption for the future is that Netflix will be able to continue to increase the prices for its service at an ever smaller rate. The company is expected to increase its price once again in the end of 2018, most likely in its two cheapest packages, and then the growth rate is expected to severely decrease after 2019, given that it is the year in which Disney's content will no longer be available in Netflix's platform and that it is assumed that the firm's competitors will start applying pricing pressure. From 2024 onwards it is assumed that Netflix's prices will be increasing at a rate smaller than the inflation for both segments. In respect to the DVD-by-mail segment, it is expected that the average monthly revenue per paid subscriber will continue to decrease, following the historical trend.

As mentioned, the firm's revenue is a function of how much it charges from its subscribers and the number of subscribers it has. The number of subscribers is defined as the product of the size of the market in which Netflix operates or plans to operate in the future and Netflix's ability to penetrate these markets. The forecast for each driver follows.

10.2.1.2. Market Size

It is assumed that the size of the market in which Netflix operates, or plans to operate in the future, consists of every broadband home in the world, given that Netflix is a company with operations worldwide, excluding China. Appendix 2 contains both historical data from the evolution of broadband homes in each of the countries of analysis as well as the forecasted evolution for the amount of broadband homes. The underlying assumption is that, in 2017, the growth rate of broadband homes in the countries Netflix operates at will consist of the average growth rate of the past five years. This is the general rule for countries in which broadband homes evolution has been growing at a similar rate yearly. Exceptions to this rule are France, Germany, India and the item “Other excluding China”, who’s growth has been increasingly smaller year on year and, as a result, applying the past five year average would bias the results. For the years after 2017 it is assumed that, for all countries, the growth rate will decrease, gradually converging to the population growth rate of the underlying country.

10.2.1.3. Market Penetration

Appendix 3 contains the percentage of Netflix’s penetration of broadband homes in each of the countries of analysis in 2017, as well as the estimate for future penetration rates. Netflix’s future penetration is estimated as a function of competition, current market penetration, the state of the economy and the creation of content either in the native language of the target country or related to that country’s history. In respect to the first, competition, it is assumed that it will be increasingly difficult to keep on penetrating broadband homes as it is forecasted that there will be plenty of supply in the market. This effect is expected to be particularly felt from 2019 onwards, the year in which the Disney-Fox merge takes off and Disney’s content is removed from Netflix’s platform. Moreover, in the UK & Ireland, Germany, Japan and India Amazon is the market leader as streaming content provider, thus, in these countries, Netflix is expected to achieve a lower market penetration than in the countries in which this is not the case. Current market penetration is, naturally, a driver of future penetration as well. In countries in which market penetration is already high, as is the case in the US, it is expected that the incremental penetration in the years to come will be gradually lower. It should be noted, however, that the fact that Netflix has an estimated market penetration of X% in 2028 does not imply that there is only 100-X% of the market for its competitors to share. Opposite to ISPs, in which it is assumed that each household only has one, as

the services are perfectly comparable and quite expensive, it is reasonable to assume, and it is Netflix's vision, that households will purchase access to more than one streaming service, especially if those are sold in bundles. Therefore, the fact that Netflix has an estimated market penetration of 63,3% in the US in 2028 does not imply that other competitor may not have a market penetration above 36,7% himself. Regarding the state of the economy, the underlying assumption is that the economy will continue to grow and there will be no recession during the period of analysis. Appendix 4 presents the implied world economy outlook. Finally, in respect to content creation in the native language of the target country, it is assumed that Latin America, Spain, Portugal, Italy and the UK & Ireland will be countries in which Netflix will have very high penetration rates as a result of Netflix's investment in shows in the native languages of these countries, or in which the history of the countries is addressed, such as *La Casa de Papel*, *Las Chicas del Cable* or *The Crown* to name a few.

10.2.1.4. Number of Subscribers

Fig. 14 – Forecasted Subscriber Evolution per Operating Segment (in \$ million)

<u>Domestic</u>	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
# Subscribers	44,7	49,4	54,8	59,4	64,4	68,4	72,0	74,6	76,8	78,5	79,7	81,0	82,1	83,1
Paid Subscribers	43,4	47,9	52,8	57,9	63,0	67,1	70,6	73,3	75,6	77,5	78,7	80,1	81,3	82,2
% of Paid Subs.	97,0%	96,9%	96,46%	97,5%	97,8%	98,0%	98,2%	98,3%	98,5%	98,8%	98,8%	99,0%	99,0%	99,0%

<u>International</u>	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
# Subscribers	30,0	44,4	62,8	84,3	103,6	119,8	134,9	148,9	161,4	173,6	184,8	194,8	204,3	213,7
Paid Subscribers	27,4	41,2	57,8	78,4	97,3	113,8	128,2	141,5	155,0	166,7	178,4	188,0	197,6	207,3
% of Paid Subs.	91,4%	92,8%	92,0%	93,0%	94,0%	95,0%	95,0%	95,0%	96,0%	96,0%	96,5%	96,5%	96,8%	97%

<u>Domestic DVD</u>	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
# Subscribers	4,90	4,10	3,40	2,72	2,24	1,91	1,67	1,50	1,39	1,32	1,29	1,27	1,26	1,25
Paid subscribers	4,79	4,03	3,33	2,69	2,22	1,89	1,65	1,49	1,38	1,31	1,27	1,25	1,25	1,24
% of Paid Subs.	97,6%	97,9%	98,4%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%

Source: Netflix Annual Report for historical data

As stated, the number of Netflix's subscribers is a function of market size and market penetration. Figure 14 depicts the number of subscribers per business segment, as well as the expected amount of paid subscribers. The existing difference between subscribers and paid

subscribers is due to the fact that it is Netflix’s policy that, upon subscribing the service, every new customer is offered the first month free of payment. It is expected that, as Netflix stops being a novelty and starts having fewer new subscriptions that the ratio of paid subscribers to subscribers should increase. Appendix 5 details the forecasted number of subscribers per country.

10.3. Revenue

Fig. 15 – Forecasted Revenue per Operating Segment (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Domestic	4.180	5.077	6.153	7.747	9.476	10.599	11.552	12.287	12.935	13.458	13.806	14.155	14.433	14.669
International	1.868	3.211	5.089	8.521	12.128	15.331	18.328	21.170	23.768	26.357	28.626	30.557	32.450	34.393
DVD	646	542	450	353	290	248	216	194	179	169	165	162	160	159
Total	6.780	8.831	11.693	16.622	21.895	26.178	30.095	33.651	36.881	39.984	42.597	44.874	47.044	49.221

Source: Netflix Annual Report for historical data

Netflix’s yearly revenue is expected to consist of the product of the average monthly revenue from paid subscribers, the number of paid subscribers and the number of months in a year, twelve. However, the firm's revenue on its domestic and international segments has historically been marginally different from Paid Subscribers times Average Monthly Revenue per Paid Subscriber times 12, as depicted in Appendix 6. The underlying assumption is that this difference will be maintained in the Domestic Segment, as it has been static for the past years. In the International Segment, however, the difference has been decreasing and, as a result, it is assumed that the ratio in the International Segment will converge to the ratio of the Domestic Segment in the long run. For the DVD segment the average ratio of the past 3 years is assumed to remain constant into the future.

10.4 Cost of Revenue

Netflix’s cost of revenue consists primarily of content amortization, relating to its existing and new streaming content. The company’s amortization policy for content is based on historical and estimated viewing patterns, being reviewed every quarter. Moreover, the firm states that its content library is amortized on an accelerated basis. Detailed information regarding the firm’s depreciation policy is, however, unavailable for investors or researchers. As a result, in the model, it is assumed that content amortization is a function of the company’s additions to streaming content. The

dissertation will follow with the explanation of the reasoning behind the forecasts for the future additions to streaming content as well as the amortization policy.

Fig. 16 – Forecasted Additions to Streaming Content (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Content Obligations due in <1y	4.703	6.201	7.447	8.564	9.592	10.407	10.927	11.310	11.592	11.824	11.943	12.062	12.152	12.213
<i>Growth YoY</i>	25.5%	31.8%	20.1%	15.0%	12%	9%	5%	3.5%	2.5%	2%	1%	1%	0.75%	0.5%
Prior YE obligations due in <1y	3.748	4.703	6.201	7.447	8.564	9.592	10.407	10.927	11.310	11.592	11.824	11.943	12.062	12.152
Additional Cash Spent	2.024	3.950	3.605	4.500	4.500	4.000	3.750	3.500	3.250	3.250	3.250	3.000	3.000	3.000
Additions to Streaming Content	5.772	8.653	9.806	11.947	13.064	13.592	14.157	14.427	14.560	14.842	15.074	14.943	15.062	15.152

Source: Netflix Annual Report for historical data

Annual additions to streaming content are assumed to consist of the sum of Netflix’s annual payments of its content obligations which will be due in the current year and additional cash spent in that year. Additional cash spent consists of content investments made by the company that do not refer to payments that were due. In each year, from 2015 onwards, the company has estimated, on its annual report, that its “unknown obligations are expected to be significant and could include approximately \$3 to \$5 billion over the next three years, with the payments for the vast majority of such amounts expected to occur over the next twelve months”. Moreover, the company states that it expects to spend \$10 to \$12 billion in cash on content (\$7-\$8 billion will be the amortized expense in the income statement). It is forecasted that, for 2018, the additions to streaming content will be in the top of the range of the company’s predictions. For the following years it is assumed that the company will continue to increase its investment in streaming content at an ever slower pace, as its position in the market starts settling, which is reflected in an increasingly lower increment to content obligations due in less than one year as well as the additional cash spent, which is expected to remain close to the bottom of the \$3 to \$5 billion range in the years to come.

Fig. 17 – Forecasted Amortization of Streaming Content (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Additions to Streaming Content	5.772	8.653	9.806	11.947	13.064	13.592	14.157	14.427	14.560	14.842	15.074	14.943	15.062	15.152
<i>Amortization as %</i>	60%	56%	64%	60%	62.5%	65%	67.5%	70%	72.5%	75%	77.5%	80%	82.5%	82.5%
Amortization of Streaming Content	3.485	4.868	6.259	7.186	8.165	8.835	9.556	10.099	10.556	11.132	11.683	11.954	12.426	12.880

Source: Netflix Annual Report for historical data

Given the inability to accurately forecast the amortization of streaming content, for the reasons previously mentioned, this item will be estimated as a % of additions to streaming content. As stated, Netflix’s content library is amortized on an accelerated basis. For that reason, the average of the past three years of the historical amortization rate as a % of additions to streaming content will be assumed for 2018. For the following years it is assumed that this ratio should increase, as the firm’s growth starts to deaccelerate, converging to a steady state.

Fig. 18 – Forecasted Cost of Revenue (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Content Amort.	3.485	4.868	6.259	7.186	8.165	8.835	9.556	10.099	10.556	11.132	11.683	11.954	12.426	12.880
Non-Content Expenses	1.106	1.163	1.402	1.992	2.624	3.138	3.607	4.033	4.421	4.792	5.106	5.379	5.639	5.900
<i>Rev. Growth Rate</i>		37.5%	36.0%	42.2%	31.7%	19.6%	15.0%	11.8%	9.6%	8.4%	6.5%	5.3%	4.8%	4.6%
Total	4.591	6.030	7.660	9.178	10.789	11.972	13.163	14.132	14.976	15.924	16.788	17.333	18.065	18.779

Source: Netflix Annual Report for historical data

The primary driver of Netflix’s cost of revenues is the amortization of streaming content, as previously explained. Its secondary driver, the non-content expenses, consists mostly of processing fees, expenses associated with service call centers and streaming delivery expenses. These expenses are assumed to continue to grow at the same growth rate of the company’s revenue.

10.5. Other Operating Costs

10.5.1. Marketing

Fig. 19 – Forecasted Marketing Expenditures (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Domestic	318	383	553	930	1.185	1.325	1.502	1.597	1.682	1.750	1.795	1.840	1.876	1.950
<i>% of Revenue</i>	7,6%	7,5%	9,0%	12,0%	12,5%	12,5%	13,0%	13,0%	13,0%	13,0%	13,0%	13,0%	13,0%	13,0%
International	506	608	725	1.150	1.516	1.840	2.108	2.329	2.614	2.767	2.863	2.903	3.083	3.181
<i>% of Revenue</i>	27,1%	18,9%	14,2%	13,5%	12,5%	12,0%	11,5%	11,0%	11,0%	10,5%	10,0%	9,5%	9,5%	9,25%
Total	824	991	1.278	2.080	2.701	3.165	3.609	3.926	4.296	4.517	4.658	4.742	4.952	4.952

Source: Netflix Annual Report for historical data

Netflix's marketing expenditures are assumed to move as a function of the firm's revenue. The firm only invests in marketing for its streaming services, being the expenditure in marketing for DVDs zero. It is assumed that marketing expenses will continue to grow in the future in absolute terms as the company's investment in content creation slows down and, with the increased competition, it is increasingly important for Netflix to remain relevant and have visibility in the markets it operates at. Naturally, given the differences in market sizes, marketing expenditure in the international segment is expected to be larger.

