Equity Valuation

Netflix Inc

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High growth outlook, hinging to global expansion from subs increase

Netflix.Inc is a provider of Internet Television Network, currently with over 57 million streaming members worldwide. SVOD is an industry going through a fast growth process, as they have reached 57,7% of consumers, growing 23% in the last two years in the United States.Netflix's year revealed to be the boom year for the American firm, as the price of the share increased 134%, and the number of subscribers worldwide increased by 30% (17 Million in absolute terms). Adding to this, Reed Hastings (company's CEO) revealed its plans to expand the service worldwide, investing in the idea that their revenues come from the number of subscribers, so, following the concept of an economy of subscribers, they need to increase its market size, as one of the main advantages of this company relies on the higher operating margins when compared to the sector (so, they can sustain the increase in the number of clients). If Netflix achieves this scenario, its future looks bright; although, Netflix is investing huge quantities of money in new markets, so it's almost impossible to fully predict accurately that how well the international market will react, and success brings competition, making the task even more complex.

Our final expectations point out for a continuous success for the internet streaming company, increasing its share price to 133,43$ in the end of the year of 2016, driven by increase in the number of worldwide subscribers hinging to a success in the international expansion plans.

Overweight

Netflix

Price: 114,38$

Price Target: 133,43$

Company Data

Price: 114,38$

Market Cap: 48,95B $

Shares Out: 428 Million

Date of Price: 31-Dec 2015

Price Target: 133,43$

Date of Price Target: 31-Dec 2016

Goldman Sachs Valuation Target

PT: 140$

Date: 15-July 2015

PT Date: 15-July 2016

Rating: Overweight

Price Performance:

Abstract

This dissertation aims at aligning the theory and practice to provide a relevant valuation of Netflix.

For this we analyzed the relevant methods in the literature review, adapting their specific characteristics to choose the most appropriate valuation methodologies: adjusted present value and relative valuation.

Through this analysis, we obtained a price target of 135,53$ (per share) for the APV method, 52 405, 92 Million $ for the trading multiples and 42 458,19 Million $ (full equity value) regarding the transaction multiples.

All the three methods lead to a unanimous conclusion: Netflix stock is overweight, recommending to buy.

Additionally, sensitivity analysis and comparisons to an equity report were conducted aiming at studying the impact and relevance of our inputs and respective assumptions and estimates

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Esta dissertação aponta a alinhar teoria e prática de modo a providenciar uma avaliação relevante da Netflix.

Para isto foram analisados os métodos relevantes na revisão da literatura relevante, adaptando características especificas da empresa para selecionar as metodologias de avaliação mais apropriadas: o valor actual ajustado e avaliação relativa.

Através desta analise foi obtido um preço alvo de 135,53 dólares por Accão, 52 405, 92 milhões de dólares para os múltiplos de troca, e 42 458,19 milões de dólares (valor completo da empresa) para os múltiplos de transacção.Todos os três métodos levam a uma conclusão unânime: O stock da Netflix recomenda a compra.

Adicionalmente, uma análise de sensibilidade e comparação á analise de outro banco foram realizadas de forma a estudar o impacto e relevância dos valores e factores assumidos.

Preface

This dissertation marks the conclusion of my academic path aimed at obtaining a master degree at Católica Lisbon. This process and its challenges were essential to further enhance my knowledge in firm valuation and equity research.

I would like to express my gratitude to Professor José Carlos Tudela Martins for the valuable insights, advices and availability throughout the entire development of my thesis.

I would like to thank my family, with special mention to my parents Virgilio Carvalho and Maria Margarida de Carvalho, and to all my friends for their constant support along this period, with specific regards to António Miranda and José Moreira da Silva, for their contribution throughout my masters and thesis.

I would like to express my gratefulness to all the team at Millenium Banque Privée for the teachings, vital for the completion of this thesis, with special thanks to the analysts Vitor Santos and João Quadrado for being able to provide crucial information for the development of this dissertation.

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1 Introduction

Valuation is the science responsible for understanding "the process of valuing a company and its business units". By assisting in identifying sources of value creation and destruction in a company, it's considered an analytical financial skill (Luerhman, 2009) for optimizing the outcomes, for operational and strategic decisions (Koller, Goedhart, Wessels, 2010), more specifically, for the resource allocation decision, focused in the final goal of achieving sustainable value creation. For better understanding of this concept, three factors must be taken into account: cash, timing and risk (Luerhman, 1997).

The concept of value, theoretically, reflects the growth expectations of an investor in any asset when compared to its initial value, with mention to the risk to which the investor is exposed (Koller et al. 2010). Following a broader perspective, value is the "defining dimension of measurement in a market economy". This measurement of value can be adopted by four different approaches (Damodaran, 2006): a discounted cash flow valuation, a relative valuation using multiples, a method based in profitability and contingent claim valuation.

The discounted cash flow method focuses on the present value of the expected future cash flows, discounted at a rate that reflects the riskiness of these cash flows. It's one of the most used approaches in the financial industry, and one of the most discussed valuation methods given all of its variants, such as the excess returns model, in which the cash flows are separated between normal returns (earning the risk of the cost of capital) and excess return cash flows that can be either positive or negative. By developing this method, we obtain models such as the economic value added or the dynamic ROE.

Valuation through multiples focuses on obtaining the value of an asset through comparison between prices of assets in the market relative to a common variable (earnings, cash flows, book value, sales).

A method following options theory (contingent claim valuation) values assets by examining the characteristics of an option to estimate its price. This is a mostly used approach for managerial flexibility, i.e. when a company must make a choice between alternative opportunities.

It seems relevant to mention that, at start, given the circumstances, no single approach is expected to reveal to be more reliable than others (Young et al. 2010).

As it can be concluded through the previous explanations, different methods use different assumptions; therefore, our choice for methods of analysis must be focused in order to tailor to the characteristics of our company, hitting the main factors that lead to value creation, making our valuation more accurate through "robustness checks", as different approaches highlight different sources of value. As a result, companies will use more than one valuation methodology.

As selecting the right methodology is directly correlated to a more accurate valuation, the choice for method of analysis must focus on fitting to the characteristics of the company, so that, through the application of a mix of methods and estimates, we expect to hit the core that leads to value creation. (Demirakos, Strong, Walker, 2004).

The goal in this chapter is to provide a better understanding of the mentioned valuation techniques.

2 Literature Review

2.2 Discounted Cash Flows

Free cash flows are a trustworthy measure, as they give the closest estimate to the intrinsic stock value (the actual value of a company, including all aspects of its business). By forecasting future cash flows to the company, discounted at a rate that reflects its risk, it's described as the "most accurate and flexible method for valuing projects, divisions and companies" (Goedhart, Koller, Wessels, 2010). It's a financial model based on the present value of future free cash flows (focused on the long-term value) identifying where the value is being generated and whether or not its current share price is justified by calculating in its' intrinsic value.

This method generated many variants, being the most used the free cash flows to equity (using Ke), the free cash flow to the firm (with the WACC), the Dividend Discount Model and the Adjusted Present Value.

The choice of approach depends on the capital structure and its stability. Positively, it is very flexible and considered a "fundamental approach to valuation" (Rosenbaum, Joshua Pearl, 2009). But, there are also some circumstances that make this method not recommendable, as explicated by Damodaran (2002): the company may be in an early stage (high volatility, assumptions are not reliable), having negative cash flows or evaluating a cyclical company. Also, a main disadvantage relies on the weight of the assumptions on the outputs; if the cash flow forecasts, discount rates and perpetuity growth rates are wide of the mark, the fair value won't be accurate.

2.2.1 Free Cash Flow to Equity

This method is based on the cash flows available for the shareholders, after paying all the other claimholders of the firm, being the discount rate the one demanded by the equity holders.

$$Value\ of\ Equity = \sum \frac{FCFE}{(1+Ke)^t}$$

$$FCFE = Net\ Income - (CAPEX - Dep.) * \frac{D}{V} - \Delta wc * [\, 1 - \frac{D}{V}\,]$$

Detailing these formulas, it’s computed by “discounting the future cash flows to the equity (FCFE) at the cost of equity. Concluding, it consists in evaluating the equity stake of a company.

2.2.2 Dividend Discount Model

It’s a special situation in the FCFE, where the cash flows constitute the dividends expected to be distributed by the company

An investor, when buying a stock, can only expect to receive its dividends and the price for which it will sell the stock in the end. The selling price is defined through the expectations on future dividends.

Given its no dividend policy, this model is not applicable to Netflix.

2.2.3 Free Cash Flow to the Firm

The cash flow that will be discounted is the free cash flow to the firm (FCFF), which results from the sum of the cash flow to all claimholders in the firm, including stockholders, bondholders and preferred stockholders and incorporate the earnings before interest and taxes (EBIT), net out taxes, reinvestment needs in capital expenditures and variation in working capital:

$$FCFF = EBIT\ (1 - t) - \ CAPEX + Dep. - \Delta WC$$

The discount rate used is the WACC, by taking into account the cost of debt and equity, it fits better for valuation of companies that don't have a stable capital structure; so for firms that are in the process of changing their leverage are best evaluated using the FCFF method.

Following the same reasoning of the CF based models, we need to discount future CF at the cost of capital, discounting at the WACC:

$$\text{Vi} = \frac{FCFF}{(1 + WACC)^t} + \frac{TVn}{(1 + WACC)^t}$$

2.2.4 Adjusted Present Value

The adjusted present value approach analyzes different areas of financial statements separately and then adds their value to that of the business. Luehrman divides the valuation process in five steps: performance forecasts and base-case incremental cash flows must be prepared (using income statements and balance sheets), obtain a base case value (value of project as if it was entirely financed with equity) by discounting its cash flows and terminal value, obtaining the present value, followed by the evaluation of the financing side effects (interest tax shields, costs of financial distress, subsidies, hedges, issue costs), add the pieces and tailor the analysis to fit the managers' needs. According to Luehrman (1997), this is the best option for unstable capital structures, as the "WACC has never been that good at handling financial side effects", along with the detail that the APV requires fewer restrictive assumptions, being less prone to errors in assumptions and estimations; in other words, it's a more flexible method for valuation when compared to the WACC, and provides more relevant information for managers, by helping in analyzing not only how much an asset is worth, but also where the value comes from.

However, according to Damodaran (2002), the APV model also has some drawbacks:

"The first and most important is that most practitioners who use the adjusted present value model ignore the expected bankruptcy costs. Adding the tax benefits to unlevered firm value to get the levered firm value makes debt seem like and unmixed blessing. Firm value will be overstated, especially at very high debt ratios, where the cost of bankruptcy is clearly not zero and, in some instances, the cost of bankruptcy is higher than the tax benefit of debt". So, as the debt increases, along with the tax savings, some costs arise, such as the costs of financial distress. Calculating the expected bankruptcy costs is a very difficult step in valuation. A way to proceed in this situation is to apply different levels of debt trying to determine the optimal capital structure given the bankruptcy costs.

2.2.5 Growth Rate

This is a very stressful topic when evaluating companies with the same nature as Netflix. Companies in the internet sector (focused in the broadcasting of content) going through its peak of growth phase don't have much historical references to estimate a stable growth rate, making it a critical input in valuation. For the valuation of high-growth companies, its recommended to predict how the industry and company will look like as the firm evolves from its current stage characterized by uncertainty, developing onto a sustainable moderate-growth state in the future. According to Damodaran in "Looking Forward: Estimating Growth", there are three possibilities for surpassing this issue related to the growth rate: we can look at the firm's past earning, analyzing through the historical growth rate, but, given its history (developed in the company's analysis), this doesn't seem to be a viable option, except for finding links between revenues and percentages of costs. The possibility of negative earnings and the high volatility of the past growth rates, along with the continuous changes in the market in the technological sector turn the historical growth into an unreliable method.

The second option is to look at the firm's fundamentals by determining the level of reinvestment into new assets, judging after the quality of this investments. But, again, as mentioned, for technological firms, this poses as a difficult challenge, given the high instability of the growth rate each year given the changing market dynamics.

The third and last option relies on following equity research analysts that continuously study the firm. This is a reliable option, except if the estimate is used for long periods, but for a five years' period, we find justification for following this estimates, given that they follow continuously technology firms. But, this only covers our predictions until 2020, still missing estimates until 2024. For computing this final value, we assumed that the perpetual growth rate equals the average of the United States GDP over the last 4 years, estimating a perpetual growth rate of 2,5%. Between 2020 and 2024, a close to linear decrease of the growth rate was applied, following the logic that with the growth of the company, the growth rates seem to fade quickly.

A way to illustrate the importance of growth when evaluating technological firms, is through comparables, seeing how growth affected the evaluation (even by seeing how different the value was for the multiples).

2.2.6 Terminal Value

As mentioned in Aswath Damodaran's "Applied Corporate Finance", a publicly traded firm is going to have an infinite life, given that the cost of equity will surpass the final growth rate, therefore practically, we apply a perpetual growth rate in order to estimate the future cash flows aiming at a final value of the company, as the company will continuously invest its cash flows to infinity.

$$TV = \frac{FCF(t+1)}{(r-g)}$$

On this equation, FCF(t+1) represents the expected free cash flow for the last year in the computation of the Adjusted Present Value, "r" is the cost of equity (for the free cash flows to the firm model, we would use the cost of capital) and the "g" is the expected perpetual growth rate, falling between the expected inflation rate and the current growth of the economy (so, not surpassing 3%).

This method relies on a perpetual growth model, but other forms to compute this value exist, mainly through the liquidation value.

2.3 Relative Valuation

2.3.1 Best Multiples

"Relative evaluation determines the value of an asset based on the valuation of similar assets on the markets". This means that the company won't be valued based solely on what it has or how it performs but rather on how similar companies on the market have their comparable measures (so, to take into account growth, forward-looking multiples are recommended to be used). A multiple analysis is comprehended as a secondary method of valuation, serving as stress-test methods for based in discounting cash flows (Goedhart, Koller, Wessels). By using this method, address issues such as the plausibility of our forecasted cash flows, the question related to why is our valuation higher or lower than our competitors, and if the company is strategically positioned to create more value than its peers. This may seem an easy to apply method; however, it has a great number of requirements and details to which we must keep our focus: using industry averages can be dangerous for how misleading it is; our company may have significantly different growth rates, ROIC's or capital structures (therefore, we must match our choice of companies thinking in getting similar expectations for growth and ROIC). Also, the market is a forward looking mechanism, so it's essential to look at forward estimates of revenue. Multiples can be easy to manipulate through depreciations and provisions, and may vary whether it is from differences in the quality of business fluctuations in cash flows or accounting differences (Goedhart et al. 2005). Multiples that have high values in intangible assets are penalized with this approach as this methodology doesn't take into account the growth opportunity of these companies.