10.5.2. General & Administrative Costs

Fig. 20 – Forecasted General & Administrative Costs (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
G&A Costs	407	578	864	1.247	1.708	2.094	2.182	2.271	2.397	2.399	2.449	2.468	2.493	2.510
<i>% of Revenue</i>	6,0%	6,5%	7,4%	7,5%	7,8%	8%	7,3%	6,8%	6,5%	6,0%	5,8%	5,5%	5,3%	5,1%

Source: Netflix Annual Report for historical data

General and administrative costs are also assumed to evolve as a function of Netflix's revenue. These costs consist mainly of payroll for employees, professional fees and general corporate expenses. As the firm's expansion slows down, given its nearly worldwide presence, it is expected that the costs associated with running the business stabilize, for which its percentage of revenues is expected to decrease over time.

10.5.3. Technology & Development

Fig. 21 – Forecasted Technology & Development Expenditures (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Technology Costs	651	852	1.053	1.512	1.861	2.160	2.408	2.608	2.766	2.899	2.982	3.141	3.175	3.199
<i>% of Revenue</i>	9,6%	9,7%	9,0%	9,1%	8,5%	8,3%	8,0%	7,8%	7,5%	7,3%	7,0%	7,0%	6,8%	6,5%

Source: Netflix Annual Report for historical data

Technology and development costs are assumed to move as a function of Netflix's revenue as well. These consist of costs associated with improvements to Netflix's service, such as tests, maintenance and modifications of the user interface, merchandising, streaming delivery technologies, telecommunication systems and infrastructures. Compensations for technology employees is also accounted for in this item. As the firm's expansion slows down, given its nearly worldwide presence, it is expected that the costs associated with running the business stabilize, for which its percentage of revenues is expected to decrease over time.

10.6. Taxes

Fig. 22 – Forecasted Corporate Tax Rate (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Domestic Tax Rate	-	-	-	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
International Tax Rate	-	-	-	12,5%	12,5%	12,5%	12,5%	12,5%	12,5%	12,5%	12,5%	12,5%	12,5%	12,5%
Blended Tax Rate	13,4%	28,4%	(31,5%)	16,6%	16,3%	16,0%	15,8%	15,7%	15,5%	15,4%	15,3%	15,2%	15,1%	15,1%

Source: Netflix Annual Report for historical data

In respect to Netflix's tax policy, it is assumed that the company will pay the US corporate tax rate for the earnings it generates in the US. For the earnings generated abroad, it is assumed that Netflix will pay taxes in the country that offers the lowest corporate tax rate, as is the policy of most major technology companies. That country is expected to be Ireland, as shown in Appendix 7. The blended tax rate consists of the weighted average tax rate, being the weights the revenues generated in either segment. Naturally, as the international segment gains more relevance and has a lower corporate tax rate indexed to it, the blended tax rate is expected to decrease.

10.7. Streaming Content Expenses

Fig. 23 – Forecasted Streaming Content Expenses (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Streaming Content Expenses	5.772	8.653	9.806	11.947	13.064	13.592	14.157	14.427	14.560	14.842	15.074	14.943	15.062	15.152

Source: Netflix Annual Report for historical data

Streaming content expenses constitute the most significant cash out-flow of Netflix, directly affecting shareholders' and debtholders' cash-flows. The computation of this value has been explained in the cost of revenue chapter.

10.8. Non-Cash Charges

Fig. 24 – Forecasted Non-Cash Charges (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Depreciation	62	58	72	85	92	114	145	169	194	215	235	251	266	280
Amortizations	3.485	4.868	6.259	7.186	8.165	8.835	9.556	10.099	10.556	11.332	11.683	11.954	12.426	12.880
Total	3.547	4.925	6.330	7.271	8.257	8.948	9.701	10.268	10.931	11.535	12.111	12.605	13.105	13.159

Source: Netflix Annual Report for historical data

Depreciation was computed as a % of gross PP&E. The company has few tangible assets, resulting in a small amount of forecasted depreciations, in line with historical data. Content Amortization represents almost the entirety of this segment and has been detailed in the Cost of Revenue segment.

10.9. Capital Expenditures (CAPEX)

Fig. 25 – Forecasted Capital Expenditures (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
CAPEX	169	185	227	249	274	275	301	303	313	320	330	337	341	345
% of Revenue	2,5%	2,1%	1,9%	1,50%	1,25%	1,05%	1,00%	0,90%	0,85%	0,80%	0,78%	0,75%	0,73%	0,7%

Source: Netflix Annual Report for historical data

Capital expenditures are expected to evolve as a percentage of Netflix's revenue. Given that the firm's expansion program has stabilized, it is expected that future CAPEX should be mainly referring to the maintenance of Netflix's infrastructures rather than related to expansion, being, therefore, expected a slow evolution of this item.

10.10. Changes in Working Capital

Fig. 26 – Changes in Working Capital (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Changes in Other Current Assets	62	46	275	27	179	145	133	121	110	105	89	77	74	74
Changes in Deferred Taxes	59	47	209	176	232	278	319	357	391	424	452	476	499	522
Change in Assets	121	92	484	204	411	423	452	477	501	529	540	553	572	596
Change in Accounts Payable	52	32	75	214	182	148	135	123	112	107	90	79	75	75
Change in Accrued Expenses	49	69	114	267	185	150	288	142	129	124	105	91	87	87
Change in Liabilities	100	101	189	480	367	298	423	265	241	231	195	170	162	162
Changes in Working Capital	20	(8)	295	(277)	44	125	29	212	260	298	345	383	411	433

Source: Netflix Annual Report for historical data

The changes in working capital shown above refer to the company's changes in operating working capital, or non-cash working capital, given that cash was not included. Other current assets are assumed to evolve as a % of revenues. Other Current Assets to Revenue ratio has always been around 3%, except in 2017, in which it increased to 5%. The underlying assumption is that the ratio will continue to be 3% from 2017 onwards, thus explaining the lower value of changes in other current assets in 2018 in respect to the future years. Deferred taxes, accounts payable and accrued expenses have also been computed as a function of revenue.

11. Discounted Cash-Flow – Valuation

11.1. Free Cash-Flow to the Firm (FCFF)

Fig. 27 – Forecasted Free Cash-Flow to the Firm (in \$ million)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
EBIT (1-T)	266	272	1.102	2.171	4.048	5.700	7.351	9.036	10.514	12.052	13.317	14.575	15.573	16.685
(+) Non-Cash Charges	3.623	5.075	6.711	7.271	8.257	8.948	9.701	10.268	10.750	11.347	11.917	12.205	12.692	13.159
(-) Streaming Content Expenses	5.772	8.653	9.806	11.947	13.064	13.592	14.157	14.427	14.560	14.842	15.074	14.943	15.062	15.152
(-) CAPEX	169	185	227	249	274	275	301	303	313	320	330	337	341	345
(-) Δ Working Capital	20	-8	295	-277	44	125	29	212	260	298	345	383	411	433
FCFF	(2.072)	(3.483)	(2.515)	(2.477)	(1.076)	656	2.565	4.362	6.131	7.939	9.484	11.118	12.452	13.914

Source: Netflix Annual Report for historical data

11.2. Weighted Average Cost of Capital (WACC)

Fig. 28 – Forecasted Weighted Average Cost of Capital (WACC)

Corporate Tax Rate	16,6%	Forecasted 2018 Corporate Tax
Risk-free Rate	2,97%	US 10Y Treasury Yield on 15/05/2018
Equity Risk Premium	5,96%	Calculation on Appendix 8
Levered Beta	1,12	Calculation on Appendix 9
Cost of Debt	5,35%	Calculation on Appendix 10
Market Value of Debt	8.049	Calculation on Appendix 10
Market Value of Equity	137.582	Market Capitalization – Net Debt
Cost of Equity	9,66%	CAPM = $r_f + \beta * \text{Equity Risk Premium}$
WACC	9,37%	

Sources: Bloomberg, Reuters and Damodaran Academic Website

11.3. Net Debt

Fig. 29 – Estimated Net Debt (in \$ million)

Market Value of Debt	8.049	Calculation on Appendix 10
Cash & Equivalents	3.721	Balance Sheet Item 2018 – Appendix 12
Net Debt	4.328	

11.4. Fair Value of Equity

Fig. 30 – Estimated Fair Value of Equity

Perpetual Growth Rate (g)	1,83%	Calculation on Appendix 11
WACC	9,37%	
Terminal Value	76.713	$[\text{Discounted FCFF } 2028f * (1+g)] / (WACC - g)$
Enterprise Value	111.583	
Net Debt	4.328	
Fair Value of Equity	107.255	
Number of Shares Outstanding	448,1	
Price per Share	\$239,35	

Sources: International Monetary Fund (IMF), Bloomberg, Reuters and Damodaran Academic Website

Netflix's estimated fair value of equity is \$107.255 million. The company has 448,1 million shares outstanding, as a result, the forecasted fair price per share is of \$239,35. As of the 15th of May 2018 Netflix's shares were trading in the market at \$328,53. The valuation presented values the firm as of the end of 2018. Being assumed that the firm's stock price should converge to its fair value at some point in time, the implicit recommendation is that investors should sell the firm's stock, as its price should decline in the future.

12. Sensitivity Analysis

Equity valuation requires the usage of assumptions for the construction of valuation models. Given that assumptions often differ from the reality, it is important to measure how changes in the inputs of the valuation models, in this case, in the DCF model, may affect its output. Below are presented two sensitivity analysis, the first being for the effect of a change in the DCF discount factor, the WACC, and perpetual growth rate simultaneously, and the second being for the effect of changes in the main drivers of Netflix's FCF, content expenditure and revenue per paid subscriber. In respect to the first, the WACC sensitivity is computed as a function of changes in Netflix's beta. The reason for this assumption is that the firm's WACC is essentially composed by the firm's cost of equity, given Netflix's low D/E ratio in market values. Since Netflix's cost of equity was estimated based on the CAPM, in which the only firm specific factor is beta, it is the most important variable affecting the company's WACC. Moreover, Netflix's beta substantially differs depending on the period of analysis used for its computation, as shown below on Figure 31. The beta chosen the cost of equity calculation of Netflix was the 5 year beta. The reasoning for this choice can be found in Appendix 9.

Fig. 31 – Beta across different periods of analysis

Beta 5Y	Beta 4Y	Beta 3Y	Beta 2Y	Beta 1Y
1,12	1,17	1,38	1,20	2,62

Source: Yahoo Finance for Netflix and SPY closing prices

Fig. 32 – Sensitivity Analysis of WACC and Perpetual Growth Rate (in \$, except WACC and Perpetual Growth Rate)

		WACC Evolution as a function of Beta (Beta +/- 5bps, in italic)										
		<i>0,87</i>	<i>0,92</i>	<i>0,97</i>	<i>1,02</i>	<i>1,07</i>	<i>1,12</i>	<i>1,17</i>	<i>1,22</i>	<i>1,27</i>	<i>1,32</i>	<i>1,37</i>
		7,96%	8,24%	8,53%	8,81%	9,09%	9,37%	9,65%	9,93%	10,21%	10,50%	10,78%
Perpetual Growth Rate (+/- 20 bps)	0,83%	279,77	265,39	252,11	239,83	228,43	217,83	207,95	198,72	190,09	182,00	174,40
	1,03%	286,07	271,08	257,27	244,51	232,69	221,72	211,51	201,99	193,09	184,76	176,95
	1,23%	292,74	277,09	262,70	249,44	237,17	225,80	215,24	205,41	196,23	187,65	179,61
	1,43%	299,83	283,46	268,44	254,63	241,89	230,09	219,15	208,98	199,51	190,66	182,38
	1,63%	307,35	290,21	274,52	260,12	246,85	234,60	223,26	212,73	202,94	193,80	185,27
	1,83%	315,37	297,38	280,96	265,91	252,09	239,35	227,58	216,67	206,53	197,09	188,29
	2,03%	323,93	305,01	287,79	272,06	257,63	244,36	232,12	220,80	210,30	200,54	191,44
	2,23%	333,09	313,15	295,06	278,57	263,49	249,65	236,91	225,15	214,26	204,15	194,75
	2,43%	342,91	321,85	302,80	285,49	269,70	255,25	241,97	229,73	218,42	207,94	198,21
	2,63%	353,47	331,17	311,07	292,86	276,30	261,17	247,31	234,56	222,80	211,93	201,85
	2,83%	364,84	341,18	319,92	300,73	283,32	267,46	252,96	239,66	227,42	216,12	205,66

Figure 32 illustrates how changes in the WACC and perpetual growth rate affect the DCF model price per share output. The row above the WACC refers to its underlying beta. The market price of reference is Netflix's stock price as of the 15th of May 2018, \$328,53. As depicted above, minor changes in either factor greatly impact Netflix's price per share output, however, for the recommendation provided by this model to be buy rather than sell the DCF model would need to be both significantly overestimating the firm's WACC and underestimating its perpetual growth rate (in light green). Both scenarios seem unlikely to represent the reality of Netflix.

Fig. 33 – Sensitivity Analysis of the main drivers of FCFE

	Content Expenditure					Revenue per Paid Subscriber				
	100%	95%	90%	85%	80%	100%	105%	110%	115%	120%
Price per Share	239,35	257,6	275,8	294,1	312,3	239,35	270,4	301,4	332,5	363,5

Figure 33 depicts how variations in the assumptions for Netflix's content expenditure and revenue per paid subscriber affect the firm's stock price. The left table shows that even in a situation in which the firm could spend 20% less on content per year, maintaining its subscriber and revenue per paid subscriber growth rates, would the recommendation be a sell rather than a buy. On the right it is shown how variations in the monthly revenue per paid subscriber affects the stock price.

It highlights that only if the revenue per paid subscriber would be 15% higher on each of the years of analysis, without compromising subscriber growth and assuming the same levels of content expenditure, would the recommendation be a buy rather than a sell. Both scenarios seem unlikely to represent the reality of Netflix.

13. Relative Valuation

13.1. Peer Group Selection

Netflix defines its competition very broadly, saying that its competition is every company that occupies people's time. Furthermore, Netflix offers both content production and distribution services, which traditionally had been a two-company job. There is no other company in the world operating solely on this segment, which explains the great success of Netflix in acquiring subscribers. This uniqueness makes it a difficult task to build a peer group of similar companies, as there aren't any that replicate this business model with a high degree of similarity.

In the face of Netflix's success, and what appears to be the start of an industry shift, the large US based traditional players in the content creation business have created a joint venture, Hulu, to offer their content straight to the consumer without the need for a middle man. In response to this change, distribution companies themselves and content creators have been in a spree of mergers and acquisitions of each other, among which the bidding offer of AT&T to Time Warner and the bidding offer of Disney to 21st Century Fox must be pointed out. It is not clear, however, if these companies will effectively be Netflix's competitors in the future. Throughout their history most media firms have had indirect relationships with the consumers of content, since it was the content distributor's job to fill that gap. This consumer distance has certainly created major organizational and cultural differences among the traditional media corporations and a company like Netflix. These organizations, whose costumers are content distributors, for the nature of their business are more focused on variables of the likes of minimum distribution guarantees or inclusion in bundles, rather than customer satisfaction.

The giants of the internet world, namely Apple, Alphabet, Amazon and Facebook have been showing interest in expanding into the streaming business. The desire to expand to this business segment has been shown differently from company to company. In Apple's case, for instance, the company has started offering streaming content in their Apple Music platform, which has more

than 38 million subscribers. Amazon has created Amazon Prime Video. Alphabet has been developing YouTube Red, a music, series and films streaming platform, while Facebook has been heavily investing on improving the video quality in its platform, under the premise that login into Netflix to watch a show is a deliberate act of searching for entertainment when you have free time while, if one can find similar sources of entertainment in Facebook, such as short, high quality shows, the time consumers spend there can be much increased and a real threat to Netflix's business.

Given the heterogeneity of companies that may be considered Netflix's peers and Netflix's position in this industry, which isn't one of a distributor nor a content producer alone, the two types of companies are included in Netflix's broad peer group.

Fig. 34 – Broad Peer Group

Company Name	Industry	Area of Operations		Market Capitalization	Revenue Growth Rate	ROIC	Beta
-	-	USA	RoW	<i>in \$ billion</i>	<i>5 year Growth Rate</i>	<i>5 year ROIC</i>	<i>5 year Monthly β</i>
Netflix	Entertainment	56%	44%	142	26,50%	8%	1,12
Walt Disney	Broadcasting	76%	24%	157	5,45%	13%	1,17
Time Warner	Entertainment	72%	28%	74	4,31%	10%	-
21st Century Fox	Entertainment	72%	28%	69	2,61%	13%	-
CBS Corp	Broadcasting	85%	15%	20	1,32%	13%	-
Viacom	Entertainment	72%	28%	13,5	-0,92%	12%	-
Discovery	Broadcasting	52%	48%	11,69	8,90%	9%	-
Amazon	Dep. Stores	60%	40%	765	23,83%	4%	1,60
Comcast Corp	Broadcasting	65%	35%	172,45	6,20%	10%	1,15
Apple	Computer Hardware	37%	63%	913	7,93%	25%	-
AT&T	Telecom	93%	7%	227,5	4,73%	8%	-
Best Buy Com	Electronic Retailer	92%	8%	21,6	1,96%	18%	-
BCE Inc	Telecom	4%	96%	40	2,18%	11%	-
DISH Network	Broadcasting	100%	0%	19	1,77%	8%	-
Pandora Media	Broadcasting	99%	1%	1,27	28,00%	46%	-
Facebook	Online Services	44%	56%	477	51,53%	13%	0,90
Snap Inc.	Software	78%	22%	18,26	103,00%	N/A	-
Alphabet	Online Services	47%	53%	756,88	19,21%	13%	1,09
Lions Gate	Entertainment	76%	24%	5,3	36,38%	9,26%	-
AMC Networks	Leisure & Recreation	73%	27%	2,25	45%	5,38%	-
Verizon	Telecom	96%	4%	197,57	1,70%	12,58%	-
Altice	Telecom	0%	100%	14,06	84,73%	5,50%	-
Sky	Broadcasting	0%	100%	29,07	7,95%	19%	-

Sources: Bloomberg, Reuters and Morningstar

Netflix's broad peer group was selected from a combination of Bloomberg, Reuters and Morningstar suggested peer groups, with minor adjustments given that some of the companies suggested by those sources have, for instance, as core business the management of amusement parks, for which they are not even part of the company's broad peer group. Moreover, Facebook

and Apple are not considered peers of Netflix by any of the mentioned sources. In this valuation these will be included for the reasons previously stated.

The companies shown on the table above were narrowed down to the final peer group according to the five criteria shown: area of operations, market capitalization, revenue growth rate, return on invested capital (ROIC) and beta. Area of operations is a decision criteria given that it is assumed that companies that operate in the same geographical area are subject to the same type of risks and opportunities. For this reason, companies whose operations are either highly concentrated in the US or abroad are not considered to be suitable peers for Netflix, whose revenues come from both sources in a nearly equal proportion.

Market capitalization is a measure of size. Companies of different sizes are subject to different risks and growth opportunities. As a result, it is also a decision criteria. This criteria, however, is a soft criteria. Amazon, despite being over five times larger than Netflix in terms of market capitalization will not be excluded from the peer group as it is the company who has invested the most in the streaming business segment and that has the most potential to be a real competitor of Netflix, for which it cannot be cut-out, despite the major size difference. Apple and Alphabet, despite not being considered competitors as strong as Amazon, are also not excluded by this criteria as it would not be coherent. Discovery, Lions Gate Entertainment and AMC Networks have been excluded due to this criteria as all these companies have a market capitalization inferior to \$10 billion.

Revenue growth rate is, naturally, a measure of growth. Companies that are in different stages of the business life cycle are subject to different risks and opportunities. For that reason, it is a decision criteria. Netflix seems to be on a late phase of the rapid growth stage of its development, while some of its potential peers are clearly already mature firms or in the decline stage already, as is the case of Viacom or CBS Corporation, while others seem to be in the early stage of their rapid growth stage, like Altice or Snap Inc, for which they have been excluded. The selection criteria was that all companies with revenue growth rates lower than 5% or higher than twice Netflix's growth rate would be excluded.

Revenue growth alone is irrelevant if shareholders cannot get a return on their investment, for which a measure of profitability is also required when deciding whether companies are comparable.

All the companies whose ROIC is more than double or less than half of Netflix's ROIC have been excluded from the firm's final peer group.

Beta is a measure of market risk, as it reflects how a stock behaves in respect to the broad stock market. For companies to be considered peers its investors should be subject to the similar levels of risk, for which it is a decision criteria, as suggested by (Damodaran, 2005). The computation of the betas of Netflix's peer group was performed in the same manner as Netflix's beta itself, which is explained in Appendix 9. The beta from all the companies on the table is comparable to Netflix's beta, as a result, no company was excluded.

Fig. 35 – Final Peer Group

Company	Legitimacy as a peer
Walt Disney	M&A with 21 st Century Fox constitutes a threat. Largest Hulu shareholder.
Amazon	Owner of Amazon Prime Video.
Comcast Corp	Long-term content distributor. Owner of DreamWorks and Hulu shareholder.
Facebook	Video quality improvement on its platforms and small investments in content.
Alphabet	YouTube and YouTube Red development as substitutes for Netflix.

13.2. Multiples Valuation

Fig. 36 – Multiples Valuation

Company Name	Forward P/E (NTM)	Forward EV/EBITDA (NTM)	Forward EV/Sales (NTM)
Walt Disney	13,87	9,94	2,96
Amazon	141,96	25,89	2,89
Comcast Corp	13,03	7,3	2,45
Facebook	21,48	12,24	7,06
Alphabet	24,63	12,01	4,62
Netflix	42,99	13,48	4,00
Enterprise Value	-	341157	87491
Value of Equity	157093	336829	83163
# Shares	448,1	448,1	448,1
Price per Share	350,58	751,68	185,59

Source: Reuters for NTM multiples

The decision for the usage of each of the multiples above is presented in the conclusion of the literature review. As expected, given Netflix's unique business and resulting poor peer group, the values differ significantly across the different multiples used and from the value obtain with the

DCF model, which is regarded as the most accurate model of the two. As a result of the inconsistency of the results achieved from this valuation method, the recommendation provided by this analysis is of limited reliability, for which the final recommendation from this dissertation consists of the recommendation built with the DCF model rather than the one from the multiples.

14. Valuation Comparison

Fig. 37 – FCFF Comparison

	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Dissertation	(2.477)	(1.076)	656	2.565	4.362	6.131	7.939	9.484	11.118	12.452	13.914
<i>FCFF Change</i>	-	1.401	1.733	1.909	1.797	1.769	1.808	1.546	1.633	1.334	1.462
Morgan Stanley	(2.724)	(1.666)	(321)	1.406	3.154	5.039	7.091	9.193	11.454	13.972	16.815
<i>FCFF Change</i>	-	1.058	1.346	1.727	1.748	1.885	2.052	2.103	2.261	2.518	2.843

Source: Morgan Stanley Equity Research Report

Figure 37 depicts the FCFF evolution in this dissertation in comparison to Morgan Stanley's equity research report FCFF. Morgan Stanley's report assumes that the company's FCFF will be positive for the first time in the year 2021, while in the dissertation's forecasts the company achieves a positive FCFF in 2020. The main difference across both valuations is that, in the dissertation, it is assumed that Netflix's FCFF will grow the quickest in the following years, until 2024, and then the absolute growth is expected to slow down. Morgan Stanley, on the contrary, assumes that the FCFF absolute increments will be ever larger as time goes by. Morgan Stanley provides very little information regarding its assumptions for the evolution of Netflix's FCFF, however, the difference appears to consist of different assumptions regarding the evolution of competition for the firm and how it will affect Netflix's ability to continue increasing the prices of its packages and penetrating new markets. Morgan Stanley, appears to believe that the firm's FCFF will continue to increase at an ever higher pace, indicating forecasted limited competition, which does not go in line with the expectations for competition described in this dissertation. Both researches are estimating the value of Netflix as of the end of 2018.

Fig. 38 – DCF Assumptions Comparison

	Dissertation		Morgan Stanley
Risk-free Rate	2,97%	Risk-free Rate	2,25%
Levered Beta	1,12	Levered Beta	1,40
Risk Premium	5,96%	Risk Premium	6,00%
Cost of Equity	9,66%	Cost of Equity	10,65%
Cost of Debt	5,35%	Cost of Debt	6,00%
D/E Ratio	5,85%	D/E Ratio	25%
Perpetual Growth Rate	1,83%	Perpetual Growth Rate	2,00%
Domestic Tax Rate	21%	Domestic Tax Rate	24%
International Tax Rate	12,5%	International Tax Rate	11%
Blended Tax Rate	16,6%	Blended Tax Rate	16,15%
WACC	9,37%	WACC	9,25%

The WACC presented in the dissertation is 12 basis points higher than Morgan Stanley's WACC. The main drivers of this difference are the risk-free rate, the beta and the forecasted capital structures. The risk free rate has substantially increased from the 23rd of January 2018, date in which Morgan Stanley report was published. In respect to the betas, the difference across each valuation should be explained by a difference in market index, time interval of analysis or return interval, however, Morgan Stanley does not specify how beta was estimated. At last, the bank forecasts a D/E ratio in perpetuity of 25%, which indicates that it is the bank's view that Netflix will need to highly increase its leverage down the line. This forecasted capital structure is high compared to the company's current D/E ratio in market values of 5,85% and does not go in line with this dissertation's prediction regarding the evolution of Netflix's capital structure, as it is expected that the firm will not further expand its operations and will be free cash-flow positive in 2020, therefore not being expected that the firm should substantially increase its leverage.