Cooper et al. (2001) mentions a difference between two types of multiples: Enterprise value (EV), which take into consideration the value of the whole company by using information as sales and Equity multiples, taking into consideration the correspondent value of the assets and cash flows of the business attributable to shareholders, basically driven by the drivers of free cash flow (as mentioned, the return on invested capital and growth).

Four recommended basic principles: using peers with similar prospects of ROIC and growth; using forward-looking multiples (as empirical evidence from Jing Liu, Dorom

Nissim and Jacob Thomas indicates that this promotes greater accuracy); use Enterprise-Value Multiples, as P/E multiples have two major flaws: they are systemically affected by the capital structure, and are based on earnings, so they could be misleading by not revealing to be a clean measure of operating performance, since this ratio commingles operating, financial and non-operational activities. Finally, there is the need to adjust the enterprise-value-to-EBITDA multiple for non-operating items. The most common adjustments involve not including excess cash on enterprise value and adding the value of leased assets to the market value of debt and equity.

Given the circumstances, the multiples chosen as the best were the Enterprise Value/Forward-Year Revenue and the Price/Earnings (PE), but this thesis will also include the remaining enterprise-value and price ratios, for analysis purposes.

2.3.2 Peer Group

The choice of the peer group constitutes a demanding task when using relative valuation, as it is difficult to find a group of companies with similar characteristics (Henschke & Homburg, 2009).

After this preliminary screening, we must proceed with an analysis of the relevant multiples across the peer group and taking into account the sector; for example, for the internet sector, an enterprise value multiple with number of subscribers' ratio can be applied, applying later a weighted average along with the median for the sample.

The definition of the peers lies on statistics like ROIC and long term growth, along with the choice of companies in the same sector. This topic will be addressed in more advanced sections of this thesis, with its final results of our choice for the peer group.

2.4 Profitability Models

2.4.1 Economic Value Added

A profit-based model analyses how a company's financial performance is expected to change over time, along with whether a company is earning its cost of capital. Through this, we obtain an idea of the source of the creation of value in the firm (Koller et al. 2010).

The economic value added is theoretically compared to the DCF method, with the exception that it's not as assumption based and market dependent (averages out with the market dependent relative evaluation). Damodaran (2002) presents a perspective over this method, mentioning that this approach "values the dollar surplus value created by an investment".

$$\mathbf{EVA} = \mathbf{After\ tax\ Income\ (NOPAT)} - \ (\mathbf{cost\ of\ capital} * \mathbf{Invested\ capital})$$

This formula translates into the "capital invested in assets in place, plus the present value of the economic value added by these assets and the expected present value of the economic value that will be added by future investments".

A possible critic to point out lies on this method not being forward-looking, as it doesn't take into account the market capitalization of the company, as its price incorporates expectations on future growth, being skewed towards assets in place (Damodaran, 2002). This opens opportunity for manipulation of results, since a manager can easily increase the economic value through reduction of the capital invested or by making riskier investments.

This model is considered equivalent to a net present value, as it cares about the value added of the company. However, unlike the NPV theory, not always the companies with the superior EVA are the best, since the model focuses on changes on EVA and not its absolute value. It serves in identifying the value created from an investment, but, considering that a great share of the assets is "off balance sheet" or intangible (economic profit fits better for firms whose tangible assets correlate with their market value), high-technology companies are least suited for this kind of valuation.

2.4.2 Dynamic ROE

Similar approach when compared to EVA, differing in the form results are interpreted; Dynamic ROE looks at the equity of the company, while the Economic Value Added looks at the company as a whole. It's optimal time structure bases in short-term forecasting.

$$V(eq) = \frac{E(t-1) * (ROE - Ke)}{(1+Ke)^t}$$

2.5 Contingent Claim Valuation

Options theory was introduced by Robert Merton, Myron Scholes and Fischer Black in 1997. This approach relies on seeing options as contingent decisions that provide opportunities to make these options, normally to continue investing or not, depending on the occurrence of events. According to Koller (2010), this form of firm valuation makes sense “if there exists a portfolio of traded securities whose future cash flows perfectly mimic the security you are attempting to value, so that the portfolio and security have the same price”.

Theoretically, this approach to valuation is most suitable to value Oil and Gas or mining companies, as their valuation is based on available options (drill or mine) which they decide, based on the economic benefit of that activity. Given the circumstances, this results in a far too complex method, not giving reliable or accurate outputs; due to the ambiguous notion of applying an option to a company, it gets extremely difficult to apply this method for the valuation of a company, along with the assessment of volatility, which opens space for manipulation of results.

The available methods to conduct this type of valuation are the Black & Scholes, the Binomial model and the Monte Carlo iterative method, but, following the previous statements, it is concluded that this thesis won’t invest in proceeding with a valuation through options.

2.6 Conclusion

After analyzing the literature and understanding the industry and company specific characteristics, there are enough qualifications to mention which methods will be used for the valuation exercise:

Adjusted Present Value, as Netflix doesn't have a stable capital structure and also given its' rapid growth and expansion strategy, hinging this valuation to a dynamic, always changing sector. a ten-year valuation will be applied (three years until the end of the expansion strategy, seven years to achieve maturity, reducing uncertainty). A DCF based on the WACC approach isn't recommendable given the lack of stability of the capital structure and of the special conditions that characterize a valuation of a firm in the internet industry (this factors or conditions are specially mentioned in the next chapter, in the analysis of the industry and company.

Also, for a consistency analysis, relative valuation will also be used; this choice reveals to be consistent given how "market based" an internet firm is, so, by using the right peers, it serves as a solid second-stage valuation, contributing, through simplicity and easy interpretation for a robustness check. The used multiples were previously mentioned and explained in its respective section.

3.1 Industry Review

Netflix is operating in the internet industry, more specifically, the online video streaming industry. This industry is still in a "growth" phase, having room for improvement and for the development of competition. In other words, streaming media industry is still relatively young, as broadband internet penetration has increased over the last few years with the growth of potential markets for internet streaming services.

From the equity research performed by Goldman Sachs on the internet industry, the introductory statements are supported:

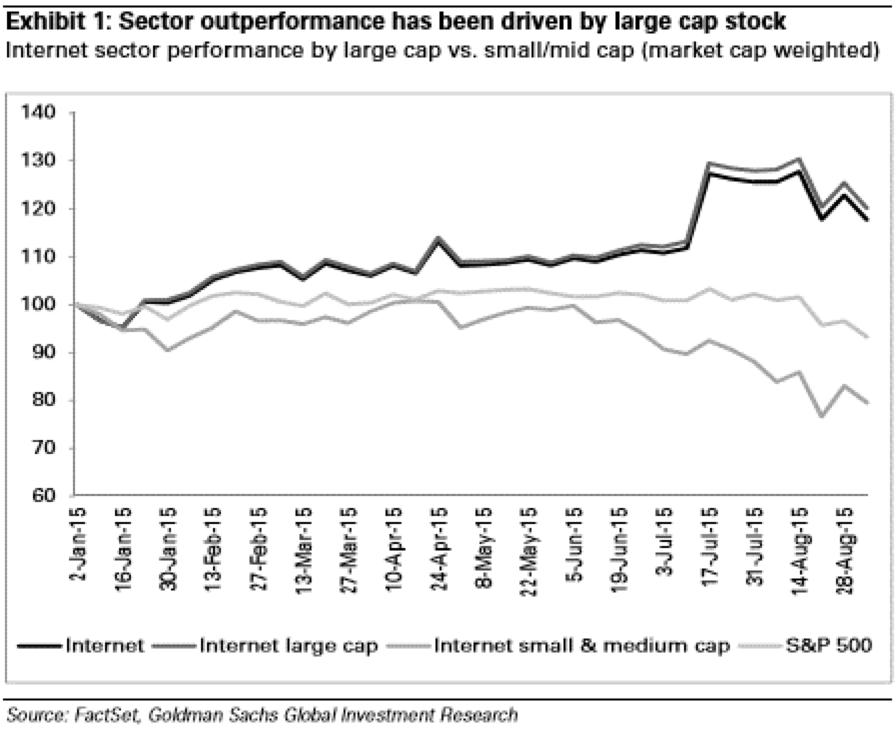


FIGURE 1 – SECTOR OUTPERFORMANCE

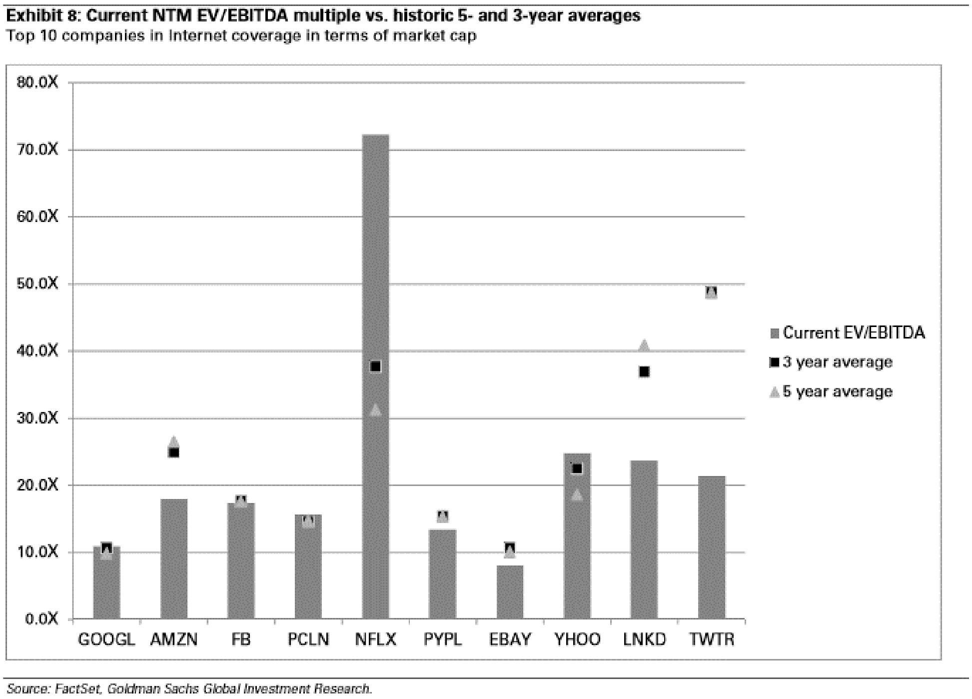


FIGURE 2 - CURRENT NTM EV/EBITDA MULTIPLE VS HISTORIC 5 AND 3- YEAR AVERAGE

It can be concluded, along with additional information from the document, that the two main responsible companies from this outperformance are also the two main competitors in the video/shows/movies streaming industry: Netflix (+ 98% YTD in contribution to the market cap) and Amazon (+ 62%), that has its' instant video service.

Firms in this industry aim at offering the best possible service by developing an online platform which offers the best shows and movies with a personalized service by recording the customers' preferences and previous choices. This companies aim at developing an ecosystem for internet-connected screens, creating a market of online entertainment connected directly to TV's, computers and mobile devices.

An industry analysis through the five porter forces shows that Netflix position can be endangered:

The rivalry in this industry is becoming more intense as it grows, as this is still a very profitable industry in a "growth" stage and there are low switching costs, leading to tighter competition. Netflix key competitors possess large levels of capital and have achieved economies of scale.

Threat of new entrants is low (the rivalry comes from the already existing companies). This is explained by the high cost or capital requirements resulting from contracts to get the product or content needed. The branding and power of the largest firms also raise some entry barriers. Main competitors in the industry are Hulu+ and Amazon Instant Video.

The threat of substitutes represents a middle level. Using the internet as a way to watch their content is a current trend, and it doesn't seem like it's going to change in a near future.

The bargaining power of buyers is high, since this is a price sensitive industry, in which the consumers have a lot of power. With few switching costs (even though Netflix is investing through the quality of its content), the customers have a large amount of options on which product to decide with.

Bargaining power of suppliers is moderately high, as suppliers of content have the power to increase the price to share their content, or see its quality to decrease (this is one of the reasons that lead for Netflix to develop its own original content), damaging the profitability of the firm. For example, in 2013, Netflix was forced to remove Nickelodeon and MTV shows from the expiration of the contract with Viacom.

In conclusion of this part of the analysis, what are the main competitors?

After this analysis, a question is proposed: how did Netflix got to differentiate, gaining competitive advantage in this industry? Two main explanations:

- First mover advantage (in 2010, Netflix already had a strong investment in the growing online industry)

- Licensing and development of original content (high quality of content kept the customers, but this is better explained in the company overview)

In conclusion, and introducing to the company overview, we propose the essential factors used to value internet companies:

Exhibit 3: Internet investing framework
Growth, leverage, innovation, competition

	Influencing factors: Industry level	Influencing factors: Company level
Multiple levers of growth	Secular shift of online and retail: - local - mobile - social - video	Scale - high revenue per customer - low customer acquisition cost
Operating leverage	Low startup costs Quick achievement of profitability	High incremental margins - Sales and marketing - Technology and product
Innovator / Disruptor	Strategic acquisitions - technology, user base, other unique assets Weak entrenched infrastructure	Tolerance for moderate cannibalization Nimbleness of organization, management, capital
Competitive advantage	Easy access to capital Eng talent in abundance / technology replicable	Network effects Technology / infrastructure High cost of content Brand value

Source: Goldman Sachs Global Investment Research.

3.2 Company Overview

Netflix is a provider of internet streaming for multimedia content. This public firm markets in the business sector of software and IT services (technology), focused in the internet services industry. Netflix provides TV shows and movies that you watch exclusively online. Ultimately, it's a powerhouse of online entertainment.

Netflix is the largest online entertainment subscription service in the United States (which plans to extend this "achievement" to a global scale). Netflix currently does business in three areas: domestic (US) DVD's, domestic streaming and international streaming. Their main investment is located in the internet-video streaming service, by offering their subscribers an entire library of online content, "user friendly". One of the main competitive advantages is the high investment in the quality of their original content. An active role in acquiring and managing their shows resulted in successes like "House of Cards" and "Orange is the New Black". Nowadays, Netflix registers 28,8% of the North American aggregate web-traffic.

History of Netflix

Netflix was founded in 1997 by its current CEO, Reed Hastings. It started movie rental services in 1999 through a subscription based business model. Originally, the company had only a DVD-by mail service. A few years later in the business in 2007, the company started including streaming services. Their strategic motivation was to reduce the costs incurred for postage and shipping.