Fig. 39 – Recommendations Comparison

	Dissertation		Morgan Stanley
# Shares Outstanding	448,1	# Shares Outstanding	448,1
Enterprise Value	111.583	Enterprise Value	130.475
Value of Equity	107.583	Value of Equity	123.534
Price per Share (15 May 2018)	\$328,53	Price per Share (22 Jan. 2018)	\$227,58
Implied Fair Price	\$239,35	Implied Fair Price	\$275,68
Recommendation	SELL	Recommendation	BUY

15. Conclusion

The purpose of this dissertation is to provide a buy or sell recommendation regarding Netflix's common stock. The two valuation methods used in this dissertation were the Discounted Cash-Flow methodology, discounted at the WACC, and the relative valuation methodology. The recommendation provided by this dissertation is a sell recommendation, which is solely based on the DCF approach. The reason for this lies on the fact that the relative valuation methodology, for the uniqueness of Netflix's business and the difficulty in finding suitable peers, yielded price per share estimates ranging from \$185,59 to \$751,68, not showing consistency and, therefore, not being suitable as neither a valuation recommendation nor as a benchmark for the DCF approach.

The sensitivity analysis built for the DCF approach shows that even the smallest variation in any of the inputs of the model highly affects the model's output. Nevertheless, due to the large difference between the value at which Netflix's stock is trading and the implied fair value provided by the model, the deviations from the DCF model assumptions necessary for the recommendation to be a buy rather than a sell appear not to be plausible.

The answer to this dissertation's research question, the fair value of one unit of Netflix's common stock at the end of 2018, is \$239,35. Given that Netflix's stock is trading at \$328,53 as of the 15th of May 2018, being assumed that the firm's stock price should converge to its fair value at some point in time, the implicit recommendation is that investors should sell the firm's stock, as its price should decline in the future.

At last, it must be mentioned that this dissertation acknowledges that the company has had a remarkable track record of understanding customer needs and desires over its history and has proven to have an extremely effective management team who has guided the company to success despite several mistakes over its history, for which it is recognized that some premium to the valuation, which is not incorporated into the valuation models, might be earned. However, it is expected that the company should face massive competition and it is unclear which tools Netflix possesses that might enable it to compete with companies with powerful brands and large balance sizes like Disney, Apple, Google, Time Warner, Facebook, Amazon, among others, which have proven to be highly interested in expanding their operations into the streaming content business.

Appendixes

Appendix 1 – Subscribers and Contribution Profit Evolution per Segment

Fig. 40 – Netflix Subscribers and Contribution Profit in the US (in millions, except Avg. Revenue per Paid Sub.)

<i>Subscribers</i>	2015	2016	2017
Net Additions	5,62	4,69	5,32
Subscribers	44,74	49,43	54,75
Paid Subscribers	43,40	47,91	52,81
Average Revenue per Paid Subscriber	\$8,50	\$9,21	\$10,18
<i>Operation Results</i>	2015	2016	2017
Revenue	\$4.180	\$5.077	\$6.153
(-) Cost of Revenue	\$2.487	\$2.856	\$3.319
(-) Marketing	\$318	\$383	\$553
Contribution Profit	\$1.376	\$1.839	\$2.280
<i>Contribution Margin (%)</i>	33%	36%	37%

Source: Netflix Annual Report 2017

Revenue in the Domestic Streaming market consists of the monthly fee paid by Netflix's subscribers solely in the US. The growth in revenue from about \$4 billion in 2015 to over \$6 billion in 2017 has been driven by both an increase in paid subscribers of over 22% during the same period, from about 44 million subscribers to 54 million subscribers, and an increase in the average revenue charged to the subscribers from \$8,50 per month to \$10,18 per month, resulting from changes in price and plan mix.

In respect to the cost of revenue, its largest component is the amortization of Netflix's streaming content. From 2015 to 2017, even though the absolute value of the cost of revenue has been increasing, in percentage of the revenue there has been a decline, from about 60% to 54%.

Contribution profit is defined as the revenue of a segment minus the cost of revenues and marketing expenses incurred by that segment. It is an important metric because it allows investors to analyze the operating performance of each sector separately, before global corporate costs. The contribution margin for the domestic segment is positive and has been increasing over the past years, reflecting a growth in paid subscriptions and revenue that outpaces the firm's costs. Netflix aim is to continue to increase its contribution margin over the following years, stating that they are willing to cut expenditure to achieve this target.

Fig. 41 – Netflix Subscribers and Contribution Profit outside the US (in millions, except Avg. Revenue per Paid

<i>Subscribers</i>	2015	2016	2017
Net Additions	11,75	14,41	18,47
Subscribers	30,02	44,37	62,83
Paid Subscribers	27,44	41,19	57,83
Average Revenue per Paid Subscriber	\$7,48	\$7,81	\$8,66
<i>Operation Results</i>	2015	2016	2017
Revenue	\$1.868	\$3.211	\$5.089
(-) Cost of Revenue	\$1.780	\$2.911	\$4.138
(-) Marketing	\$506	\$608	\$725
Contribution Profit	\$(333)	\$(309)	\$227
<i>Contribution Margin (%)</i>	(17)%	(10)%	4%

Source: Netflix Annual Report 2017

The revenue for the International Streaming market consists of the monthly fee paid by Netflix’s subscribers outside the US. This segment’s revenue has had a remarkable growth over the past three years, driven by a 110% growth in the number of international subscribers, which are now more than the domestic subscribers, as well as an increase on the average revenue charged to the subscribers from \$7,48 to \$8,66. This average price increase was driven by changes in price and plan mix, just like it happened in the domestic market, and boosted by favorable fluctuations in the foreign exchange rates. Netflix does not use hedging derivatives to mitigate its FX exposure, engaging only in natural hedging, consisting of paying its international suppliers in local currency, from the revenues collected in that country. The International Streaming revenue stream is gaining great importance in Netflix’s business. The average price charged to international subscribers is still lower than the price charged on the domestic market, as it is Netflix’s strategy to penetrate new markets with low prices and gradually increase those.

In respect to the cost of revenue, the trend seems favorable, as it has been decreasing in percentage of the revenue, from over 95% in 2015 to 81% in 2017.

International marketing expenses have been, on average, 50% higher than the Domestic marketing expenses over the period of analysis. This difference is explained by the market size differences as well as by the fact that Netflix is penetrating new markets where it needs to build awareness for its service, while it already has a strong brand in the US.

At last, contribution profit was positive for the first time in 2017, increasing \$551,1 million from its 2016 result, as profit growth in Netflix's most mature international markets outpaced expenditure in newer markets. The contribution margin increased by 21%, from (17)% in 2015 to 4% in 2017. It is still at a great distance from the contribution margin of 37% in the US, but there is great market potential, as Netflix is now a company operating worldwide with a positive contribution margin in its international segment.

Fig. 42 – Netflix Subscribers and Contribution Profit for DVDs (in millions, except Avg. Revenue per Paid Sub.)

<i>Subscribers</i>	2015	2016	2017
Net Additions	(0,87)	(0,79)	(0,73)
Subscribers	4,90	4,11	3,38
Paid Subscribers	4,79	4,03	3,33
Average Revenue per Paid Subscriber	\$10,30	\$10,22	\$10,17
<i>Operation Results</i>	2015	2016	2017
Revenue	\$646	\$542	\$450
(-) Cost of Revenue	\$324	\$263	\$203
(-) Marketing	\$-	\$-	\$-
Contribution Profit	\$322	\$280	\$248
<i>Contribution Margin (%)</i>	50%	52%	55%

Source: Netflix Annual Report 2017

The DVDs (and Blu-Ray) business only operates in the US. The revenues for this segment consist of the monthly fee paid by Netflix's subscribers solely in the US. The revenues are declining and Netflix estimates that this decline will continue down the road. However, Netflix does not expect that demand for this service will fade in following years, as it is expected that there will be some persistent level of demand for DVDs, coming mostly from rural areas where broadband access is not as available or affordable.

Cost of revenue for this segment consists mostly of delivery expenses, such as packaging and postage costs, expenses associated with content and other expenses related with the processing of DVDs and customer service centers. These costs are mainly variable costs, as a result, they vary greatly with the level of shipments, which is determined by the amount of subscribers. The growth in the contribution margin, from 50% in 2015 to 55% in 2017, as the number of paying subscribers and average revenue charged from those subscribers decreases, signals that paying subscribers are

renting fewer DVDs: Netflix is collecting the monthly fee from its clients and they are not using the service they are paying for. This ultimately leads to believe that those too will cancel their subscription in the near future as they as paying for a service they do not actually use.

Appendix 2 – Broadband Homes Evolution

Fig. 43 – Broadband Homes Evolution (in

	2011	2012	2013	2014	2015	2016	2017f	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
United States	88,3	92,5	96,0	97,8	102,2	106,3	110,4	114,2	117,6	120,6	123,0	124,8	126,4	127,7	128,6	129,5	130,4	131,2
<i>Growth Rate YoY</i>		4,75%	3,80%	1,85%	4,50%	4,03%	3,79%	3,50%	3,00%	2,50%	2,00%	1,50%	1,25%	1,00%	0,75%	0,70%	0,7%	0,7%
Canada	11,3	11,7	12,1	12,6	13,0	13,4	13,8	14,2	14,6	14,9	15,2	15,5	15,7	15,9	16,1	16,3	16,5	16,5
<i>Growth Rate YoY</i>		3,61%	3,46%	3,92%	3,68%	2,74%	3,02%	3,0%	2,5%	2,3%	2,0%	1,8%	1,5%	1,3%	1,2%	1,20%	1,20%	0,85%
UK & Ireland	21,7	22,8	24,2	25,0	26,0	26,5	27,4	28,1	28,7	29,1	29,5	29,8	30,0	30,2	30,4	30,7	30,9	31,1
<i>Growth Rate YoY</i>		5,26%	6,28%	3,13%	4,03%	2,13%	3,34%	2,5%	2,0%	1,5%	1,3%	1,0%	0,8%	0,8%	0,8%	0,8%	0,8%	0,8%
Latin America	37,3	41,3	44,9	48,5	52,6	55,9	58,7	61,4	64,0	66,5	68,9	70,9	72,7	74,3	75,8	77,2	78,3	79,5
<i>Growth Rate YoY</i>		12,6%	21,43%	4,29%	5,15%	5,50%	4,98%	4,5%	4,3%	4,0%	3,5%	3,0%	2,5%	2,3%	2,0%	1,8%	1,5%	1,5%
Nordics	8,7	8,9	9,2	9,5	9,8	10,1	10,4	10,7	10,9	11,2	11,4	11,6	11,8	12,0	12,2	12,3	12,4	12,5
<i>Growth Rate YoY</i>		2,27%	3,35%	3,38%	3,42%	2,74%	3,03%	2,8%	2,5%	2,3%	2,0%	2,0%	1,8%	1,5%	1,3%	1,0%	0,8%	0,8%
Netherlands	6,5	6,7	6,8	6,9	7,0	7,2	7,3	7,5	7,6	7,7	7,8	7,9	8,0	8,1	8,2	8,2	8,2	8,3
<i>Growth Rate YoY</i>		2,40%	2,07%	0,87%	2,60%	1,99%	2,00%	1,8%	1,8%	1,5%	1,5%	1,3%	1,3%	1,0%	0,8%	0,5%	0,5%	0,5%
France	22,7	24,0	24,9	26,0	26,9	27,7	28,5	29,3	30,1	30,8	31,5	32,2	32,9	33,5	34,0	34,4	34,7	35,1
<i>Growth Rate YoY</i>		5,41%	4,00%	4,13%	3,46%	2,97%	3,00%	2,8%	2,8%	2,5%	2,3%	2,3%	2,0%	1,8%	1,5%	1,3%	1,0%	1,0%
Germany	27,3	28,0	28,6	29,6	30,7	32,0	33,0	34,0	35,0	35,8	36,7	37,5	38,3	38,9	39,5	40,1	40,6	41,1
<i>Growth Rate YoY</i>		2,56%	2,45%	3,25%	3,84%	4,21%	3,26%	3,0%	2,8%	2,5%	2,4%	2,3%	2,0%	1,8%	1,5%	1,5%	1,3%	1,3%
Austria	2,1	2,1	2,2	2,4	2,5	2,5	2,6	2,7	2,8	2,9	3,0	3,0	3,1	3,2	3,2	3,3	3,3	3,4
<i>Growth Rate YoY</i>		1,57%	4,79%	5,69%	4,07%	2,77%	3,78%	3,5%	3,3%	3,0%	2,8%	2,5%	2,3%	2,0%	1,8%	1,8%	1,3%	1,3%
Belgium	3,5	3,7	3,8	4,0	4,1	4,3	4,4	4,6	4,7	4,9	5,0	5,2	5,3	5,4	5,5	5,6	5,7	5,8
<i>Growth Rate YoY</i>		4,21%	3,68%	4,78%	2,74%	3,62%	3,81%	3,5%	3,3%	3,0%	2,8%	2,8%	2,5%	2,3%	2,0%	1,8%	1,8%	1,8%
Switzerland	3,1	3,2	3,4	3,5	3,7	3,8	4,0	4,1	4,2	4,4	4,5	4,6	4,7	4,8	4,9	5,0	5,1	5,2
<i>Growth Rate YoY</i>		4,35%	7,04%	0,76%	7,27%	2,05%	4,29%	3,5%	3,3%	3,0%	2,8%	2,5%	2,5%	2,3%	2,0%	2,0%	1,8%	1,8%
Luxembourg	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,3	0,3	0,3	0,3	0,3	0,3	0,3
<i>Growth Rate YoY</i>		0,0%	4,14%	5,68%	4,84%	4,10%	3,75%	3,8%	3,8%	3,5%	3,3%	3,3%	3,0%	3,0%	2,8%	2,8%	2,5%	2,5%
Australia	5,6	5,7	6,0	6,5	6,8	7,4	7,8	8,2	8,6	9,1	9,5	9,9	10,3	10,6	11,0	11,4	11,7	12,1
<i>Growth Rate YoY</i>		3,30%	4,29%	9,28%	4,47%	8,00%	5,87%	5,5%	5,0%	4,8%	4,5%	4,3%	4,0%	3,8%	3,5%	3,3%	3,0%	3,0%
Japan	35,7	36,1	36,9	37,8	38,9	39,8	40,7	41,5	42,2	42,9	43,4	43,8	44,3	44,6	44,9	45,2	45,4	45,6
<i>Growth Rate YoY</i>		1,22%	2,18%	2,36%	2,87%	2,40%	2,20%	2,0%	1,8%	1,5%	1,3%	1,0%	1,0%	0,8%	0,8%	0,5%	0,5%	0,5%
Spain/PT/Italy	26,9	27,7	28,8	30,2	31,6	33,1	33,1	34,3	35,5	36,6	37,7	38,8	39,7	40,6	41,5	42,2	42,8	43,5
<i>Growth Rate YoY</i>		2,78%	4,15%	4,92%	4,43%	4,64%	4,18%	3,8%	3,5%	3,3%	3,0%	2,8%	2,5%	2,3%	2,0%	1,8%	1,5%	1,5%
India	13,4	15,0	14,9	15,8	16,9	18,7	20,0	21,3	22,5	23,8	25,0	26,1	27,3	28,5	29,6	30,7	31,8	32,9
<i>Growth Rate YoY</i>		12,2%	-0,37%	5,51%	7,57%	10,10%	7,01%	6,5%	6,0%	5,5%	5,0%	4,8%	4,5%	4,3%	4,0%	3,8%	3,5%	3,5%
Other exc.China	127,3	144,3	160,4	174,9	192,3	208,9	226,7	245,4	265,0	285,5	307,7	330,7	355,0	380,8	408,2	436,8	467,4	500,1
<i>Growth Rate YoY</i>		13,3%	11,22%	9,01%	9,96%	8,63%	8,50%	8,3%	8,0%	7,8%	7,8%	7,5%	7,4%	7,3%	7,2%	7,0%	7,0%	7,0%
Total	353	381	408	433	463	492	519	547	577	606	637	668	699	732	765	799	835	873

Source: World Bank (for historical data)

Appendix 3 – Penetration of Broadband Homes

Fig. 44 – Penetration of Broadband Homes Evolution (in %)

	Launch Date	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
United States		49%	52,0%	54,8%	56,8%	58,5%	59,8%	60,8%	61,5%	62,0%	62,5%	63,0%	63,3%
<i>Growth Rate YoY</i>			3,0%	2,8%	2,0%	1,8%	1,3%	1,0%	0,8%	0,5%	0,5%	0,5%	0,3%
Canada	Sept-10	46%	47,8%	49,3%	50,8%	52,3%	53,8%	55,0%	56,2%	57,2%	58,2%	59,2%	60,0%
<i>Growth Rate YoY</i>			1,8%	1,5%	1,5%	1,5%	1,5%	1,3%	1,2%	1,0%	1,0%	1,0%	0,8%
UK & Ireland	Jan-12	39%	42,0%	44,5%	46,0%	47,0%	47,8%	48,3%	48,8%	49,3%	49,8%	50,3%	50,6%
<i>Growth Rate YoY</i>			3,0%	2,5%	1,5%	1,0%	0,8%	0,5%	0,5%	0,5%	0,5%	0,5%	0,4%
Latin America	Sept-11	26%	34,0%	38,5%	42,0%	45,0%	47,5%	49,8%	51,8%	53,3%	54,8%	55,8%	56,3%
<i>Growth Rate YoY</i>			8,0%	4,5%	3,5%	3,0%	2,5%	2,3%	2,0%	1,5%	1,5%	1,0%	0,8%
Nordics	Oct-12	41%	43,5%	45,8%	47,8%	48,8%	49,5%	50,0%	50,5%	50,8%	51,0%	51,3%	51,5%
<i>Growth Rate YoY</i>			2,5%	2,3%	2,0%	1,0%	0,8%	0,5%	0,5%	0,3%	0,3%	0,3%	0,3%
Netherlands	Sept-13	20%	23,3%	26,3%	29,3%	31,3%	32,8%	34,0%	35,0%	35,8%	36,5%	37,0%	37,5%
<i>Growth Rate YoY</i>			3,3%	3,0%	3,0%	2,0%	1,5%	1,3%	1,0%	0,8%	0,8%	0,5%	0,5%
France	Sept-14	12%	19,0%	25,5%	30,5%	34,5%	38,0%	40,5%	42,8%	44,8%	46,5%	48,0%	49,2%
<i>Growth Rate YoY</i>			7,0%	6,5%	5,0%	4,0%	3,5%	2,5%	2,3%	2,0%	1,8%	1,5%	1,2%
Germany	Sept-14	10%	15,5%	20,5%	24,5%	28,0%	30,5%	32,5%	34,0%	35,3%	36,3%	37,3%	38,3%
<i>Growth Rate YoY</i>			5,5%	5,0%	4,0%	3,5%	2,5%	2,0%	1,5%	1,3%	1,0%	1,0%	1,0%
Austria	Sept-14	16%	24,5%	30,5%	34,5%	38,0%	40,0%	42,0%	43,5%	44,5%	45,0%	45,5%	46,0%
<i>Growth Rate YoY</i>			8,5%	6,0%	4,0%	3,5%	2,0%	2,0%	1,5%	1,0%	0,5%	0,5%	0,5%
Belgium	Sept-14	16%	24,5%	30,5%	34,5%	37,5%	40,0%	41,5%	42,5%	43,3%	43,8%	44,3%	44,8%
<i>Growth Rate YoY</i>			8,5%	6,0%	4,0%	3,0%	2,5%	1,5%	1,0%	0,8%	0,5%	0,5%	0,5%
Switzerland	Sept-14	15%	23,5%	29,5%	33,5%	38,0%	41,0%	43,5%	45,8%	47,8%	49,5%	51,0%	52,3%
<i>Growth Rate YoY</i>			8,5%	6,0%	4,0%	4,5%	3,0%	2,5%	2,3%	2,0%	1,8%	1,5%	1,3%
Luxembourg	Sept-14	27%	35,5%	41,5%	45,5%	48,5%	51,0%	53,0%	54,5%	55,5%	56,5%	57,0%	57,5%
<i>Growth Rate YoY</i>			8,5%	6,0%	4,0%	3,0%	2,5%	2,0%	1,5%	1,0%	1,0%	0,5%	0,5%
Australia	Mar-15	25%	33,5%	39,5%	43,5%	45,5%	47,5%	49,0%	50,5%	51,5%	52,5%	53,5%	54,3%
<i>Growth Rate YoY</i>			8,5%	6,0%	4,0%	2,0%	2,0%	1,5%	1,5%	1,0%	1,0%	1,0%	0,8%
Japan	Sept-15	7%	11,0%	14,5%	17,0%	19,0%	20,5%	21,8%	22,8%	23,8%	24,8%	25,5%	26,3%
<i>Growth Rate YoY</i>			4,0%	3,5%	2,5%	2,0%	1,5%	1,3%	1,0%	1,0%	1,0%	0,8%	0,8%
Spain/PT/Italy	Oct-15	10%	16,5%	22,0%	26,5%	30,5%	34,0%	36,5%	38,8%	40,8%	42,8%	44,3%	45,5%
<i>Growth Rate YoY</i>			6,5%	5,5%	4,5%	4,0%	3,5%	2,5%	2,3%	2,0%	2,0%	1,5%	1,3%
India	Jan-16	5%	9,5%	13,0%	15,0%	16,5%	17,5%	18,3%	19,0%	19,5%	20,0%	20,3%	20,6%
<i>Growth Rate YoY</i>			4,5%	3,5%	2,0%	1,5%	1,0%	0,8%	0,8%	0,5%	0,5%	0,3%	0,3%
Other exc.China	-	3%	4,0%	5,0%	5,8%	6,5%	7,3%	7,9%	8,5%	9,0%	9,3%	9,5%	9,8%
<i>Growth Rate YoY</i>			-	1,0%	1,0%	0,8%	0,8%	0,8%	0,6%	0,6%	0,5%	0,3%	0,3%

Source: Netflix Annual Report for historical data

Appendix 4 - World Economy Outlook

Netflix is a streaming company whose internationalization process has been extremely aggressive over the past decade. As a result, it is important not only to understand what the economy outlook for the US is but also for the rest of world. It should be noted that the product Netflix offers is not a basic need for its customers, meaning that, facing adverse economic scenarios, it is expected to be one of the first expenses to be cut.

In respect to the US, the International Monetary Fund (IMF) revised its previous growth forecast to 2.7% in 2018 and 2.5% in 2019 from 2.3% and 1.9% respectively. This revision comes as a consequence of a higher expected external demand and a positive expected effect of the reduction in corporate tax rates. This forecast assumes that the reduction in government revenues will not affect public expenditure in the short-run and will, as a result, stimulate short-term business activity in US, leading also to an increase in domestic demand. The IMF projects that the US real GDP will be 1.2% higher in 2020 as a consequence of the corporate tax reduction than it would be had this policy not been put into motion. The strong growth expected in the following years should be offset by a lower expected growth from 2022 onwards, as a consequence of an increase in the fiscal deficit.

The IMF considers that, due to strong momentum in domestic demand and high external demand, the growth rates for the euro zone are expected to increase even further, particularly for Germany, Italy and the Netherlands. The prospects for Spain are not as bright, as a consequence of political uncertainty on citizens' confidence and demand. In the non-euro countries of Europe, the IMF estimates growth rates of more than 5% for Poland and Turkey, as a result of a more favorable external environment, leading to more external demand and cheaper financing opportunities.

Globally, according to the IMF, the economic growth of 2017 was the broadest synchronized growth upsurge since 2010 and high-frequency hard data and sentiment indicators suggest that this momentum is expected to continue for the following years, suggesting good market conditions for Netflix to consolidate its position in the markets it has recently expanded operations to.

Appendix 5 - Subscriber Evolution per Geography and Segment

Fig. 45 – Subscriber Evolution per Geography and Segment (in millions)

<i>Domestic</i>	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
United States	33,4	39,1	44,7	49,4	54,8	59,4	64,4	68,4	72,0	74,6	76,8	78,5	79,7	81,0	82,1	83,1
<i>Growth YoY</i>	-	17,10%	14,40%	10,48%	10,76%	8,48%	8,45%	6,24%	5,15%	3,67%	2,94%	2,25%	1,57%	1,51%	1,46%	1,13%

<i>DVD</i>	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
United States	6,3	5,7	4,9	4,1	3,4	2,7	2,2	1,9	1,7	1,5	1,4	1,3	1,3	1,3	1,3	1,2
<i>Growth YoY</i>	-	-9,94%	-14,19%	-16,33%	-17,07%	-20,0%	-17,5%	-15,0%	-12,5%	-10,0%	-7,50%	-5,00%	-2,50%	-1,50%	-0,75%	-0,75%