With market trends in viewing online content at home consistently growing, along with a "first movers advantage", by 2010, Netflix was known as one of the largest subscription service, offering its services in the US and Canada until 2010, expanding to 43 countries in 2011.

In 2012, the main competitors started "establishing" the market: Hulu Plus and Amazon Instant Videos.

By October 2015, Netflix has more than 69 million subscribers worldwide, with plans to expand even more. Reed Hastings expressed on the company's annual report its goal of reaching more than 150 countries by 2017.

How will they capture all of these customers? This can be explained in the modified Delta model in figure 3:

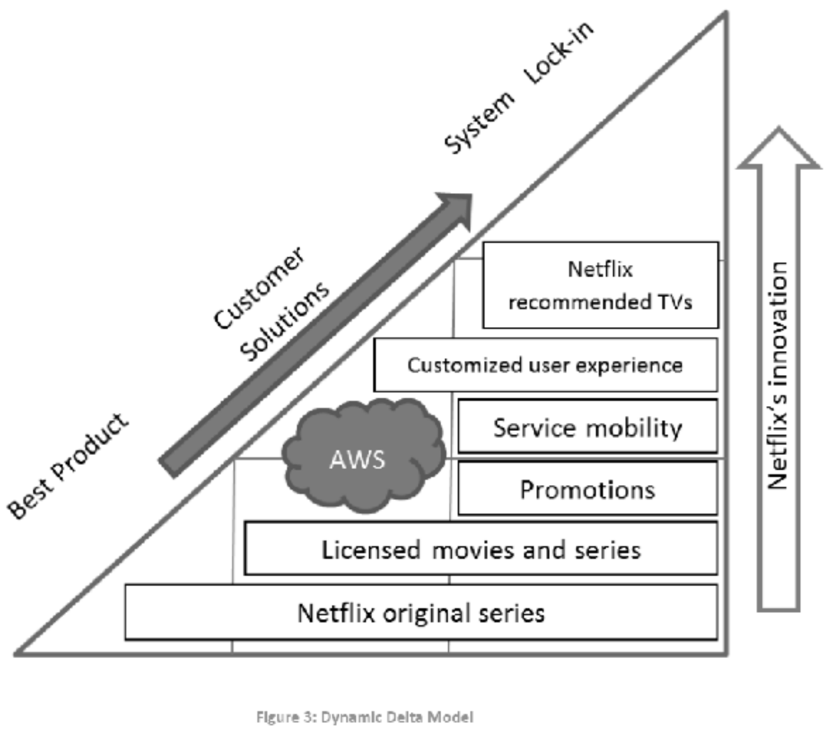


FIGURE 3 - DELTA MODEL ON NETFLIX

Mainly through their original series and customized user experience, they developed a formula to maintain their customers (achieve customer lock-in).

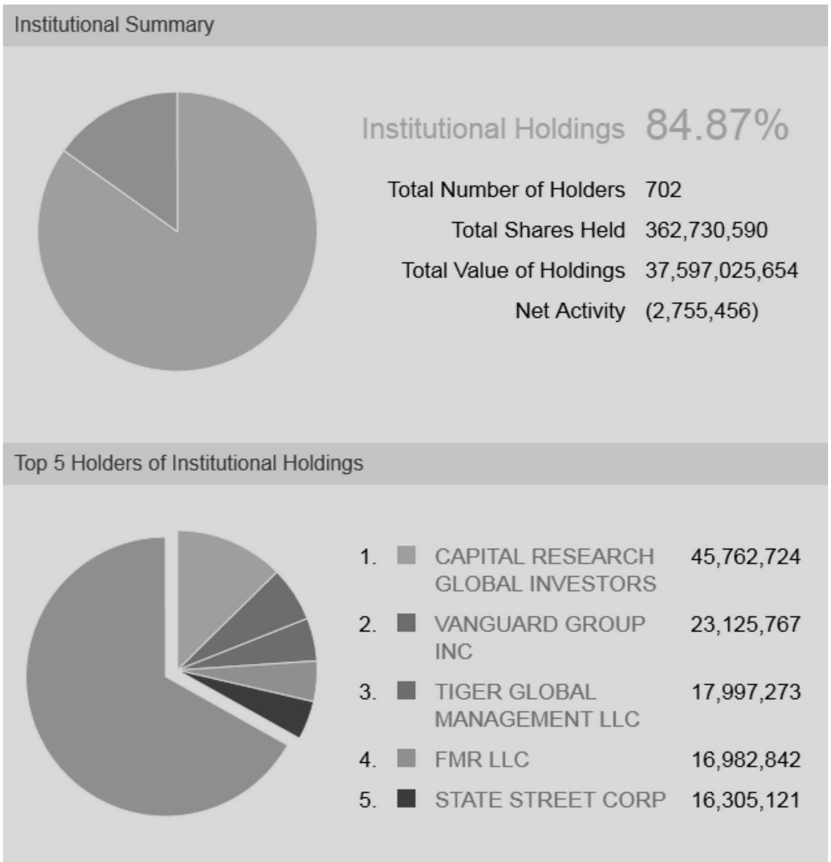
By integrating customer information, Netflix (using the profiles) is following a "growth hackers" strategy, trying after to achieve a system lock-in through the quality of its original content.

Expansion strategy

Netflix has positioned itself in many “western” countries and is looking beyond: it is positioning itself in Latin America, and is lurking in Asia and the rest of Europe. They plan to be in more than 200 countries in the next 2 years (that explains the period for valuation of 10 years, so that is has 3 years for the end of the expansion, and another 6 or 7 years, until 2024, to achieve maturity worldwide).

Summarizing, its behavior is similar towards the entertainment industry: providing “universal” content (American blockbusters and shows) while, at the same time, creating local content. It’s trying to control a part of the creation process upstream (in the Delta Model, the “best product”), through licensing and production, and, with one of the best customer solutions, aiming to lock-in its customers.

Figure 4- Shareholder structure



Another approach on the analysis of Netflix comes from studying its strengths, weaknesses, opportunities and threats.

Netflix strengths were mentioned before throughout this thesis. Their strong brand recognition, original content, the user friendly platform that uses extensive customer data, along with high convenience (since the app is available on all platforms) generates high competitive advantage, giving them space for expansion.

Weaknesses on Netflix focus on the presented results from their international business. Their international investments still present a negative NPV, but this can't be taken with much seriousness considering that this investment is still in an early phase.

By following this perspective, we can also see international investments as opportunities. If Netflix uses its advantages (brand recognition, quality of content) to establish and dominate the market in other countries, they can reveal to be as profitable as they are in the US. Another opportunity relies on the development of original content, since Netflix has the ability to produce new shows with the same success as House of Cards, guaranteeing customers.

A threat is generated from the increasing competition and the growth of the costs of licensing. For example, Netflix lost directly its video provider (EPIX) to Amazon.

Now, in order to introduce valuation, we proceed with a review of the company's financial through the last years:

4. Assumptions: The Discount Factor

Through this chapter, it's explained in detail the path followed in the determination of the inputs required for the adjusted present value methodology. The "core input" will be the cost of equity (Re) which will be determined from the CAPM theory. The cost of equity represents the compensation demanded by the market in exchange of possessing an asset, accompanied by the risk that comes from owning it. This is the formula needed to be solved for us to get our discount factor:

$$Ke \ = rf + \beta(MRP)$$

4.1 Risk Free rate and the Market Risk Premium

The methodology for completing this formula outlines that we must start by defining our risk free rate and the market risk premium, two essential inputs.

The risk free rate is a factor that reflects the rate of return of a government treasury bond, being theoretically the most secure possible investment. It must correspond to the currency of the cash flow being analyzed. For Netflix, we have American dollars, therefore our risk free rate will come from the 10 year US treasury bond, having a yield of 2,25%. This will be our risk free rate.

As for the second input, the Market Risk Premium, it comes from the return that the investor wants from its investment on a risky asset when compared to a risky investment. Through analysis of historical data of the American indexes (according to Damodaran in its article from 2012, the US is a mature market with enough information for this kind of analysis), we took into account the yearly returns (in %) between 2005 and 2014, and, as the benchmark, the S&P500 index, returning an expected market return of 6,47%. By subtracting the risk free rate, we get a market risk premium of 4,22%.

4.2 Beta

Finally, in order to fill the formula, we must estimate the Beta, or, in other words, the volatility of a security or of a portfolio in comparison to the market. It's basically capturing the undiversifiable risk.

For Netflix, it is going to be used a service Beta provided by Reuters. This computed source gives an estimate for Beta of 1,58, being based on a 5-year monthly data (60 months), comparing Netflix to the S&P500. This source provided a sufficient large estimation window and a periodicity that isn't affected by daily or weekly trading noise. Considering that the first step of the APV valuation requires us to discount only over the unlevered value of the company, we are also going to use the unlevered beta, obtained through the following formula:

$$\beta u = \frac{\beta l}{(1 + (1 - Tc) * \left(\frac{D}{E}\right))}$$

By completing this formula, we get a final Unlevered Beta of 1,24.

4.3 Cost of Equity

Now that we possess all the required inputs, we have the conditions to calculate the cost of equity, which has a core impact on our final valuation results, as it is used to discount the forecasted free cash flows.

By filling with the inputs of the CAPM model, we achieve a cost of equity of 7,49%

4.4 Cost of Debt

In order to calculate the cost of debt (the effective rate that a company pays on its debt) we took into account the risk-free rate and the default rate based on the rating of the bonds of the company (as it is rated).

So, our pre-tax cost of debt adds the risk free rate (2,25%) to its default spread (based on a B+ rating, it's 4%, as it can be concluded from table X), giving 6,25%; therefore, we will have an after-tax cost of debt of 4,75% (6,25% * (1-t)).

4.5 Effective Tax Rate

An additional input essential for obtaining the net income, firstly we need to apply a corporate tax rate. From the information displayed in Netflix's annual reports, we will assume using the same value for the projected years, using an effective tax rate of 24%.

4.6 Conclusions

Given how unstable our capital structure is (see appendix C for variations in the equity/debt relation), this values will not be used to calculate a WACC, as we will achieve Netflix price target through a "Sum-of-Parts" valuation.

So, our summary for calculated estimates:

Ke (Unlevered)	7,49%	Kd	4,75%
Rf	**2,25%**	**E/V (2014)**	**26,4%**
Beta	**1,28**	**D/V (2014)**	**73,6%**
MRP	**4,22%**	**Tc**	**24%**

5. Valuation Estimates

5.1 Revenues

Revenue growth rate and the resultant projections are one of the most important (even a core) assumptions in our valuation models; sales represent one of the main drivers of most of the following components in a company's financial statements.

According to Damodaran (2002) there is a main method into defining the growth rate for our revenues: hinging our projections to historical growth rates. This method fits well into mature companies in stable industries. However, for companies like Netflix, which is still investing in its global expansion, going still through a growth stage, this method would present a great deal of inconsistencies which could lead to unreliable results, as growth hinges mainly to its activity in the North American region.

So, what other alternatives do we have? As mentioned before, Netflix is subscribers based company, hinging to an economy of subscriptions; therefore, our most fitting method demands that we go directly through statistical studies to create our projections.

So, in more detail, what factors drive Netflix revenues? By providing streaming media online TV shows, and movies, Netflix generates revenues through a monthly membership fees for its content and streaming services.

Summarizing, in order to introduce how we will proceed during this step, being a subscriber's driven company, our growth will be directly linked to the evolution in the number of subscribers.

To build this revenue forecast, we need to size our market, estimating the number of households and subscribers that might register to Netflix. For this we must estimate both historical and future subscription rates by studying and analyzing Netflix historical data, incorporating possible deviations caused by external factors prior to this analysis (which will be revealed in the sensitivity analysis).

Our study begins with market surveys making analysis in reference countries, already taking into account historical development in each respective market, his development of

Netflix and of its competitors, through public reports, annual reports and financial statements. Our market surveys involve determining the weight in the demand of many factors such as international benchmarks, trends, risk factors, demographic factors (for example, younger people are online more frequently, therefore, higher usage of Netflix

from the younger generation, so a country with older age average will have lower estimates), user behavior (for example, the impact of introducing streaming online and original content in the market penetration of the United States), willingness to pay, hardware penetration, and network infrastructure; taking the choice of markets based in if they are representative for the development of a specific region. For this development, the historical development is obtained from official statistics, organization or industry information.

By identifying the drivers that lead to evolution of the market penetration, using the inputs (more than 400 market drivers) into a multifactorial analysis, using a mathematical optimization function and subsequent logic checks aiming at obtaining projections that reflect the future development of the market penetration of the studied markets. This is obtained by getting the value for the total population, the evolution of the number of households, the GDP per capita, the internet penetration and the smartphone penetration in the respective country, correlating this with the evolution of the market share, estimating the mentioned market penetration. Finally, by using market sizing and ARPU along with the historical penetration rates, the outcome is checked for plausibility, achieving a fitting consistent modelling logic that supports our results.

For the statistical approach, given the demanding task that represents to perform an entire global statistical study, we decided to get our sources from Statista, a worldwide known company with a team of experienced database experts and analysts who work closely with market leaders, achieving reliable results that support what we desired and expected. The results come in the form of market penetration by region in the year of 2020:

Market sizing: 562 Million*	2015	2020
USA	45 Mill. (50% Market Penet.)	63 M (70% MP)
Canada	4,4 M (40% MP)	6,6 M (60% MP)
Latin America	8 M (18% MP)	16,8 M (35% MP)
Europe (except UK)	10 M (10% MP)	42 M (41% MP)
United Kingdom	6,5 M (25% MP)	9 M (40% MP)
Asia Pacific	0 M (0% MP)	57 M (20% MP)
Australia & New Zealand	1,05 M (15% MP)	2,45 M (2,45% MP)
Global*	75 M (13,3% MP)	197 M (35,5% MP)

Figure 5 – Subscribers Growth Prediction for 2020

*- excluding Africa and Middle East

Between 2015 and 2020, how do we estimate with higher precision the growth per region and respectively per year? From this point, Damodaran's approach hinging to historical growth is plausible. Since Netflix introduced new original content, online streaming along with strong marketing and connectivity between multiple devices, their market penetration has increased in two years by 15%, by gaining 14 Million subscribers. So, analogically to studying historical market share, we estimate the growth for the first three years based on a formula which adds subscribers based on exclusive content, marketing, connectivity between devices, suffering from a setback from increase in pricing and political and cultural threats. In the regions in which Netflix still hasn't entered until 2015, we expect an impact in the market penetration close to 15% in the first two years (as it can be seen in Europe). Asia has a lower impact (12% in the first 3 years) given the high difficulty in surpassing political barriers (Netflix is even considering if they should enter China), but, as Netflix surpasses this issues, the growth suffers a positive impact, so it may take a couple of years until we see a decrease in the growth rate by Asia. So, by entering Europe, we expect a boost in growth to 30%, while, in Asia, by entering a market with a size of 280 Million people (close to half of the world market size), we also find plausible for a 8% marginal boost in revenue growth between 2015 and 2016.

From 2019-2020 to 2024, the growth rates derive from a logarithmic logic, decreasing close to a rate that follows a concave function until it reaches "entering in maturity" phase; from this point, the historical growth from the United States can be applied, except for Asia, whose expansion process only terminates in 2018, so its growth phase will still be ending by 2023. The final growth rates by region by year, along with its CAGRs can be found in the appendix A, and an analysis of the resultant consolidated revenues can be checked in figure 6:

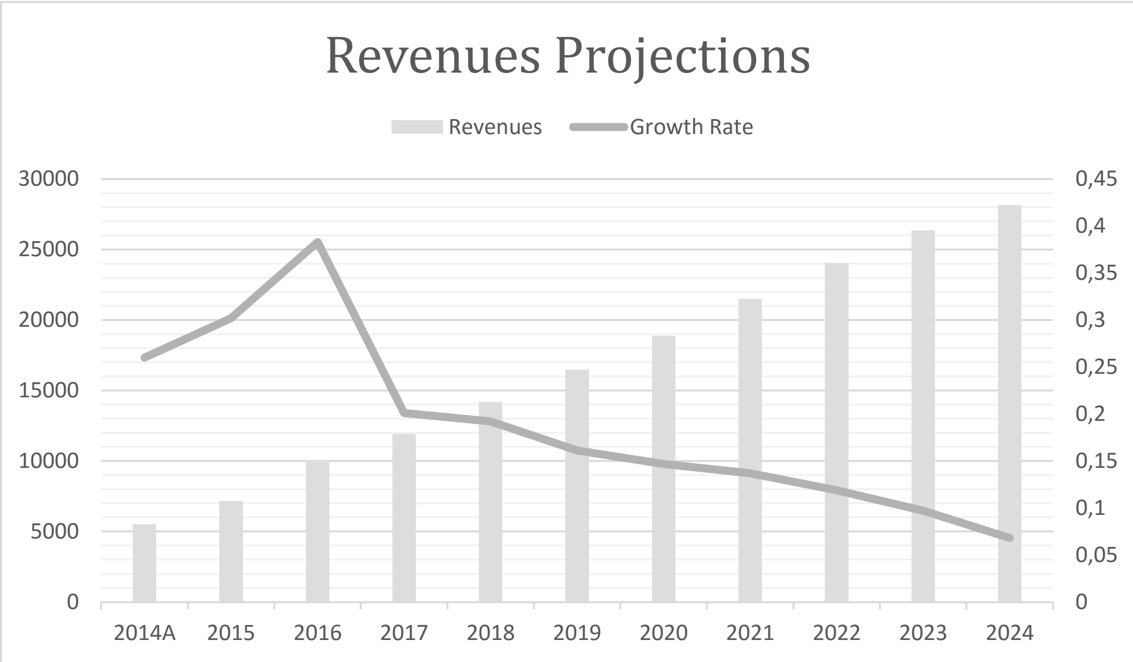


Figure 6 – Revenues Projections

Netflix is continuously investing in providing better and customized services, and improved tech in order to increase its subscribers group, aiming at becoming the leader in the industry.

5.2 Costs of Goods Sold (COGS)

The costs of goods sold are direct costs attributable to the production of the goods or services developed in the company. Usually, cogs are calculated as a percentage of the revenues of the company, being normally variable in nature.

What are these costs? "For Netflix, video streaming is one of the central cogs of the company". Netflix pays for licensing for the right to stream its content. This costs include the amortization of the streaming content library and other expenses associated with the licensing and acquisition of this content, customer service and payment processing fees. Third-party costs are also related with delivering content over the internet. The ever-increasing cost of licensing is a huge issue for Netflix, and, by entering in new countries, they will have to spend extras to adapt to each market; that is the reason behind Netflix considerable investment in the development of original content such as House of Cards. This kind of costs differ from types of businesses. Netflix's business model looks straightforward, although online video streaming is heavily laden with costs, the majority of which are content license fees and investment outlays for settling up the internet infrastructure, along with running online operations.

Our percentage will come from historical weights based on the period of Netflix, between "high growth" (higher investment so, cogs grow at 95% of the revenues growth), "transition" (85%) and entering maturity and beyond (80%).

The evolution of the cogs can be better viewed through the following chart, along with a fully detailed analysis on appendix B.

5.3 Other operational expenses

For the other additional operating expenses, the same rationale was used and applied to the weight of the costs over the sales, for the marketing, R&D and S&G costs.

The marketing costs account for the advertising expenses (including promotional activities used online and on TV), and all the payments made to the affiliates and device partners.

The research and development department creates costs related to the payroll and costs associated with the improvements of service offerings. This englobes testing, maintaining and modifying the user interface, merchandising and delivery technology (Netflix is even trying to develop a technology to be able to simply enter every country easier and simultaneously, trying to fasten the expansion period) as well as the telecommunication system and infrastructures (related to computer hardware and software).

Finally, the general and administrative consist of payroll for corporate personnel, along with professional fees. With this info into account, we get figure 7 for each category of the remaining costs.

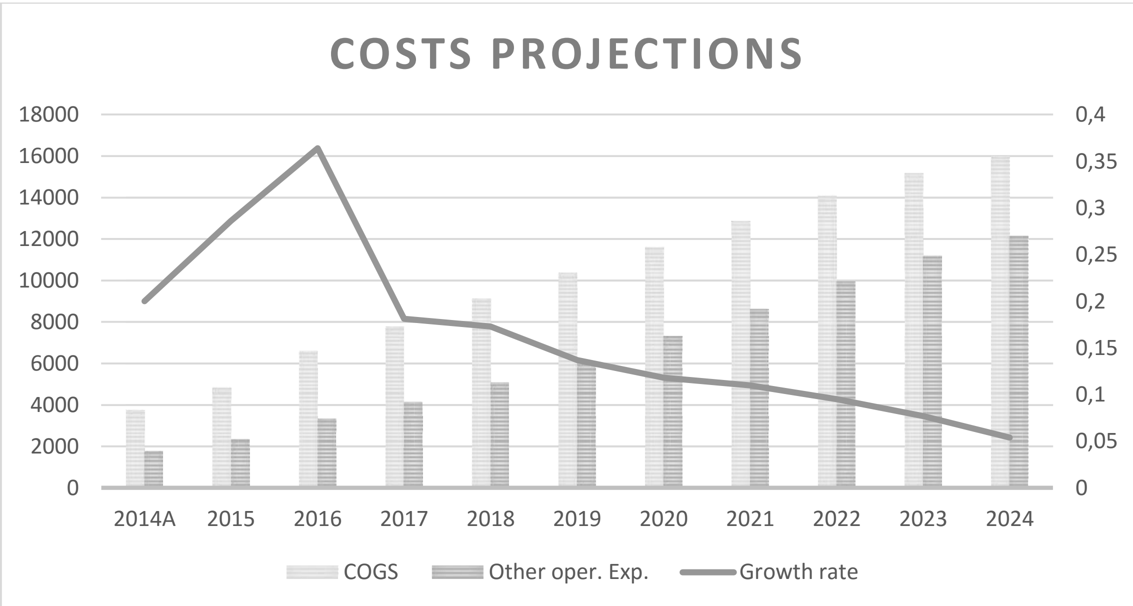


Figure 7 – Costs Projections

5.4 Capex

Capital expenditures constitutes the funds allocated by a firm to acquire or upgrade physical assets such as property, industrial buildings or equipment.

$$CAPEX = New\ PPE - Old\ PPE - Depreciation$$

Given the plans to enter in new countries, Netflix will have to keep investing in property and equipment, to be able to assist all of its new customers; this involves expenses to increase the HQ and to invest in more staff, as well as investing in the streaming delivery network. This growth will match the needed to satisfy the customers (adapt required HQ and staff for customer service to number of added subscribers), therefore it will be equal to the rate of growth of the revenues.

Capex is also linked to the calculation of the depreciation. Depreciation follows a straight line basis, so the net depreciation will decrease throughout the process that leads to maturity, as investment in property will also decrease.

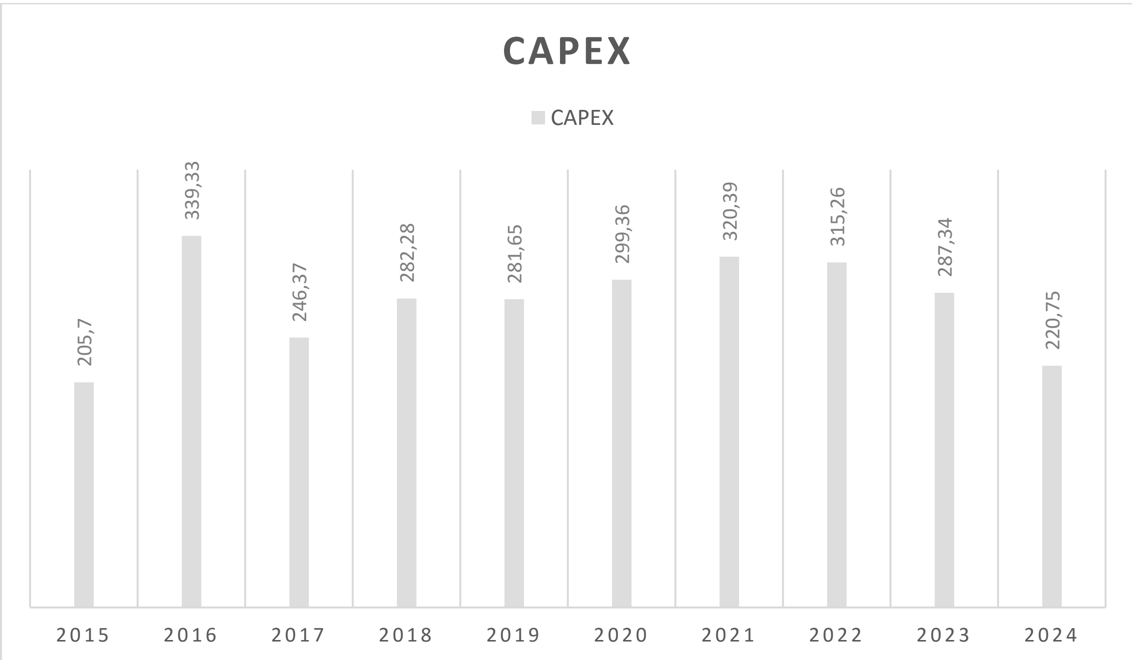


Figure 7 – CAPEX Predictions

5.5 Debt

From the plans highlighted by Reed Hastings, in 2014's annual report, the Debt will have to continue increasing, supporting the growth in investment in development, acquisition and expansion of new content, staff and equipment, raising a certain level of debt that additionally optimizes the value of the company given its capital structure. The optimal level of debt is calculated through a formula developed by Damodaran focused in variations of the relation between equity and debt, valuating the benefits in the interest tax shields for an adjusted project valuation model.

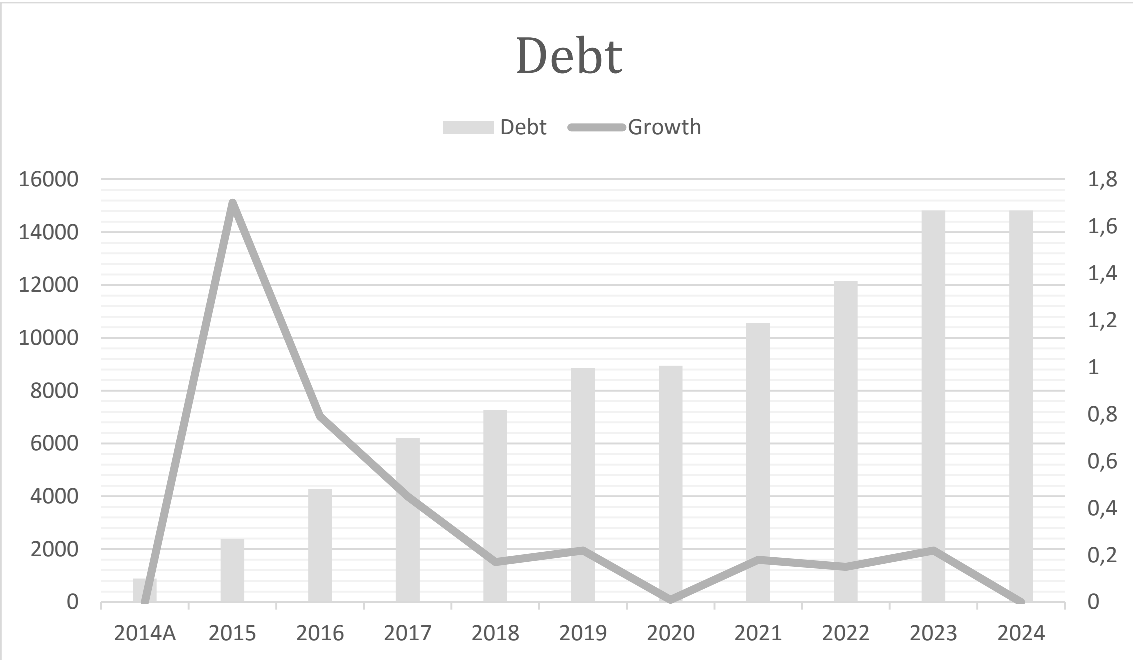


Figure 8 – Debt Growth Projections

5.6 Return on Equity

The return on equity is a method for measuring a company's ability to generate earnings for equity shareholders.

Studies have showed (such as the Monster Worldwide) that the current margins for Return on Equity might not be the best indicative for long-term margins. This equity return is sensitive to external factors such as the appearance of competition which will force the margins down, so it's risky to rely solely on this for taking conclusions.