<u>International</u>	Launching Date	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Canada	Set-10	3,8	4,3	4,9	5,5	6,0	6,8	7,2	7,6	7,9	8,3	8,6	8,0	9,2	9,4	9,7	9,9
<i>growth YoY</i>			26,8%	19,8%	10,9%	9,8%	13,2%	5,7%	5,4%	5,0%	4,7%	3,9%	3,5%	2,9%	2,8%	2,6%	2,1%
UK & Ireland	jan-12	3,5	5,7	7,8	9,2	10,7	11,8	12,8	13,4	13,9	14,2	14,5	14,7	15,0	15,3	15,5	15,8
<i>growth YoY</i>			64,9%	36,5%	18,4%	16,1%	10,4%	8,1%	4,9%	3,5%	2,6%	1,8%	1,8%	1,8%	1,8%	1,7%	1,6%
Latin America	set-11	3,1	5,1	9,5	13,9	17,7	20,9	24,6	27,9	31,0	33,7	36,2	38,5	40,4	42,0	43,5	44,8
<i>growth YoY</i>			65,9%	86,4%	45,5%	27,4%	18,1%	18,0%	13,5%	10,9%	8,7%	7,4%	6,4%	5,0%	4,1%	3,4%	3,0%
Nordics	out-12	1,1	1,9	2,8	3,3	3,9	4,6	5,0	5,3	5,6	5,8	5,9	6,1	6,2	6,3	6,3	6,4
<i>growth YoY</i>			78,7%	46,2%	20,3%	18,1%	18,6%	7,8%	6,7%	4,1%	3,6%	2,8%	2,5%	1,8%	1,5%	1,3%	1,3%
Netherlands	set-13	0,3	0,7	1,0	1,2	1,5	1,7	2,0	2,3	2,4	2,6	2,7	2,8	2,9	3,0	3,0	3,1
<i>growth YoY</i>			151,9%	48,5%	22,5%	19,9%	16,9%	14,9%	13,1%	8,4%	6,1%	5,1%	4,0%	3,0%	2,6%	1,9%	1,9%
France	set-14		0,4	0,8	1,4	3,1	5,6	7,7	9,4	10,9	12,3	13,3	14,3	15,2	16,0	16,7	17,2
<i>growth YoY</i>				91,0%	78,3%	127,8%	79,3%	37,9%	22,6%	15,7%	12,6%	8,7%	7,4%	6,2%	5,2%	4,3%	3,4%
Germany	set-14		0,4	0,7	1,3	3,0	5,3	7,2	8,8	10,3	11,4	12,4	13,2	13,9	14,5	15,1	15,7
<i>growth YoY</i>				108,0%	77,6%	128,8%	78,3%	35,9%	22,5%	17,0%	11,4%	8,7%	6,4%	5,2%	4,4%	4,0%	4,0%
Austria	set-14		0,1	0,2	0,3	0,4	0,7	0,9	1,0	1,1	1,2	1,3	1,4	1,4	1,5	1,5	1,5
<i>growth YoY</i>				133,3%	43,4%	70,1%	55,5%	28,5%	16,5%	13,2%	7,9%	7,4%	5,6%	4,1%	2,9%	2,4%	2,4%
Belgium	set-14		0,1	0,3	0,4	0,7	1,1	1,4	1,7	1,9	2,1	2,2	2,3	2,4	2,5	2,5	2,6
<i>growth YoY</i>				152,0%	56,3%	76,4%	61,7%	28,5%	16,5%	11,7%	9,6%	6,3%	4,7%	3,8%	2,9%	2,9%	2,9%
Switzerland	set-14		0,1	0,2	0,3	0,5	1,0	1,2	1,5	1,7	1,9	2,0	2,2	2,3	2,5	2,6	2,7
<i>growth YoY</i>				148,0%	67,7%	71,5%	79,8%	29,6%	17,0%	16,6%	10,6%	8,7%	7,5%	6,5%	5,7%	4,8%	4,2%
Luxembourg	set-14		0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,2	0,2	0,2	0,2
<i>growth YoY</i>				90,0%	47,4%	75,0%	58,3%	21,3%	13,5%	10,1%	8,6%	7,0%	5,9%	4,6%	4,6%	3,4%	3,4%
Australia / New Zealand	mar-15			1,0	1,6	2,3	2,8	3,4	3,9	4,3	4,7	5,0	5,4	5,7	6,0	6,3	6,5
<i>growth YoY</i>					57,7%	46,4%	17,7%	23,8%	15,4%	9,3%	8,8%	7,3%	6,9%	5,5%	5,3%	5,0%	4,4%
Japan	set-15			0,7	1,5	2,9	4,6	6,1	7,3	8,2	9,0	9,6	10,1	10,7	11,2	11,6	12,0
<i>growth YoY</i>					128,8%	96,2%	56,4%	34,1%	19,0%	13,2%	9,0%	7,2%	5,4%	5,2%	4,7%	3,5%	3,5%
Spain / Portugal / Italy	out-15			0,5	1,3	3,1	5,7	7,8	9,7	11,5	13,2	14,5	15,7	16,9	18,0	18,9	19,8
<i>growth YoY</i>					163,0%	139,2%	79,9%	38,0%	24,4%	18,5%	14,5%	10,0%	8,6%	7,3%	6,7%	5,1%	4,4%
India	jan-16				0,4	1,1	2,0	2,9	3,6	4,1	4,6	5,0	5,4	5,8	6,1	6,4	6,8
<i>growth YoY</i>						152,9%	87,9%	45,1%	21,7%	15,5%	11,1%	9,0%	8,5%	6,7%	6,4%	4,8%	5,0%
Other worldwide (excluding China)	After Jan-16				3,1	6,2	9,8	13,2	16,4	20,0	24,0	28,0	32,4	36,7	40,4	44,4	48,8
<i>growth YoY</i>						98,4%	59,6%	35,0%	23,9%	21,8%	19,9%	16,6%	15,8%	13,5%	10,0%	9,9%	9,8%
Total			18,3	30,0	44,4	62,8	84,3	103,6	119,8	134,9	148,9	161,4	173,6	184,8	194,8	204,3	213,7

Appendix 6 – Revenue and Paid Subscribers * Monthly Revenue per Paid Subscriber * 12 Comparison

Fig. 46 – Revenue and Paid Subscribers*Monthly Revenue per Paid Subscriber*12 Comparison

<u>Domestic</u>	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Revenue	4.180	5.077	6.153	7.747	9.476	10.599	11.552	12.287	12.935	13.458	13.806	14.120	14.405	14.669
PaidSub*MonthRev*12	4.427	5.294	6.451	8.135	9.950	11.129	12.129	12.902	13.582	14.131	14.496	14.827	15.125	15.403
<i>Revenue as %</i>	94%	96%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%

<u>International</u>	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Revenue	1.868	3.211	5.089	8.521	12.128	15.331	18.328	21.170	23.768	26.357	28.628	30.592	32.412	34.393
PaidSub*MonthRev*12	2.463	3.860	6.010	9.574	13.551	17.035	20.140	23.010	25.835	28.341	30.783	32.806	34.666	36.589
<i>Revenue as %</i>	76%	83%	85%	89%	90%	90%	91%	92%	92%	93%	93%	93%	94%	94%

<u>DVD</u>	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Revenue	646	542	450	353	290	248	216	194	179	169	165	162	160	159
PaidSub*MonthRev*12	592	494	406	327	269	229	200	179	165	157	152	150	148	147
<i>Revenue as %</i>	109%	110%	111%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%

Source: Netflix Annual Report for Historical Data

Appendix 7 – Corporate Tax Rate

Fig. 47 – Corporate Tax Rate per Country

Country	Tax Rate
United States	21%
Canada	26,5%
Denmark	22%
Ireland	12,5%
UK	19%
Mexico	30%
Brazil	34%
Colombia	33%
Argentina	30%
Finland	20%
Norway	25%
Sweden	22%
Netherlands	25%
France	33%
Germany	30%
Austria	25%
Belgium	29%
Switzerland	18%
Luxembourg	26%
Australia	30%
Japan	30%
Spain	25%
Portugal	21%
Italy	24%
India	35%
Other (exc. China)	24%

Source: KPMG Corporate Tax Table

Appendix 8 – Equity Risk Premium

Fig. 48 – Equity Risk Premium per Country

Country	Equity Risk Premium	Weight
Canada	5,08%	4,95%
UK & Ireland	5,67%	8,84%
<i>United Kingdom</i>	5,65%	-
<i>Ireland</i>	6,06%	-
Latin America	8,18%	14,60%
<i>Mexico</i>	6,46%	-
<i>Brazil</i>	8,54%	-
<i>Colombia</i>	7,27%	-
<i>Argentina</i>	11,42%	-
Nordics	5,18%	3,23%
<i>Denmark</i>	5,08%	-
<i>Finland</i>	5,54%	-
<i>Norway</i>	5,08%	-
<i>Iceland</i>	6,46%	-
<i>Sweden</i>	5,08%	-
Netherlands	5,08%	1,23%
France	5,65%	2,56%
Germany	5,08%	2,44%
Austria	5,54%	0,35%
Belgium	5,78%	0,57%
Switzerland	5,08%	0,44%
Luxembourg	5,08%	0,04%
Australia / New Zealand	5,08%	1,94%
Japan	5,89%	2,41%
Spain / Portugal / Italy	7,34%	2,60%
<i>Spain</i>	7,27%	-
<i>Portugal</i>	7,96%	-
<i>Italy</i>	7,27%	-
India	7,27%	0,89%
Other (Exc, China)	9,78%	5,08%
United States	5,08%	48,06%

Source: Damodaran Academic Website

Netflix's equity risk premium is calculated as the weighted average equity risk premium of the countries in which Netflix operates. Given the inexistence of data regarding Netflix's revenue per country, in order to compute the weights, the number of subscribers per country was used. The underlying assumption is that the price charged across the globe is always the same and that subscribers alone are the driver of revenue. Despite not being a precise estimate for the weights it should be a close approximation, as Netflix's packages pricing does not vary significantly from country to country.

The value of “Other (Exc. China)” was calculated as the average of the equity risk premium of all countries in the world for which there is an estimate for the equity risk premium.

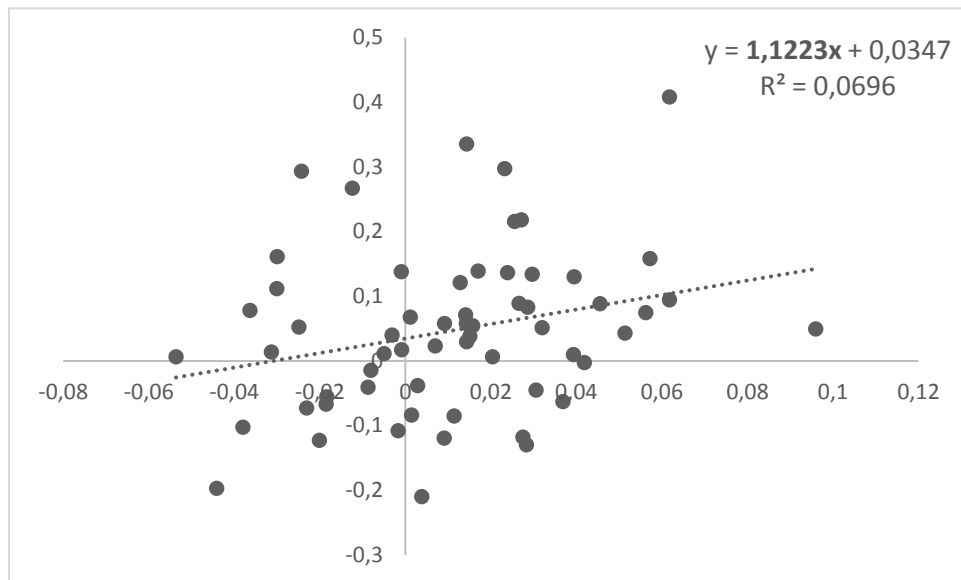
Appendix 9 – Levered Beta Calculation

Beta measures the risk of an asset in respect to a benchmark. The estimation of a company's beta is a process that involves a series of decisions, the first being the choice of a market index to reflect the market portfolio. Naturally, there is no single index that does it, as the market is too vast for any individual index to cover. Given the impossibility to select such an index, the alternative is selecting one that is the closest possible estimate of a market index. The NYSE composite or the Wilshire 5000 do cover many stocks, however, these are equal weighted indexes, which are poor reflections of the market index. As a result, the most common index of choice by analysts is the S&P 500, as it covers a significant number of stocks and is market weighted. This is also the index of choice in this dissertation.

The second choice refers to the return interval, which may be daily, weekly, monthly, quarterly or annually. Damodaran (1999) states that betas estimated using daily or weekly returns are likely to have significant biases due to non-trading problems. The author adds that, using such small return intervals will lead illiquid firms to report lower betas than they really should and liquid firms to report higher betas than justified. Given the shortfalls pointed out by the author, the return interval of chosen was monthly returns.

The third and last decision required consists of the selection of the period for the analysis, as there is a trade-off: more observations against the possible irrelevance of past information. Damodaran (1999) suggests that one should go back further in time when estimating the beta for firms that have remained stable in terms of business mix and leverage. Both variables have stayed relatively flat during the past years. Netflix has quickly expanded its area of operations over the past years and has issued considerable amounts of debt to fund this expansion, as it has had negative free cash-flows. However, due to the stock price momentum the company has been witnessing, its D/E ratio in market value hasn't changed significantly, nor has the company increased the range of products it offers. As a result, according to Damodaran (1999), the usage of the 5 year beta seems the most appropriate.

Fig. 49 – Estimated 5Y Beta



Source: Yahoo Finance for Stock Price

In order to compute the firm's beta the stock prices as of the first of each month over the past five years, for Netflix and the ETF SPY, which tracks the S&P500 index, were collected from Yahoo Finance. These stock prices are adjusted for dividends and stock splits. Afterwards, the monthly return for both the SPY and Netflix were computed and the regression depicted on Figure 49 run, resulting in a beta of 1,12.