Netflix's return on equity is still far from being optimal for its shareholder during its growth rate. This only sustains the idea that Netflix has yet to fully grow its international market to make up for its high level of costs, also knowing that the US market is already maturing. With enough sales growth, Netflix can generate sufficient earnings for shareholders, despite a low operating margin. This tendency can be confirmed with the projections for the next years of Netflix:

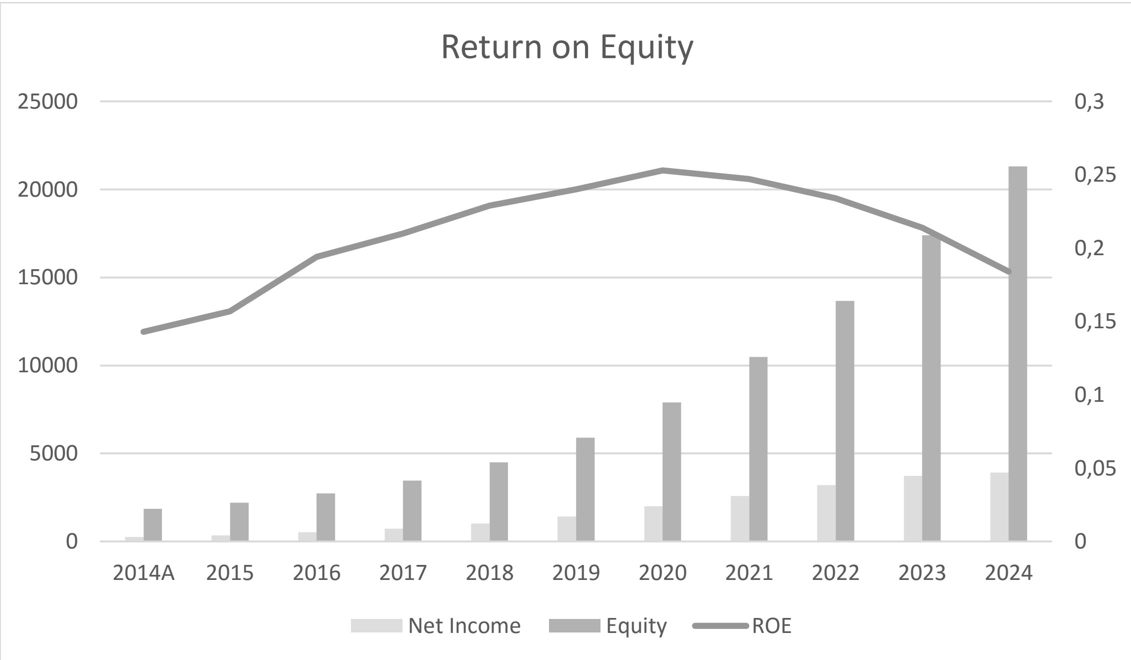


Figure 9 – ROE Growth Projections

5.7 Final Valuation and Model Assumptions

Aiming at completing the calculation of the company's pro forma BS and IS, some final assumptions need to be mentioned.

The foreign exchange revenues, costs and losses on PPE were not projected given its uncertain nature.

Furthermore, following Netflix policy, there will be no dividends distributed until the end of the projected period, despite the considerable value of cash.

Finally, the shareholders' equity results from the other inputs of the valuation model. The value for the equity is obtained by directly adding the net income to the corresponding year (taking into account also the "no-dividend" policy).

6 Valuation

This chapter introduces the outcome of our valuation models, in which the previously explained assumptions and inputs are applied, making of this chapter the results of all the process developed so far, as we reach our price target.

6.1 Adjusted Present Value

The adjusted present value approach, as a development of the DCF model, allows us to evaluate the intrinsic value of the firm based on the expected cash flows from its business.

But, as mentioned by Timothy A. Luehrman "the WACC has never been good at handling financial side effects", so it's an obsolete discount rate, unless for simple capital structures".

As it was previously explained, Netflix possesses a complex capital structure, hinging to a subscribers based business, needing a valuation model with few restrictive assumptions, ready to cover off-balance sheet information, being exceptionally transparent when studying all the components of value in the final analysis.

The APV approach follows a "sum-of-parts" methodology, as we begin with the value of the firm without debt.

By adding debt to the firm, we must take into account the effect in our final results by including both the benefits (interest tax shields) and the costs (added risk of bankruptcy) of borrowing.

6.1.1 The FCFF evolution

Our initial step will involve obtaining our base-case value, which is the value of the firm as if were financed solely by equity (so, with no leverage). For this step, we need to estimate the free cash flows of the assets:

$$FCFF = Net\ income + Depreciation - NWC - Capex$$

By achieving this step, we discount them with the unlevered cost of equity. The results of the process so far can be seen with a detailed calculation of the values (including the taken assumptions) in appendix D. As it can be analyzed from the results, the high variable costs resultant of the expansion plans leads to a drawback in the growth of the net income. But, as the firm "breakevens" from this investment, we assist an exponential increase in our final income, as the company is still going through a strong growth period, resulting in an equal increase in our cash flows until 2023.

6.1.2 The Terminal Value

A special case, in which the cash flows grow at a constant rate in perpetuity, the terminal value gives an estimate of the value at the company after the explicit forecast period, in this case, from 2024 onwards.

$$TV = \frac{FCFF(t+1)}{(Re - g)}$$

It's usually the component with the biggest weight in the valuation, making of the stable growth rate a core input in our valuation process. For Netflix perpetual growth rate, it has been decided to use an average of the last five years of the US GDP growth, using a 2,5% rate, as it gives us the steadiest reasonable range in a market yet without a stable model.

6.1.3 Interest Tax Shields & Expected Bankruptcy Costs

One of our last steps goes by evaluating the effect of the given level of debt on the default risk of the firm, seeing the weight of the expected bankruptcy costs. The expected bankruptcy costs are obtained through the formula:

$$Expected\ Bankruptcy\ Costs = Probability\ of\ Banrkuptcy\ (default\ probability) * Cost\ of\ Bankruptcy * Equity\ Value\ of\ Firm$$

From Shapiro and Titman, we speculate our cost of bankruptcy to be around 25% and 30% of the company; as for the default probability, it follows a chart based on the credit rating of the company:

Bond Rating	Default Rate
D	100%
C	80%
CC	65%
B-	46,61%
B	32,5%
B+	26,36%
BB	19,28%
BBB	12,2%
A-	2,3%
A	1,41%
A+	0,53%
AA	0,28%
AAA	0,01%

Finally, we add the excess cash, subtract the debt, and divide by the number of outstanding shares, completing this method of valuation.

6.1.4 Conclusions

After applying all inputs, getting all the FCFF's discounted by the unlevered cost of equity, adding interest tax shields, cash, and subtracting the expected cost of bankruptcy and debt, we reach an unlevered value of the firm of **58 019,31** million $. In figure 10 (or in appendix G), we can see the weights of the final value, divided by components:

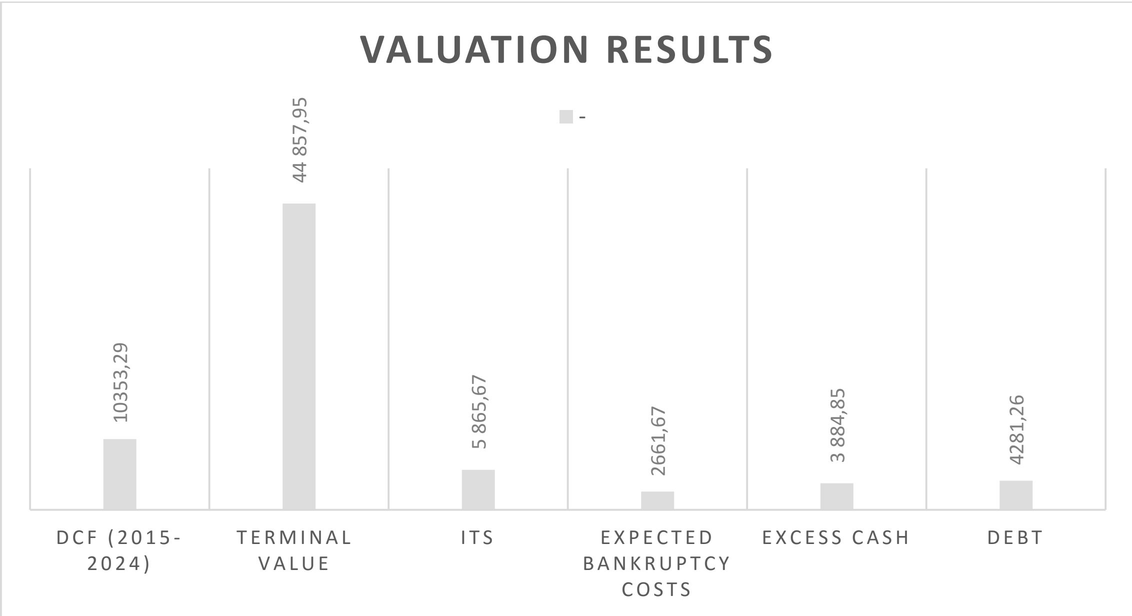


FIGURE 10 – VALUATION COMPONENTS RESULTS

Finally, to get our price target at December 2016, or the value per share, we divide the enterprise value by the fully diluted number of shares in the year defined for calculation. In the end, this valuation method yields a value of **135,53** dollars per share, which is higher than the closing price of the end of the period chosen for this valuation, 31st of December of 2015.

However, given the uncertainty of the future behavior of the market and the concretization of Netflix worldwide expansion and effective penetration of new geographies, various sensitivity analysis need to be conducted in order to define the strategy that defines the investments required to optimize the value of Netflix:

6.2 Sensitivity Analysis

In this section we account the impact on the final price target by changing some core variables, linked to the cost of equity, the number of subscribers and the capital structure.

Through different studies we detect the main sources of value and of uncertainty on the firm. We can develop good and bad case scenarios given the health of the market, industry, and, consequent number of subscribers for the next year, influencing the growth rate of revenues.

Also, the stable growth rate (for perpetuity) will be included in an analysis with variations along with other input, the cost of equity (Re), given its weight in the final value by its role in discounting both the FCFF and the terminal value.

A final analysis of the APV model focuses in determining the optimal capital structure in order to maximize the value of the firm.

6.2.1 Cost of equity/Growth

G /Ke	5,50%	6%	6,50%	7%	***7,50%***	8%	8,50%	9%	9,50%	10%
0%	143,73	130,07	118,57	108,76	100,31	92,95	86,50	80,80	75,74	71,20
0,50%	154,75	138,91	125,77	114,71	105,28	97,14	90,06	83,85	78,37	73,49
1%	168,23	149,53	134,30	121,66	111,01	101,93	94,10	87,29	81,31	76,03
1,50%	185,08	162,51	144,52	129,86	117,70	107,46	98,72	91,18	84,62	78,87
2%	206,74	178,73	157,02	139,71	125,61	113,90	104,04	95,63	88,37	82,06
2,50%	235,61	199,58	172,64	151,75	135,09	121,52	110,25	100,76	92,66	85,68
3%	276,04	227,39	192,72	166,79	146,69	130,66	117,60	106,75	97,61	89,81
3,50%	336,69	266,32	219,50	186,14	161,19	141,84	126,41	113,83	103,38	94,58
4%	437,76	324,71	256,99	211,93	179,82	155,80	137,18	122,32	110,21	100,15
4,50%	639,91	422,03	313,23	248,05	204,67	173,76	150,64	132,70	118,39	106,73
5,00%	1 246,34	616,67	406,95	302,21	239,46	197,71	167,94	145,67	128,40	114,62

This sensitivity analysis tries to proof the weight of two main inputs in our valuation model: the growth rate used for perpetuity and the cost of equity, and their impact in the price target, by changing each of the variables in 0,5 percentage points. We relate this two variables giving the impact that they have together, given the terminal value formula (the free cash flow from the last year will be divided by the difference between the Ke and the perpetual growth, so a study between the impact in changes in this relation might reveal to be relevant). As expected, the variables have an inverse relation in the impact that they have on the valuation. If the growth is higher, the value is higher; if the cost of equity is higher, the cash flows get more discounted, so the value suffers a decrease.

A plausible conclusion to take is that the cost of equity has a stronger impact in the value than the changes in the growth, and, the closer it is from the growth, the higher the impact of the 0,5 percentual change; so, the closer the values of the variables are to each other, the better; following this logic, the lower the cost of equity, the better.

6.2.2 Scenario Analysis

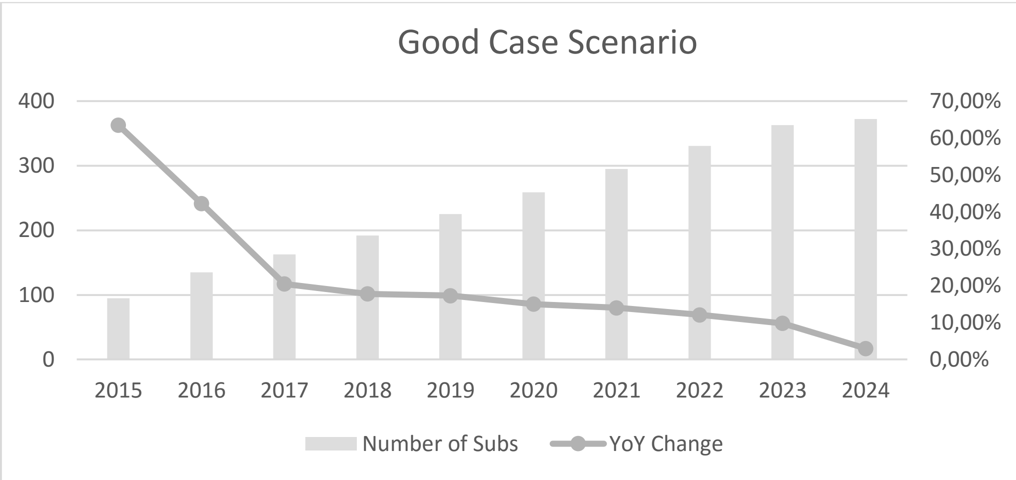
In a scenario analysis, we study the process of estimating the expected value of a share prior to a given period of time, following a specific assumption that an event will occur which will dictate changes in key factors or core inputs with enough importance to significantly affect the value of our share.

The purpose of a scenario analysis doesn't focus in identifying the exact conditions of each scenario; is to build a "what-if" situation based on a plausible idea of what might happen. This mentioned idea must change all inputs in order to be a scenario analysis, or else it would be just a sensitivity analysis (in which you only change one attribute).

For this analysis, we are developing a good and bad case scenario, in which our main impact will be highlighted in the number of subscribers.

6.2.2.1 Good Case Scenario

For this projection, we assume some factor such as a lower interest rate, or development of new technology that greatly decreases the costs, or even stronger policies against piracy. Through this type of factors, we expect a higher rate of market penetration, as Netflix obtains more subscribers, giving reasons for the investors to act towards a bullish investment mindset.



We assume a yearly increase in growth of subscribers by 25% and a perpetual stable growth rate of 3%, we achieve a price target under this circumstances of 207,49$ per share.

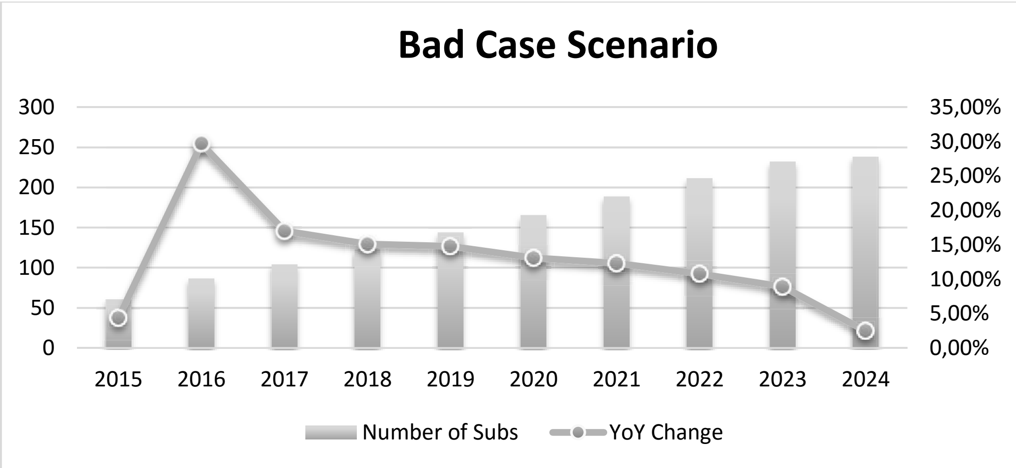
There is an increase in the price target of 53,33%, dividing by the 25% predicted growth, we calculate a 2,13% growth in the price target per 1% growth in the subscriptions.

A more detailed analysis is available through appendix I.

6.2.2.2 Bad Case Scenario

In this projection we assume new factors such as increase in competition or costs (for example, the government could include an extra fee that would require for Netflix to increase the price of the monthly fees).

These occurrences affect negatively the revenues, giving the investors a bearish mentality (a more detailed analysis in appendix J):



In this prediction, we estimate under a 20% decrease in yearly growth relatively to the base case scenario, along with a perpetual growth rate of 2%. Under this condition, we have a price target of 69,71$ per share. Relatively to the base case scenario, the price target decreases by 51,2%, decreasing 2,6% by each point decrease in the price target.

In conclusion, as expected, as Netflix gains more subscribers, each individual has less weight in relative terms when it comes to impact in the final price target. From the results, we confirm that the number of subscribers is possibly the strongest factor in the final value, as decreasing the growth only in 1/5 per year deceases the entire value in more than 50% in a 10-year estimation. It's therefore essential that they keep their growth at the same levels (25% CAGR) for the next years or else their share price will suffer significantly. A higher investment in Asia is recommended.

6.3 Monte Carlo Simulation

Given the high level of uncertainty associated to a company like Netflix, there is the need to add a probability-weighted scenario like a Monte Carlo simulation, covering the possibility of changes in our price target caused by random variables. Using our base case scenario and our good and worst predictions, giving, through a histogram, an idea of the most expected possible price behaviors, assuming perfectly efficient markets:

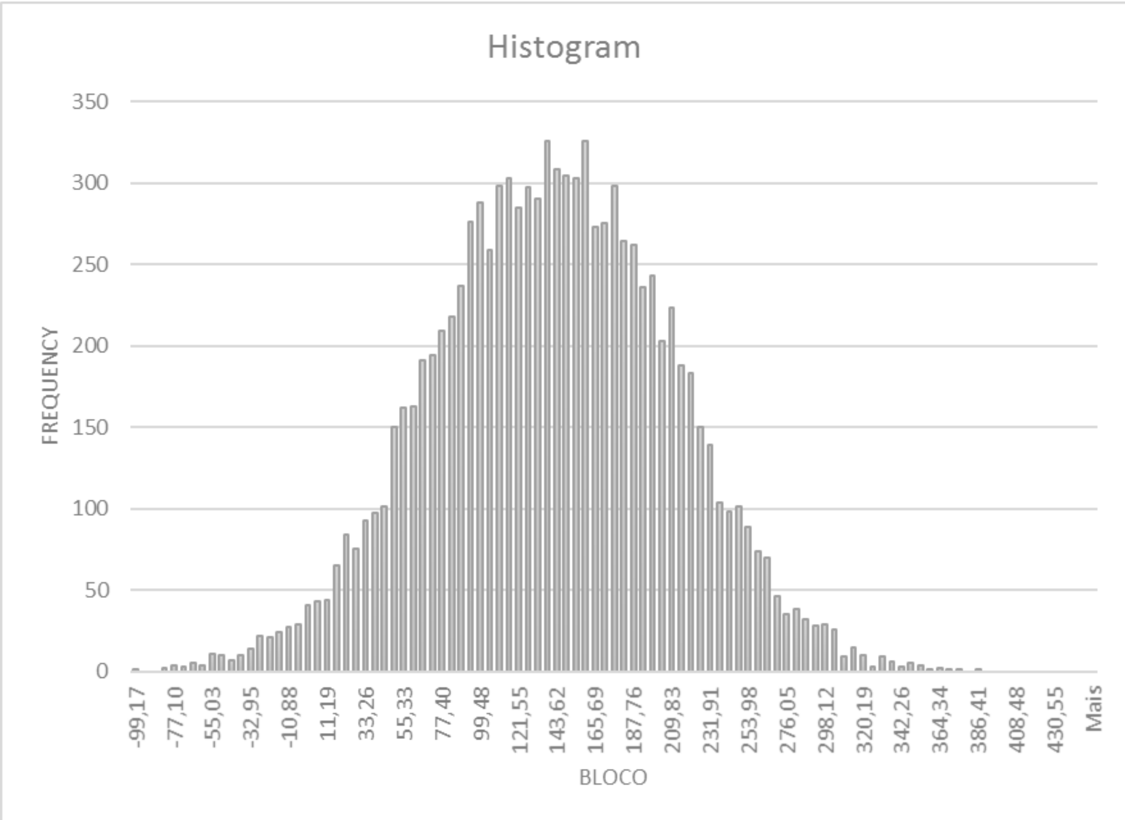


Figure 11 – Monte Carlo Simulation Results

By using the mean of 137,58$ from our three scenario price targets, and the standard deviation of 68,91, we ran randomized our model to get 10.000 results. As it can be concluded, the most frequent values (above 290 matches) predict a price movement between 116$ and 160$ per share, reinforcing the results of our valuation.

6.4 Multiples

As previously mentioned in the literature review, using multiples represents usually a stress test for the main valuation models, being considered a “tier 2” valuation method, checking for credibility and plausibility of the DCF-based valuations. It’s seen as a stress-test for the other valuation methods.

Multiple analysis is based in comparing a company’s multiples (Netflix) to those of its comparable companies (peer group). A relevant detail in multiples valuation is that, even if the results are far from the expected, valid conclusions can still be taken from that information; so our job hinges to finding the right multiples.

There are two types of multiples: trading multiples and transaction multiples.

6.4.1 Trading Multiples

Using the market as benchmark to estimate the value of a certain asset and, according to Schreiner (2007), this is the analysts most used valuation methodology (67% of the times).

Peer Group

As mentioned in KGW, our analysis begins by checking other companies in the target industry. This type of analysis is, as expected, very sensitive to the peers chosen.

The initial step leads us through the process of taking into consideration the set of companies provided by various plausible and trustworthy sources such as Reuters, Bloomberg, Yahoo Finance and equity research reports (for example, from Nomura).

After completing this introductory screening, the following step involves analyzing the performance and core metrics in order to appropriately narrow down the final peer group. It was given relatively higher importance to such metrics as: dimension (market cap), growth rate, ebit, ebitda, liquidity, roic, total assets, earnings, and sales.

Our first analysis highlights an initial conclusion: companies in the internet industry (mostly in SVOD) have considerably different financial and operational ratios, even if at the same growth rate (but, at the current period, some didn't even had the same growth), so, with the presence of many "outliers", indicating that the valuation may be biased. In the end, our initial group of 9 companies was reduced to: Amazon, Time Warner, Comcast Corp, AT&T and Facebook. All of this companies are settled in the internet retail or service delivery business, getting the most fitting metrics in order to build the final peer group.

These multiples were computed using 2014 annual reported financial taken from Reuters, using this info to follow Baker and Rubeck (1999) and Herman and Richter (2003) studies that explain that, by computing the mean to estimate the synthetic peer group multiples, we get a more accurate valuation.

We decided to perform the relative valuation first screening process regarding the choice of multiples, and, after that, to do a specific analysis on the most relevant multiples based on their values; so, we decided to calculate the following multiples: EV/EBIT, EV/EBITDA, EV/Revenues, EV/#subs, P/Revenues, P/E, P/B and.

The detailed calculation of the multiples can be seen in the appendix M, and the ending results in the following chart:

	EV/EBIT	**EV/EBITDA**	**EV/Revenues**	**EV/#Subs**	**P/Revs**	**P/E**	**P/B**
Average	28,54x	25,73x	6,41x	620,17x	6,24x	36,51x	8,21x
Valuation	27 313,72 M $	24 629,68 M $	63 507, 83 M $	69 080,26 M $	144,41$ /share	29,4$ /share	52,54$ /share

As it can be seen at first, there is a huge difference between final values, confirming the conclusion of Pablo Fernandéz in "Valuation using Multiples" (2002), mentioning the problem that it is the broad dispersion of values in multiple (relative) valuation.

Now, our issue remains at finding the best measure of valuation: to evaluate under an average of a specific set of multiples, or to simply choose one of the multiples and base our valuation on that multiple (the one that fits the best to our valuation).

Firstly, we need to adapt the multiples to Netflix: it's a very "unique" company, combining strong revenues to low operating margins (high costs) along with huge growth, but low free cash flows.

If it isn't even a stable company, to make our process even more complex, the industry (online streaming under a subscription based business) itself isn't yet mature, as companies have different levels of margins or of cash flows, following the mindset of Liu (2001) on the impact on relative valuation between industries.

The price multiples, in general, suffer from a problem: "price multiples" models apply for a high growth firm, calculated under a function of growth, risk and payout; the problem is that these inputs have to be estimated for both the high growth phase and the stable growth period, which Netflix will only achieve approximately in 2013, therefore we only have the values for a high growth period, so we can expect the price to be undervalued (much higher multiple than the peer group). In conclusion, we won't be taking the price multiples into account.

While price ratios focus on the market value of equity relative to earnings to equity investors, enterprise value ratios look at the market value of the company relative to operating earnings.

EV/EBIT suffers too much from accounting measures, and, given the difference in the industries peers margins, this is a very misleading metric for valuation.

We are left with three multiples:

EV/Revenues is the multiple least susceptible to accounting measures and it still remains applicable for negative earnings and highly cyclical periods, although it shouldn't be a "solo" metric as sales are rarely a direct value driver.

EV/EBITDA is one of the best performing multiples, by already having costs included, but still not being enough affected by accounting measures, being a proxy for free cash flows, as they exclude extraordinary and one-time items. But, Netflix has much "off-balance" factors not taken into account; conclusion, our valuation will come an average between EV/Revenues, EV/EBITDA and EV/#Subs.

Prior to final calculations, we go through a company's relative valuation of 52 405,92 Million \$. It can be concluded that the company is being undervalued given its value at 31st of December of 2015, the ending period, in which Netflix was valued at approximately 48 222 Million \$.

6.4.2 Transaction Multiples

An alternative relative valuation method is the transaction multiples, which uses recent corporate transaction exit valuation (instead of current market prices). This method involves higher magnitude transactions, considering that trading multiples only capture a small portion of the transactions of a stock.

This a piece of information very demanding to obtain, also very limited; through an obtained industry (internet) analysis performed by Goldman Sachs, we got:

Date	Acquirer	Target	Value	NTM EV/Revenues	NTM EV/EBITDA
jul/15	IAC/InterActive Corp	PlentyofFish.com	575,00 €	5,80	NA
apr-15	LinkedIn Corp	lynda.com	1 500,00 €	8,00	NA
nov/14	Rocket Internet	Jumia	445,00 €	7,20	NA
sep-14	News Corp.	Move	950,00 €	3,80	34,10
sep-14	Rakuten, Inc.	Ebates	1 000,00 €	3,90	NA
jul/14	Zillow, Inc.	Trulia, Inc.	2 500,00 €	5,80	40,50
jul/14	Expedia	Wotif.com	658,00 €	4,70	10,50
jun/14	Priceline.com	Opentable	2 488,00 €	11,30	27,80
jan/14	Zynga	Natural Motion	527,00 €	6,60	26,40
sep-13	eBay	Braintree	800,00 €	6,40	NA
dec-12	Expedia, Inc.	trivago GmbH	631,00 €	4,20	NA
nov/12	Priceline.com, Inc.	Kayak Software Corp.	1 486,00 €	6,30	27,80
jul/10	Google, Inc.	ITA Software, Inc.	700,00 €	3,50	NA
Average				5,96	27,85
Median				5,80	27,80

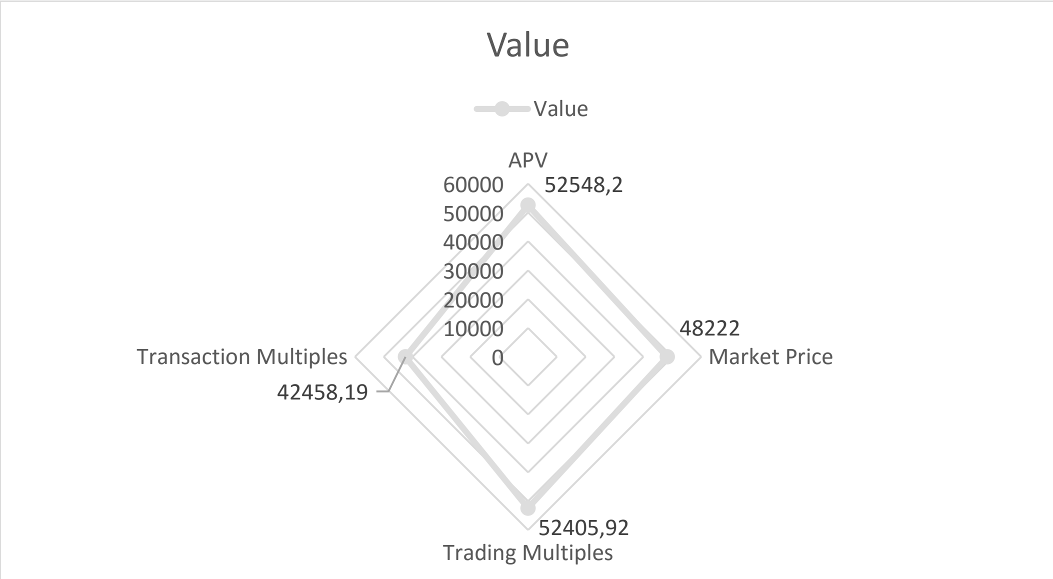
From this information, a representable average and median values for the internet sector is available. As it can be seen, the multiples performed (with the limited available information) were the EV/Revenues and the EV/EBITDA. The final results:

Netflix (2016)	**Revenues**	**EBITDA**
	9 911,14 M $	957, 10 M $
Valuation (avg of metrics)	58 285, 11 M $	26 631, 27 M $

The valuation range is still high; but, following a similar logic applied to the final valuation for the trading multiples, our valuation reference will come from an average of the available multiples:

With a final value of 42 458,19 Million $, the company is, under this method of valuation, it’s actually overvalued

7 Valuation Comparison: Model



Adjusted Present Value – 58 019,31 Million $

Market Price – 48 222 Million $

Trading Multiple – 52 405, 92 Million $

Transaction Multiple – 42 458, 19 Million $

In this equity valuation thesis on Netflix we applied three valuation models aiming at achieving a close estimate to the price of a share of the company in the end of 2016.