Appendix 10 – Cost of Debt and Market Value of Debt

Fig. 50 – Interest Coverage Ratios and Ratings: High Market Capitalization Firms

Interest Coverage Ratio			
<i>From</i>	<i>To</i>	<i>Rating</i>	<i>Spread</i>
-100000	0,199999	D2/D	18,60%
0,2	0,649999	C2/C	13,95%
0,65	0,799999	Ca2/CC	10,63%
0,8	1,249999	Caa/CCC	8,64%
1,25	1,499999	B3/B-	4,37%
1,5	1,749999	B2/B	3,57%
1,75	1,999999	B1/B+	2,98%
2	2,249999	Ba2/BB	2,38%
2,25	2,49999	Ba1/BB+	1,98%
2,5	2,999999	Baa2/BBB	1,27%
3	4,249999	A3/A-	1,13%
4,25	5,499999	A2/A	0,99%
5,5	6,499999	A1/A+	0,90%
6,5	8,499999	Aa2/AA	0,72%
8,50	100000	Aaa/AAA	0,54%

Source: Damodaran Academic Website

Netflix's cost of debt is computed as a function of the firm's credit rating, provided by Moody's, which is Ba2. On the table above can be seen that, for large market capitalization companies in this rating bracket, the appropriate spread over the risk free rate is 2,38%. As a result, Netflix's cost of debt is assumed to be 5,35% (2,97% (rf) + 2,38% (spread)).

Fig. 51 – Market Value of Debt Computation

Issuance Date	Maturity Date	Time to Maturity	Principal at Par	Coupon Rate	# Annual Coupons	YTM	Bonds Market Value
April-2018	April-2028	11	1900	5,88%	2	5,948%	\$1888,92
Oct-2017	April-2028	11	1600	4,875%	2	5,948%	\$1462,84
May-2017	May-2027	10	1562	3,625%	2	5,732%	\$1314,12
Oct-2017	Nov-26	9	1000	4,375%	2	5,606%	\$913,92
Feb-2015	Feb-2022	5	700	5,500%	2	4,811%	\$721,21
Feb-2015	Feb-2025	8	800	5,875%	2	5,462%	\$821,18
Feb-2014	Mar-24	7	400	5,750%	2	5,290%	\$410,65
Feb-2013	Feb-2021	4	500	5,375%	2	4,493%	\$515,98
							\$8.048,82

Source: Netflix Annual Report and Reuters

Market value of debt was estimated using the excel formula “*PV*”. Netflix does not have debt in any form other than bonds. All the information on the table can be found in Netflix’s annual report, except the bonds Yield to Maturity (YTM), which was extracted from Netflix’s yield curve from Reuters and the information regarding the bond issued in April 2018, as the 2018 annual report is not available at the time of this dissertation.

Appendix 11 – Perpetual Growth Rate

Fig. 52 – Perpetual Growth Rate

Country	GDP Growth Rate 2023f	Weight
Canada	1,6%	4,95%
UK & Ireland	1,7%	8,84%
<i>United Kingdom</i>	1,6%	-
<i>Ireland</i>	2,8%	-
Latin America	2,7%	14,60%
<i>Mexico</i>	2,9%	-
<i>Brazil</i>	2,2%	-
<i>Colombia</i>	3,5%	-
<i>Argentina</i>	3,3%	-
Nordics	1,7%	3,23%
<i>Denmark</i>	1,7%	-
<i>Finland</i>	1,2%	-
<i>Norway</i>	1,9%	-
<i>Iceland</i>	2,6%	-
<i>Sweden</i>	1,9%	-
Netherlands	1,9%	1,23%
France	1,6%	2,56%
Germany	1,2%	2,44%
Austria	1,5%	0,35%
Belgium	1,5%	0,57%
Switzerland	1,7%	0,44%
Luxembourg	3%	0,04%
Australia / New Zealand	2,6%	1,94%
Japan	0,5%	2,41%
Spain / Portugal / Italy	1,2%	2,60%
<i>Spain</i>	1,7%	-
<i>Portugal</i>	1,2%	-
<i>Italy</i>	0,8%	-
India	8,2%	0,89%
Other (Exc. China)	3,9%	5,08%
United States	1,4%	48,06%

Source: International Monetary Fund (IMF)

The International Monetary Fund (IMF) has forecasted the GDP growth rate for the following five years for all the countries for which there is data available. Despite the fact that the explicit period for Netflix's valuation is of ten years, therefore going until 2028, it is assumed that the forecasted GDP growth rate from 2028 onwards will be equal to the forecasted GDP growth rate for 2023. Given the inexistence of data regarding Netflix's revenue per country, in order to compute the weights, the number of subscriber per country was used. The underlying assumption

is that the price charged across the globe is always the same and that subscribers alone are the driver of revenue. Despite not being a precise estimate for the weights it should be a close approximation as Netflix's packages pricing does not vary significantly from country to country,

The value of "Other (Exc. China)" was calculated as the average of the forecasted GDP growth rate of all countries in the world for which there is an estimate for GDP growth.

Appendix 12 – Forecasted Financial Statements

Fig. 53 – Forecasted Income Statement

	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Revenue	4.375	5.505	6.780	8.831	11.693	16.622	21.895	26.178	30.095	33.651	36.881	39.984	42.597	44.874	47.044	49.221
(-) Cost of Revenue	3.117	3.753	4.591	6.030	7.660	9.178	10.789	11.972	13.163	14.132	14.976	15.924	16.788	17.333	18.065	18.779
Gross Profit	1.258	1.752	2.189	2.801	4.033	7.443	11.105	14.206	16.932	19.518	21.905	24.060	25.809	27.542	28.979	30.442
(-) General & Administrative	180	270	407	578	864	1.247	1.708	2.094	2.182	2.271	2.397	2.399	2.449	2.468	2.493	2.510
(-) Marketing	470	607	824	991	1.278	2.080	2.701	3.165	3.609	3.926	4.296	4.517	4.657	4.743	4.959	5.088
(-) Technology & Development	379	472	651	852	1.053	1.512	1.861	2.160	2.408	2.608	2.766	2.899	2.982	3.141	3.175	3.199
(-) Unusual Expense (Income)	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Income	204	403	307	380	838	2.604	4.836	6.787	8.733	10.713	12.446	14.245	15.720	17.189	18.351	19.644
(-) Interest Expense	-32	-53	-164	-119	-353	-471	-471	-471	-471	-471	-443	-387	-331	-275	-220	-164
Net Income Before Taxes	172	349	142	261	485	2.133	4.365	6.316	8.262	10.242	12.003	13.858	15.389	16.914	18.131	19.480
(-) Provision for Income Taxes	59	83	19	74	-153	355	711	1.012	1.307	1.603	1.863	2.134	2.353	2.573	2.745	2.934
Net Income	113	266	123	187	559	1.778	3.654	5.304	6.955	8.639	10.140	11.724	13.036	14.341	15.387	16.546

Assumptions	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
<i>G&A as % of Revenue</i>	4,1%	4,9%	6,0%	6,5%	7,4%	7,5%	7,8%	8,0%	7,3%	6,8%	6,5%	6,0%	5,8%	5,5%	5,3%	5,1%
<i>Technology & Development as % of Revenue</i>	8,7%	8,6%	9,6%	9,6%	9,0%	9,1%	8,5%	8,3%	8,0%	7,8%	7,5%	7,3%	7,0%	7,0%	6,8%	6,5%
<i>Interest Expense as % of LTD</i>	6,4%	5,8%	6,8%	3,5%	5,4%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%
<i>Corporate Tax Rate</i>	34,3%	23,8%	13,4%	28,4%	-31,5%	16,6%	16,3%	16,0%	15,8%	15,7%	15,5%	15,4%	15,3%	15,2%	15,1%	15,1%

Fig. 54 – Forecasted Balance Sheet

	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Assets (\$ Millions)																
Cash & Equivalents	605	1.114	1.810	1.467	2.823	3.721	4.373	6.397	10.156	15.861	22.732	30.874	40.436	51.564	64.022	77.942
Short Term Investments	595	495	501	266	0	0	0	0	0	0	0	0	0	0	0	0
Other Current Assets	1.858	2.319	3.121	3.987	4.847	6.065	7.346	8.442	9.380	10.150	10.860	11.522	12.119	12.645	13.113	13.528
Other Current Assets	151	152	215	260	536	563	742	887	1.020	1.141	1.250	1.355	1.444	1.521	1.595	1.669
Current Content Assets	1.706	2.166	2.906	3.726	4.310	5.501	6.603	7.555	8.360	9.009	9.610	10.166	10.675	11.123	11.519	11.860
Total Current Assets	3.058	3.928	5.432	5.720	7.670	9.785	11.719	14.839	19.537	26.011	33.592	42.395	52.555	64.209	77.135	91.471
Property/Plant/Equipment, Total - Net	134	150	173	250	319	483	664	826	982	1.115	1.235	1.339	1.435	1.520	1.594	1.659
Intangibles, Net	2.091	2.773	4.313	7.275	10.371	13.942	17.738	21.544	25.340	29.019	32.422	35.576	38.459	40.999	43.240	45.172
Other Long Term Assets	129	192	285	341	652	828	1.060	1.338	1.657	2.014	2.405	2.829	3.280	3.756	4.255	4.777
Total Assets	5.412	7.043	10.203	13.586	19.012	25.038	31.182	38.547	47.515	58.158	69.653	82.139	95.729	110.484	126.224	143.078
Liabilities (\$ Millions)																
Accounts Payable	108	202	253	313	360	574	756	904	1.039	1.161	1.273	1.380	1.470	1.549	1.624	1.699
Accrued Expenses	54	69	140	198	315	582	766	916	1.204	1.346	1.475	1.599	1.704	1.795	1.882	1.969
Current Port. of LT Debt/Capital Leases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Customer Advances	216	275	347	443	619	619	619	619	619	619	619	619	619	619	619	619
Other Current Liabilities	1.776	2.117	2.789	3.633	4.173	5.485	7.006	8.115	9.029	10.095	11.064	11.995	12.779	13.462	14.113	14.766
Total Current Liabilities	2.154	2.663	3.529	4.587	5.467	7.260	9.147	10.554	11.890	13.222	14.432	15.594	16.572	17.425	18.238	19.053
Total Long Term Debt	500	914	2.400	3.394	6.529	8.429	8.429	8.429	8.429	8.429	7.929	6.929	5.929	4.929	3.929	2.929
Other Liabilities, Total	1.425	1.607	2.049	2.927	3.436	3.935	4.537	5.191	5.868	6.541	7.187	7.787	8.362	8.923	9.464	9.956
Total Liabilities	4.079	5.184	7.978	10.908	15.432	19.623	22.113	24.174	26.187	28.192	29.547	30.309	30.863	31.277	31.630	31.938
Shareholders' Equity (\$ Millions)																
Common Stock	0	1.043	1.325	1.600	1.871	1.927	1.927	1.927	1.927	1.927	1.927	1.927	1.927	1.927	1.927	1.927
Additional Paid-In Capital	777	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retained Earnings (Accumulated Deficit)	552	819	942	1.129	1.731	3.509	7.163	12.467	19.422	28.061	38.200	49.924	62.961	77.302	92.688	109.235
Other Equity, Total	3	-5	-44	-49	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21
Total Equity	1.332	1.857	2.223	2.680	3.581	5.415	9.069	14.373	21.328	29.967	40.106	51.830	64.867	79.208	94.594	111.141
Total Liabilities & Shareholders' Equity	5.411	7.041	10.201	13.588	19.013	25.039	31.182	38.547	47.515	58.159	69.654	82.140	95.729	110.484	126.225	143.079
Assumptions																
<i>Accounts Payable as % of Revenues</i>	2%	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
<i>Accrued Expenses as % of Revenues</i>	1%	1%	2%	2%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
<i>Other Current Liabilities as % of Revenues</i>	41%	38%	41%	41%	36%	33%	32%	31%	30%	30%	30%	30%	30%	30%	30%	30%
<i>Other Current Assets as % of Revenues</i>	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%