The introductory chart leads us to conclude that there is low dispersion between the outputs of the valuation methods picked. As it can be seen from the chart, the highest valuation comes from the APV with a value of 58 019,31 Million Dollars, while the lowest method comes from the Transaction Multiples with 42 458, 19 Million Dollars (the maximum dispersion is of 15 561,12 Million Dollars).

Through this section we take some final considerations towards the results and which methods fit best company being analyzed, aiming at a final price.

Relative valuation is one of the most common alternatives for analysts and investors to value a stock (Damodaran). Through this method we achieve a value for our company using a benchmark developed by basing our valuation on the multiples of Netflix's peer group. Right at this point we bump into our first challenge in this method: it's very difficult to find companies that are truly comparable, given that we desire for them to match in a high number of metrics such as liquidity, market cap, size, earnings, growth, number of customers, margins or even the revenues. Along with this challenge, a valuation using multiples doesn't allow to evaluate all the fundamentals and assumptions behind these companies' financial figures. In conclusion, the idea that multiples are useful for stress testing our main model is strengthened, as supported by Michael J. Maubousin: "Multiples are not valuation; they represent shorthand for the valuation process. Like the most forms of shorthand, multiples come with biases that few investors take the time and care to understand" (2006).

So, our valuation will hinge to an analysis based on the adjusted present value method. This method bases its valuation on the calculation of the NPV of the projects if it all-equity financed, being later adjusted for the benefits of financing (tax shield). This method matters as it measures the profitability of a project or investment in which tax reductions apply on the basis of debt financing by an unleveraged equity cash flows. It's similar to a DCF, with the exception that it isn't discounted by the cost of capital, but by the unlevered cost of equity. APV can be a useful measure for investments and projects with high levels of debt that could be allocated to the acquiring firm if approved.

By following a "sum-of-parts" mindset, this step-by-step approach gives clear and transparent understanding of the element of decision. This method, as an advantage, can evaluate any type of financial package, as using the cost of equity and the cost of debt separately instead of the WACC enables us to get transparent non misleading results when evaluating complex capital structures, as the APV separates the effects of debt into different components and allow the analyst to use different discount rates for each component. Through this method we avoid assuming that the debt ratio stays unchanged forever, which is an assumption of the cost of capital approach. Instead of this, we have the flexibility to keep the dollar value of debt fixed.

Weighting with this, we have the main issues with this method: the APV presents difficulties in estimating probabilities and cost of bankruptcy, in determining the cost of equity and the cost of debt and the amount that will be used to finance each project. Additionally, both adjusted WACC and APV approach do not deal with the increased financial risk that comes with increasing gearing.

Our final choice will hinge to the APV valuation, which, from what we can see from the above chart, gives us the highest price for the stock. The variations (although slightly) in the values between each method can be explained by the uncertainty surrounding the following years of Netflix.

8 Equity Research Report Comparison: Goldman Sachs

The valuation process conducted in this thesis will be compared to the investment report performed by Goldman Sachs.

This report was launched at the 16th of July of 2015, using the price of 98,13$ per share (obtained from the date of 15th of July of 2015), developing a, prior to this period, a 12-month valuation, getting a price target of 140$ per share.

From table x, we can observe and compare some core information regarding differences or similarities between the reports:

	Thesis	Goldman Sachs
Method	APV	DCF
Period	2015-2024	2015-2020
Discount Rate	Ke = 7,49%	WACC = 9,4%
Growth Rate	G = 2,5%	G = 4,5%
Equity Value	58. 019,31 M $	63.320, 6 M $
# shares	428, 08 M	452,29 M
Target Price	135, 53 $ /share	140 $ /share
Recommendation	Buy (Overweight)	Buy (Overweight)

The main differences come from the method of valuation: Goldman Sachs conducted an analysis hinging to a DCF valuation, assuming that the debt (long-term) will stay stable, therefore the capital structure won't be complex.

This lock in the investment on the debt will reflect on the net intangibles and cash. Our main difference comes from the need to keep investing in new content, adapting to respective countries and R&D and marketing expenses, also taking into account that we only predict for Netflix to finish its global expansion by 2018 (extending the period for the costs).

But even so, the discount factor is much higher – 9,4%, then what explains the price target to be higher? One of the answers comes from the perpetual growth rate. Goldman Sachs estimates that Netflix will grow at the rate of 4,5% forever. GS believes that the progress in technology combined with the investment in Asia will result in a winning formula, increasing Netflix market size and, consequently, the market penetration percentage (mainly after 2020, getting therefore much more subscribers in the long term, this coming from lower costs from the technological progresses).

But, still, from our sensitivity analysis, under GS conditions, we still get a lower price, since the discount factor is so high. An additional explanation then comes from the COGS. Our revenues estimates are more optimistic, so the main difference comes from the reduction of production costs. GS finds it plausible that Netflix will invest strongly in original content and in technological developments to decrease streaming costs, which will result in much higher margins.

9 Conclusions

This thesis allowed to conclude that there exist few methodologies to be applied to the value of a company with the circumstances of Netflix.

We endeavored on the most fitting valuation techniques that align theory with practice. Through the literature review, we understood the core factors and circumstances of each method, developing solid theoretical knowledge essential for a proper selection of the most fitting methods.

At this point, a special notice should be given to the detail that the valuation process is a very subjective one, mainly in the estimation of the assumptions. It's important to mention that the estimation for the revenues is a very complex task, so it can't be said this dissertation will be 100% correct, as there is an impossibility to predict the future, although the results can be seen as an accurate indicator for the company's future behavior.

The adjusted present value methodology was used to value Netflix due to the applicability of the theoretical background to the firm characteristics, specifically, a complex and constantly changing capital structure, along with revenues fragmented through different drivers (generating also, as expected, different costs for production).

Three analysis were conducted: one focused in studying the impact of the relation between growth and cost of equity in the terminal value formula, and the other two predicted optimistic and pessimistic scenarios affecting the number of subscribers obtained.

Through this sensitivity analysis, we were able to obtain outcomes which revealed the strategical route the company needs to follow in order to understand how to optimize Netflix intrinsic value.

From our results we conclude that Netflix must invest in the global expansion, as the main driver of the revenues comes from the number of subscriptions, investing mainly in Asia; also, invest heavily in the technology and streaming contracts to reduce the costs of goods sold. Netflix must constantly keep investing on debt to maximize their firm value.

Additionally, aiming at obtaining robustness in our APV results, we conducted a multiples analysis, hinging to trading and transaction categories, as supported by most practitioners and academics.

The main goal was to “stress-test” our main valuation method by seeing how different would be the outcomes between both methods. Both of the APV and multiples led to the same conclusion: Netflix is undervalued at 114,38$, supporting our recommendation to buy hinging to a price target of 135,53$ dollars per share, as we use the APV approach for our representative final price.

Finally, we carried out a comparison with Goldman Sachs equity research on Netflix; This choice was based on how profitable it could be to compare the results obtained from different valuation methods, as our thesis uses APV and Goldman Sachs equity reports uses a DCF approach, finding relevant conclusions and intakes on the assumptions that arrive the valuation and their respective impact.

Concluding, this dissertation we studied and developed a comprehensive analysis of firm valuation methods, an incisive understanding of the online streaming industry linked to a subscription economy, and, by this, establishing a concrete valuation process to be followed and applied to online companies in growth stages affected by strong alterations in the capital structure leading us to a final recommendation on the stock.

10 Appendix

Appendix – A: subscriber analysis

SUBS		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
US	**Beg. Subs**	36,45	40,50	45,00	49,05	52,48	56,16	59,81	63,10	66,57	70,23	74,09
	End. Subs	40,50	45,00	49,05	52,48	56,16	59,81	63,10	66,57	70,23	74,09	77,05
CANADA	**Beg. Subs**	3,56	3,96	4,40	4,80	5,20	5,65	6,13	6,65	7,15	7,61	8,07
	End. Subs	3,96	4,40	4,80	5,20	5,65	6,13	6,65	7,15	7,61	8,07	8,39
LATIN	**Beg. Subs**	5,12	6,40	8,00	9,60	11,52	13,25	15,24	17,14	18,85	20,27	21,79
	End. Subs	6,40	8,’’	9,60	11,52	13,25	15,24	17,14	18,85	20,27	21,79	22,88
UK	**Beg. Subs**	5,27	5,85	6,50	7,48	8,22	8,92	9,68	10,50	11,29	12,14	12,93
	End. Subs	5,85	6,50	7,48	8,22	8,92	9,68	10,50	11,29	12,14	12,93	13,57
EUROPE	**Beg. Subs**	--	--	10,00	16,50	23,10	30,03	36,04	41,44	47,66	53,61	58,44
	End. Subs	..	10,00	16,50	23,10	30,03	36,04	41,44	47,66	53,61	58,44	62,24
ASIA	**Beg. Subs**	--	--	--	15,00	22,50	32,63	43,23	56,20	70,25	84,29	96,94
	End. Subs	--	--	15,00	22,50	32,63	43,23	56,20	70,25	84,29	96,94	106,23
AUSTRALI	**Beg. Subs**	0,73	0,88	1,05	1,26	1,51	1,81	2,18	2,61	3,00	3,31	3,54
	End. Subs	0,88	1,05	1,26	1,51	1,81	2,18	2,61	3,00	3,31	3,54	3,71
GLOBAL	**Beg. Subs**	51,13	57,59	74,95	103,68	124,54	148,44	172,29	197,64	224,76	251,46	275,79
	New Subs	6,46	17,37	28,73	20,86	23,90	23,85	25,35	27,13	26,69	24,33	18,69
	End. Subs	57,59	75,95	103,68	124,54	148,44	172,29	197,64	224,76	251,46	275,79	294,48
	YOY	**--**	**30,2%**	**38,3%**	**20,1%**	**19,2%**	**16,1%**	**14,7%**	**13,7%**	**11,9%**	**9,7%**	**6,8%**

Appendix – B: Income Statement

Inc. Stat.	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E
Revenue	7164,67	9911,14	11905,26	14189,97	16469,63	18892,58	21485,79	24037,46	26363,14	28149,89
Cogs	4287,89	6586,06	7778,66	9122,17	10367,84	11588,06	12860,53	14082,40	15172,40	15995,04
Gross Profit	2336,78	3325,08	4126,60	5067,80	6101,79	7304,51	8625,25	9955,06	11190,74	12154,85
Other Oper. Exp.	1735,84	2367,98	2796,78	3279,83	3727,70	4166,43	4623,94	5063,25	5455,16	5750,93
Tot. Oper. Expense	6563,73	8954,04	10575,44	12401,99	14095,55	15754,49	17484,47	19145,65	20627,56	21745,98
EBITDA	600,93	957,10	1329,82	1787,98	2374,08	3138,08	4001,31	4891,81	5735,58	6403,91
Deprec.	80,64	132,42	96,15	110,16	109,91	116,82	125,03	123,03	112,13	86,15
EBIT	520,29	824,68	1233,68	1677,82	2264,17	3021,26	3876,28	4768,78	5623,45	6317,76
Interest	116,96	203,36	294,87	345,00	420,90	425,11	501,63	576,87	703,79	703,79
EBT	406,68	621,32	938,80	1332,82	1843,27	2596,15	3374,65	4191,91	4919,66	5613,98
Tax	97,60	149,12	225,31	319,88	442,38	623,08	809,92	1006,06	1180,72	1347,35
Net Income	309,08	472,20	713,49	1012,94	1400,88	1973,08	2564,74	3185,85	3738,94	4266,62

Appendix – C: Balance Sheet

Balance Sheet	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E
Assets										
Cash & Equivalent	2428,26	3884,85	4689,61	4988,64	6484,00	6751,02	9674,29	13151,98	18334,79	21995,82
Short Term Invest.	507,26	519,94	532,94	546,27	559,92	573,92	588,27	602,98	618,05	633,50
Current Content Assets. net.	3040,38	4343,79	5979,85	7387,73	8643,14	9862,50	10917,11	11975,37	13097,83	13541,58
Other Curr. Assets	198,38	274,43	329,65	392,91	456,03	523,12	594,92	665,57	729,97	779,44
Tot. Curr. Assets	6174,29	9023,01	11532,04	13315,54	16143,09	17710,55	21774,59	26395,90	32780,64	36950,34
Non-Current Content Assets	3899,62	5571,39	7669,81	9475,57	11085,78	12649,74	14002,40	15359,73	16799,40	17368,57
Property & Equipm.	194,31	268,80	322,88	384,84	446,67	512,38	582,71	651,92	714,99	763,45
Other non-curr. Assets	250,22	346,14	415,79	495,58	575,20	659,82	750,38	839,50	920,72	983,13
Total Assets	10518,44	15209,35	19940,52	23671,54	28250,73	31532,49	37110,09	43247,05	51215,75	56065,49
Liabilities										
Current content Liabilities	2942,52	4171,43	5293,67	6183,90	6934,51	7633,30	8216,33	8785,23	9373,40	9600,23
Accounts Payable	280,26	397,31	504,20	588,99	660,48	727,04	782,57	836,76	892,78	914,38
Accrued Expenses	90,78	125,58	150,85	179,80	208,69	239,39	272,25	304,58	334,05	356,69
Deferred Revenues	357,39	494,40	593,87	707,84	821,55	942,42	1071,77	1199,06	1315,07	1404,20
Total Current Liab.	3670,96	5188,72	6542,59	7660,53	8625,23	9542,14	10342,92	11125,62	11915,29	12275,50
Non-curr. Cont. Liab.	2168,24	2891,70	3594,69	4101,69	4683,30	4938,30	5493,74	6040,09	6798,30	6891,23
Long-term debt	2391,77	4281,26	6207,83	7263,69	8861,06	8949,67	10560,61	12144,71	14816,54	14816,54
Other non-curr. Liab.	78,04	107,96	129,68	154,56	179,40	205,79	234,03	261,83	287,16	302,73
Total Liab.	8309,01	12469,64	16474,79	19179,96	22348,99	23635,90	26631,31	29572,24	33817,29	34286,00
Common Stock	1237,37	1534,33	1940,93	2515,45	3305,30	4422,49	5868,64	7658,58	9744,01	12197,55
Retained Earnings	972,08	1205,37	1524,80	1976,14	2596,65	3474,31	4610,41	6016,59	7654,90	9582,41
Total Stockholders Equity	2209,44	2739,71	3465,73	4491,58	5901,94	7896,80	10479,05	13675,16	17398,91	21779,96
Total Liab. & Equity	**10518,45**	**15209,35**	**19940,52**	**23671,54**	**28250,93**	**31532,70**	**37110,36**	**43247,41**	**51216,20**	**56065,96**