Fig. 55 – Forecasted Cash-Flow Statement

	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
Cash Flow-Operating Activities																
Net Income	113	266	123	187	559	1,778	3,654	5,304	6,955	8,639	10,140	11,724	13,036	14,341	15,387	15,387
Depreciation	48	54	62	58	72	85	92	114	145	169	194	215	235	251	266	266
Amortization of Intangibles	2,193	2,728	3,485	4,868	6,259	7,186	8,165	8,835	9,556	10,099	10,556	11,132	11,683	11,954	12,426	12,426
Deferred Taxes	-22	-30	-59	-47	-209	-176	-232	-278	-319	-357	-391	-424	-452	-476	-499	-499
Stock Based Compensation	22	41	76	150	380	499	602	654	677	673	645	600	575	561	541	541
Changes in Working Capital	-2,256	-3,043	-4,437	-6,688	-8,847	-10,184	-11,355	-12,330	-12,953	-13,216	-13,459	-13,786	-14,184	-14,167	-14,323	-14,323
Other Assets	-2,988	-3,782	-5,753	-8,606	-10,040	-11,974	-13,243	-13,737	-14,290	-14,548	-14,669	-14,948	-15,163	-15,020	-15,135	-15,135
<i>Additions to Streaming Content</i>	-3,050	-3,774	-5,772	-8,653	-9,806	-11,947	-13,064	-13,592	-14,157	-14,427	-14,560	-14,842	-15,074	-14,943	-15,062	-15,062
<i>Other Current Assets</i>	62	-9	19	47	-234	-27	-179	-145	-133	-121	-110	-105	-89	-77	-74	-74
Accounts Payable	18	84	52	32	75	214	182	148	135	123	112	107	90	79	75	75
Accrued Expenses	2	56	49	69	114	267	185	150	288	142	129	124	105	91	87	87
Other Current Liabilities	720	652	1,235	1,869	1,078	1,312	1,521	1,109	913	1,067	969	931	784	683	651	651
Other Assets & Liabilities, Net	-9	-52	-18	-52	-74	0	0	0	0	0	0	0	0	0	0	0
Cash from Operating Activities	98	17	-749	-1,474	-1,786	-811	926	2,299	4,060	6,007	7,685	9,461	10,893	12,465	13,799	13,799
Cash Flow-Investing Activities																
Capital Expenditures	-120	-145	-169	-185	-227	-249	-274	-275	-301	-303	-313	-320	-330	-337	-341	-341
Sale/Maturity of Investment	408	527	364	423	343	0	0	0	0	0	0	0	0	0	0	0
Purchase of Investments	-550	-427	-372	-187	-75	0	0	0	0	0	0	0	0	0	0	0
Other Investing Cash Flow	6	1	-2	-1	-7	0	0	0	0	0	0	0	0	0	0	0
Cash from Investing Activities	-256	-43	-179	50	34	-249	-274	-275	-301	-303	-313	-320	-330	-337	-341	-341
Cash Flow-Financing Activities																
Financing Cash Flow Items	72	82	63	55	-32	0	0	0	0	0	0	0	0	0	0	0
Issuance (Retirement) of Stock, Net	125	61	78	37	88	56	0	0	0	0	0	0	0	0	0	0
Issuance (Retirement) of Debt, Net	280	399	1,500	1,000	3,021	1,900	0	0	0	0	-500	-1,000	-1,000	-1,000	-1,000	-1,000
Cash from Financing Activities	476	542	1,640	1,092	3,077	1,956	0	0	0	0	-500	-1,000	-1,000	-1,000	-1,000	-1,000
Foreign Exchange Effects	-3	-5	-16	-9	30	0	0	0	0	0	0	0	0	0	0	0
Starting Cash	290	606	1,116	1,812	1,470	2,826	3,721	4,373	6,397	10,156	15,861	22,732	30,874	40,436	51,564	51,564
Net Changes in Cash	316	510	696	-342	1,355	895	652	2,024	3,759	5,704	6,871	8,142	9,562	11,128	12,457	12,457
End Cash	606	1,116	1,812	1,470	2,826	3,721	4,373	6,397	10,156	15,861	22,732	30,874	40,436	51,564	64,022	64,022

Assumptions	2013	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f
<i>Depreciation of PPE</i>	27%	26%	26%	19%	18%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
<i>Amortization as a % of Additions to Streaming Content</i>	72%	72%	60%	56%	64%	60%	63%	65%	68%	70%	73%	75%	78%	80%	83%	85%
<i>Stock Based Compensation as % of Revenue</i>	0,50%	0,75%	1,12%	1,69%	3,25%	3,00%	2,75%	2,50%	2,25%	2,00%	1,75%	1,50%	1,35%	1,25%	1,15%	1,00%
<i>Capex as % of Revenue</i>	2,74%	2,63%	2,49%	2,09%	1,94%	1,50%	1,25%	1,05%	1,00%	0,90%	0,85%	0,80%	0,78%	0,75%	0,73%	0,70%
<i>Deferred Taxes as % of Revenue</i>	-0,50%	-0,55%	-0,87%	-0,53%	-1,78%	-1,06%	-1,06%	-1,06%	-1,06%	-1,06%	-1,06%	-1,06%	-1,06%	1,06%	-1,06%	-1,06%

References

- Amazon, 2018. *Amazon*. [Online]
Available at: <https://www.amazon.com/Amazon-Video/b?ie=UTF8&node=2858778011>
[Accessed 17 March 2018].
- Bloomberg, 2018. *Bloomberg*. [Online]
[Accessed 3 May 2018].
- Branch, B., 2002. The Costs of Bankruptcy: a review. *International Review of Financial Analysis*, 11(1), pp. 39-57.
- Brealey, R., Myers, S. & Allen, F., 2011. *Principles of Corporate Finance*. Maidenhead: McGraw-Hill Education.
- Damodaran, A., 1999. Estimating Risk Parameters. *World Bank Working Paper*.
- Damodaran, A., 2001. *Corporate Finance: Theory and Practice*. 2nd ed. New York: John Wiley & Sons Inc.
- Damodaran, A., 2005. *Valuation Approaches and Metrics: A survey of the theory and evidence*. 1st ed. Hanover: Now Publishers Inc.
- Damodaran, A., 2012. *Investment Valuation: Tools and Techniques for Determining the Value of any Asset*. 3rd ed. New York: John Wiley & Sons, Inc.
- Damodaran, A., 2018. *Damodaran Academic Website*. [Online]
Available at:
http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html
[Accessed 3 May 2018].
- Damodaran, A., 2018. *Damodaran Academic Website*. [Online]
Available at: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.htm
[Accessed 30 April 2018].
- Dunn, J., 2017. *Business Insider*. [Online]
Available at: <http://www.businessinsider.com/netflix-vs-amazon-prime-video-content->

spend-estimate-chart-2017-4

[Accessed 9 February 2018].

Ekanadham, C., 2018. *Netflix Technology Blog*. [Online]

Available at: <https://medium.com/netflix-techblog/using-machine-learning-to-improve-streaming-quality-at-netflix-9651263ef09f>

[Accessed 11 March 2018].

Fernandez, P., 2002. *Valuation using multiples: How do analysts reach their conclusions?*, Madrid: IESE Business School.

Fernandez, P., 2010. *WACC: Definition, Misconceptions and Errors*, Madrid: IESE Business School.

Garrahan, M., 2017. Disney close to \$60bn deal to take over Fox assets. *Financial Times*, 12 December.

Gilbert, G. A., 1990. *Discounted Cash-Flow Approach to Valuation*, Illinois: CFA Institute.

Goedhart, M., Wessels, D. & Koller, T., 2010. *Measuring the Value of Companies*. 5th ed. Hoboken: Mckinsey & Company.

Graham, J. R., 2001. The Maze of Banking: History, Theory, Crisis. *The Journal of Applied Corporate Finance*, pp. 43-54.

HBO, 2018. *HBO*. [Online]

Available at: <https://help.hbonow.com/>

[Accessed 17 March 2018].

Hulu, 2018. *Hulu*. [Online]

Available at:

https://www.hulu.com/welcome?orig_referrer=https%3A%2F%2Fwww.google.com%2Furl%3Fsa%3Dt%26rct%3Dj%26q%3D%26esrc%3Ds%26source%3Dweb%26cd%3D1%26ved%3D0ahUKEwil38H60JDbAhUKvhQKHZdkAu8QFgguMAA%26url%3Dhttps%253A%252F%252Fwww.hulu.com%252F%26usg%3DAOvVaw1GWqbtY

[Accessed 17 March 2018].

IMF, 2018. *IMF DataMapper*. [Online]

Available at:

http://www.imf.org/external/datamapper/NGDP_RPC@WEO/OEMDC/ADVEC/WEOWORLD

[Accessed 3 May 2018].

IMF, 2018. *World Economy Outlook Update*, Washington: IMF.

Kang, C., 2017. FCC Repeals Net Neutrality. *The New York Times*, 14 December.

Kastrenakes, J., 2017. *TheVerge*. [Online]

Available at: <https://www.theverge.com/2017/11/22/16690870/fcc-repeal-net-neutrality-proposal-released>

[Accessed 9 May 2018].

Khan, J., 2018. Comcast prepares rival bid to crash Walt Disney-Fox deal. *Financial Times*, 8 May.

Kim, M. & Ritter, J., 1999. Valuing IPOs. *The Journal of Financial Economics*, 53(3), pp. 409-437.

Koller, T., Goedhard, M. & Wessels, D., 2005. *The Right Role for Multiples in Valuation*, Boston: Mckinsey on Finance.

KPMG, 2018. *KPMG Corporate Tax Table*. [Online]

Available at: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

[Accessed 7 May 2018].

Liu, J., Nissim, D. & Thomas, J., 2002. Equity Valuation Using Multiples. *Journal of Accounting Research*, 40(1), pp. 135-172.

Luehrman, T., 1997. *What's it Worth? A General Manager's Guide to Valuation*. Boston: Harvard Business Review.

Morgan Stanley & CO. LLC, 2018. *Morgan Stanley Equity Research - 4Q17: Banner Year - Reiterate OW*, London: Morgan Stanley.

- MorningStar, 2018. *MorningStar Rating - Netflix Inc.* [Online]
Available at: <http://www.morningstar.com/stocks/XNAS/NFLX/quote.html>
[Accessed 3 May 2018].
- Netflix Media Center, 2018. *Netflix Media Center.* [Online]
Available at: <https://media.netflix.com/en/>
[Accessed 15 May 2018].
- Netflix, Inc., 2017. *Netflix Annual Report*, California: SEC.
- Netflix, Inc., 2018. *Netflix Investor Relations.* [Online]
Available at: <https://ir.netflix.com/>
[Accessed 15 May 2018].
- Oxford Dictionary, 2018. *Oxford Dictionary.* [Online]
Available at: https://en.oxforddictionaries.com/definition/net_neutrality
[Accessed 9 May 2018].
- Pinto, J., 2010. *Equity Asset Valuation*. 2nd ed. New Jersey: John Wiley & Sons, Inc.
- R&P Research, 2015. *Revenuesandprofits.* [Online]
Available at: <https://revenuesandprofits.com/how-netflix-makes-money/>
[Accessed 5 March 2018].
- Roettgers, J., 2017. *NASDAQ: Movie Theaters Haven't Innovated Beyond Popcorn.*
[Online]
Available at: <https://www.nasdaq.com/article/netflix-ceo-reed-hastings-movie-theaters-havent-innovated-beyond-popcorn-cm762376>
[Accessed 3 March 2018].
- Schill, M., 2013. *Business Valuation: Standard Approaches and Applications.*
Charlottesville: Darden Business Publishing.
- Sharpe, W., 1964. Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk. *The Journal of Finance*, pp. 425-442.
- Spandler, T., 2017. *Variety.* [Online]
Available at: <http://variety.com/2017/digital/news/hulu-2017-content-spending-2-5-billion->

1202558912/

[Accessed 9 February 2018].

Statistica, 2018. *Amazon Prime Video Subscriber Evolution*. [Online]

Available at: <https://www.statista.com/statistics/693936/global-number-of-amazon-prime-video-subscribers-region/>

[Accessed 15 May 2018].

Statistica, 2018. *HBO Now Subscriber Evolution*. [Online]

Available at: <https://www.statista.com/statistics/539290/hbo-now-subscribers/>

[Accessed 15 May 2018].

Statistica, 2018. *Hulu Subscribers Evolution*. [Online]

Available at: <https://www.statista.com/statistics/258014/number-of-hulus-paying-subscribers/>

[Accessed 15 May 2018].

Thomson Reuters Eikon, 2018. *Thomson Reuters Eikon Platform*. [Online].

US Department of the Treasury, 2018. *Daily Treasury Yield Curve Rates*. [Online]

Available at: <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2018>

[Accessed 15 May 2018].

World Bank, 2017. *Fixed Broadband Subscriptions Evolution*. [Online]

Available at:

<https://data.worldbank.org/indicator/IT.NET.BBND?end=2016&locations=US&start=2013&view=chart>

[Accessed 1 May 2018].

Yahoo Finance, 2018. *Yahoo Finance Alphabet Historical Stock Prices*. [Online]

Available at: <https://finance.yahoo.com/quote/GOOG/history?p=GOOG>

[Accessed 5 May 2018].

Yahoo Finance, 2018. *Yahoo Finance Amazon Historical Stock Prices*. [Online]

Available at: <https://finance.yahoo.com/quote/AMZN/history?p=AMZN>

[Accessed 5 May 2018].

Yahoo Finance, 2018. *Yahoo Finance Comcast Historical Stock Prices*. [Online]
Available at: <https://finance.yahoo.com/quote/CMCSA/history?p=CMCSA>
[Accessed 5 May 2018].

Yahoo Finance, 2018. *Yahoo Finance Facebook Historical Stock Prices*. [Online]
Available at: <https://finance.yahoo.com/quote/FB/history?p=FB>
[Accessed 5 May 2018].

Yahoo Finance, 2018. *Yahoo Finance Netflix Historical Stock Prices*. [Online]
Available at: <https://finance.yahoo.com/quote/NFLX/history?p=NFLX>
[Accessed 5 May 2018].

Yahoo Finance, 2018. *Yahoo Finance SPY Historical Stock Prices*. [Online]
Available at: <https://finance.yahoo.com/quote/SPY/history?p=SPY>
[Accessed 5 May 2018].

Yahoo Finance, 2018. *Yahoo Finance Walt Disney Historical Stock Prices*. [Online]
Available at: <https://finance.yahoo.com/quote/DIS/history?p=DIS>
[Accessed 5 May 2018].