Appendix – D: Statement of Cash Flows

Cash Flow Statement	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E
Net Income	309,08	472,20	713,49	1012,94	1400,88	1973,08	2564,74	3185,85	3738,94	4266,62
Depreciation	80,64	132,42	96,15	110,16	109,91	116,82	125,03	123,03	112,13	86,15
Deferred Taxes	30,10	30,10	30,10	30,10	30,10	30,10	30,10	30,10	30,10	30,10
Changes in Working Capital	164,32	258,93	209,91	202,82	189,26	191,73	189,50	186,01	176,17	117,80
Cash from Operating Activities	195,30	315,59	569,63	890,18	1291,44	1868,07	2470,17	3092,77	3644,81	4204,87
CAPEX	205,70	339,33	246,37	282,28	281,65	299,36	320,39	315,26	287,34	22,75
Free Cash Flow	-10,39	-23,74	323,26	607,90	1009,78	1568,71	2149,78	2777,51	3357,47	3984,11

Appendix – E: CAPEX

CAPEX	2015E	2016E	2017E	2018E	2019E	2022E	2021E	2022E	2023E	2024E
New PPE	539,75	764,66	896,89	1069,01	1240,75	1423,28	1618,65	1810,88	1986,08	2120,69
Old PPE	414,70	539,75	756,66	896,89	1069,75	1240,75	1423,28	1618,88	1810,88	1986,08
Depreciation	80,64	132,42	96,15	110,16	109,91	116,82	125,03	123,03	112,13	86,15
CAPEX	205,70	339,33	246,37	282,28	281,65	299,36	320,39	315,26	287,34	220,75

Appendix – F: Return on Equity

	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E
Net Income	309,08	472,20	713,49	1012,94	1400,88	1973,08	2564,74	3185,85	3738,94	4266,62
Equity	2209,44	2739,71	3465,73	4491,58	5901,94	7896,80	10479,05	12675,16	17398,91	21779,96
ROE	14%	17,2%	20,6%	22,6%	23,7%	25%	24,5%	23,3%	21,5%	19,6%

Appendix – G: APV results

	2016	2017	2018	2019	2020	2021	2022	2023	2024
FCFF	-23,74	323,26	607,90	1009,78	1568,71	2149,78	2777,51	3357,47	3984,11
TV (disc.)									44857,95
Disc FCFF	-23,74	300,74	526,18	813,17	1175,29	1498,46	1801,19	2025,66	2236,33
ITS	48,81	70,77	82,80	101,02	102,03	120,39	138,45	168,91	168,91
ITS (Disc.)	48,81	67,56	75,46	87,89	84,74	95,46	104,80	122,06	5178,89
Exp. Bankruptcy Costs	2553,39								

Equity Value	**55 211,24**
Cash	3 884,85
Debt	4 281,26
Value	54 814,82
Unlevered Equity Value	58 019,31
Outstanding Shares	428,08 M
Price Target	135,53$/share

Appendix – H: Sensitivity Analysis

G/Ke	*5,5%*	*6%*	*6,5%*	*7%*	*7,5%*	*8%*	*8,5%*	*9%*	*9,5%*	*10%*
0%	143,73	130,07	118,57	108,76	100,31	92,95	86,50	80,80	75,74	71,20
0,5%	154,75	138,91	125,77	114,71	105,28	97,14	90,06	83,85	78,37	73,49
1%	168,23	149,53	134,30	121,66	111,01	101,93	94,10	87,29	81,31	76,03
1,5%	185,08	162,51	144,52	129,86	117,70	107,46	98,72	91,18	84,62	78,87
2%	206,74	178,73	157,02	139,71	125,61	113,90	104,04	95,63	88,37	82,06
2,5%	235,61	199,58	172,64	151,75	135,09	121,52	110,25	100,76	92,66	85,68
3%	276,04	227,39	192,72	166,79	146,69	130,66	117,60	106,75	97,61	89,81
3,5%	336,69	266,32	219,50	186,14	161,19	141,84	126,41	113,83	103,38	94,58
4%	437,76	324,71	256,99	211,93	179,82	155,80	137,18	122,32	110,21	100,15
4,5%	639,91	422,03	313,23	248,05	204,67	173,76	150,64	137,18	118,39	106,73
5%	1246,34	616,67	406,95	302,21	239,46	197,71	167,94	145,67	128.40	114,62

Appendix – I: Good Case Scenario

Global	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beg. Subs	51,54	58,10	94,99	135,18	162,88	191,86	225,14	258,96	295,15	330,72	363,13
New Subs Adds	6,56	36,89	40,19	27,71	28,98	33,28	33,82	36,18	35,57	32,41	27,52
End. Subs	58,10	94,99	135,18	162,88	191,86	225,14	258,96	295,15	330,72	363,13	390,65
YoY Growth	--	63,5%	42,3%	20,5%	17,8%	17,3%	15%	14%	12,1%	9,8%	7,6%

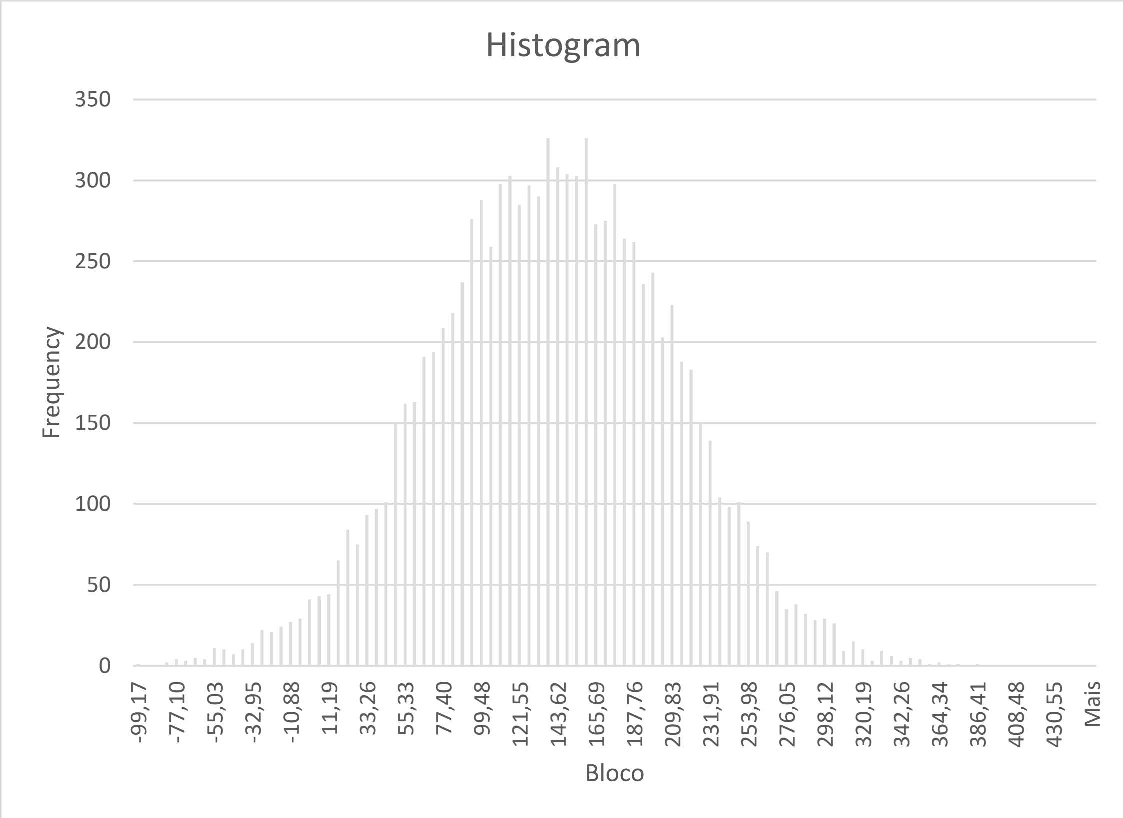
Price Target	207,49 $/share

Appendix – J: Bad Case Scenario

Global	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beg. Subs	51,54	58,10	60,79	86,51	104,25	122,79	144,09	165,74	188,89	211,66	232,40
New Subs Adds	6,56	2,70	25,72	17,73	18,55	21,30	21,65	23,16	22,76	20,74	6,04
End. Subs	58,10	60,79	86,51	104,25	122,79	144,09	165,74	188,89	211,66	232,40	238,44
YoY Growth	--	4,4%	29,7%	17%	15,1%	14,8%	13,1%	12,3%	10,8%	8,9%	2,5%

Price Target	69,71$/share

Appendix – K: Monte Carlo Simulation



Appendix – L: Relative Valuation

	2014A	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E
EV/Sales Multiple	10,45	8,05	5,81	4,78	3,99	3,45	3,03	2,74	2,55	2,43	2,42
Net Revs	5054,70	7164,67	9911,14	11905,26	14189,57	16469,63	18892,58	21485,79	24037,46	26,363,14	28149,89
Implied Ent. Value	57545,02	57706,13	57622,90	56964,62	56547,15	56783,45	57300,69	58951,85	61184,29	64034,10	68033,96
Cash	1113,61	2428,26	3884,85	4689,61	4988,64	6484,00	6751,02	9674,29	13151,98	18334,79	21995,82
Debt	885,84	2391,77	4281,26	6207,83	7623,17	8861,06	8949,67	10560,61	12144,71	14816,54	14816,54
Net Cash	227,77	36,49	-396,41	-1518,22	-2274,53	-2377,06	-2198,65	-886,32	1007,27	3518,25	7179,28
Implied Equity Value	57317,25	57669,64	58019,31	58482,84	58821,67	59160,51	59499,34	59838,18	60177,01	60515,85	60854,68
Dill. Shares Outs.	422,9	425,5	428,08	431,5	434	436,5	439	441,5	444	446,5	449
Price Target	135,53	135,53	135,53	135,53	135,53	135,53	135,53	135,53	135,53	135,53	135,53
Price	114,38	114,38	114,38	114,38	114,38	114,38	114,38	114,38	114,38	114,38	114,38
Upside/Downside	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%
EPS	0,62	0,73	1,10	1,65	2,33	3,21	4,49	5,81	7,18	8,37	9,5
P/E Multiple	218,60	186,59	122,87	81,97	58,07	42,23	30,16	23,33	18,89	16,19	14,26
Free Cash Flow	-128,00	-10,39	-23,74	323,26	607,90	1009,78	1568,71	2149,78	2777,51	3357,47	3984,11
P/FCF Mult.	--	--	--	180,92	96,76	58,59	37,93	27,83	21,67	18,02	15,27
EBITDA	402,60	600,93	957,10	1329,82	1787,98	2374,08	3138,31	4001,31	4891,81	5735,58	6403,91
EV/EBITDA Multiple	142,93	96,03	60,21	42,84	31,63	23,92	18,26	14,73	12,51	11,16	10,62

Appendix – M: Trading Multiples

	EV/EBIT	EV/Sales	EV/EBITDA	EV/FCF	P/S	P/E	P/B	P/FCF	EV/#Customers
Netflix	123,37	7,83	107,07	-336,33	7,74	162,45	22,93	-332,77	682,08
Amazon	-2474,44	3,09	1543,05	137,52	3,14	-1146,88	26,03	143,44	1125,67
Time Warner	16,34	2,79	12,79	18,26	2,07	15,15	2,32	18,26	1142,57
Comcast Corp	14,50	2,63	12,17	16,14	1,97	17,24	2,57	16,13	4044,17
AT&T	29,14	2,19	24,32	21,32	1,63	24,07	2,41	21,31	5234,47
Facebook	54,18	21,34	43,27	76,38	22,37	89,58	7,73	76,91	190,96
Unweighted Avg.	28,54	6,41	25,73	45,83	6,24	36,51	8,21	55,21	620,17
Valuation (Avg.)	27313,72	63607,83	24629,68	-1088,13	144,41	33,10	52,54	-1310,71	69080,26

Specific Avg. (Final Valuation) 52 405,92 Million $

Appendix – N: Transaction Multiples

Date	Acquirer	Target	Value	NTM EV/Revs	NTM EV/EBITDA
Jul-15	**IAC/InterActive Corp**	PlentyofFish.com	575,00 €	5,80	NA
Apr-15	**LinkedIn Corp**	lynda.com	1 500,00 €	8,00	NA
Nov-14	**Rocket Internet**	Jumia	445,00 €	7,20	NA
Sep-14	**News Corp.**	Move	950,00 €	3,80	34,10
Sep-14	**Rakuten, Inc.**	Ebates	1 000,00 €	3,90	NA
Jul-14	**Zillow, Inc.**	Trulia, Inc.	2 500,00 €	5,80	40,50
Jun-14	**Expedia**	Wotif.com	658,00 €	4,70	10,50
Jun-14	**Priceline.com**	Opentable	2 488,00 €	11,30	27,80
Jan-14	**Zynga**	Natural Motion	527,00 €	6,60	26,40
Sep-13	**eBay**	Braintree	800,00 €	6,40	NA
Dec-12	**Expedia, Inc.**	trivago GmbH	631,00 €	4,20	NA
Nov-12	**Priceline.com, Inc.**	Kayak Software Corp.	1 486,00 €	6,30	27,80
Jul-10	**Google.Inc**	ITA Software, Inc.	700,00 €	3,50	NA
Average				**5,96**	**27,85**

	Revenues	EBITDA
Netflix	9911,14	957,10
Avg	58 285,11	26 631,27
Final Value	42 458,19	

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