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Master's Thesis

VALUATION OF **Netflix, Inc.** (Incorporated)

by

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DEDICATION

This thesis is dedicated to everyone who has encouraged and motivated me throughout this process. To my parents, Antonis and Athena, thank you for pushing me and believing in me. I could not have made it through this process without all of the love and support that you each provide!

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ABSTRACT

Rapid technological developments are occurring quicker than ever before in the twenty-first century. COVID-19 further exacerbated this issue by emphasizing the continuous changing of schemes in our society and economy. Enterprises, being one of the primary engines of the economy, must constantly change by efficiently adjusting to the new realities enabled by technological advancement. On the other hand, markets are the most accessible they have ever been in human history. Nowadays, anybody may access the markets using a smartphone app. Despite this, the sheer quantity of analysts and specialists throughout the world has made it exceedingly difficult for any individual investor to identify and pick firms that may provide considerable potential. This incident highlights the significance of recognizing a company's true value and the correct procedure for estimating it.

Each company's value reflects its ability to generate profits for its owners. The evaluation of an entity's worth is a complex process that is governed by each individual's requirements. Its usefulness becomes important during the investment decision-making process.

The purpose of this master's thesis is to calculate a theoretical equity value for Netflix, Inc and, as a result, its value per share. By discounting projected future cash flows to present value, the enterprise value was calculated.

The dissertation presents and analyzes Netflix and the entertainment business from a strategic standpoint. The strategic analytical insight enabled a financial statement study of Netflix and the sector, followed by a forecast of future performance. The approach utilized was the Discounted Cash Flow model.

Finally, the 'fair' share value was compared to the actual stock market price to determine if its value is underpriced or overvalued and to effectively estimate its potential. The conclusion falls on a final value estimate of $720.18 per share. Thus, suggesting a buy recommendation.

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INTRODUCTION

1.1 Introduction

Netflix, Inc. is a Los Gatos, California-based production business and an American video service that is available directly to viewers through the Internet (Netflix, Inc., 2021). The core business of the firm is a subscription-based streaming service that provides online streaming from a library of films and television programs. Netflix is one of the world's top entertainment providers, with over 204 million paying subscribers in over 190 countries watching TV shows, documentaries, and feature films in a wide range of genres and languages. Members may view a limitless amount of material on any internet-connected screen without interruptions (Katz, 2021).

Netflix is a forerunner in the distribution of on-demand entertainment. Its streaming service debuted in 2007. Since the original introduction, an ecosystem for internet-connected displays has evolved, and a growing quantity of material has been added, allowing customers to experience entertainment directly on their internet-connected screens. As a result, consumers' acceptance and interest in the distribution of streaming entertainment has grown.

As of December 31, 2020, the company had approximately 9,500 full-time employees located globally in 59 countries. Of these, the vast majority were located in the United States and Canada, 11% in EMEA, and the rest in Latin America and Asia-Pacific (Netflix, Inc., 2021).

In 2001, Netflix made its initial public offering (IPO), at a selling price of $1 a share under the NASDAQ ticker NFLX. As of August 1, 2021, the company is ranked 115th on the Fortune 500 (Fortune, 2021) and 219th on the Forbes Global 2000 (Forbes, 2021). On July 10, 2020, Netflix became the largest entertainment/media company by market capitalization. Its market cap is US$ 242.04 billion. During the 2010s decade, Netflix was the top-performing stock in the S&P 500 stock market index, with a total return of 3,693% (Fitzgerald, 2019).

The current dissertation seeks to analyze the company's worth, which will be determined after an examination and assessment of the real value of the share. Finally, by comparing its market price to the fair value that will be exported, we will be able to determine if Netflix Inc.'s

stock is undervalued or overvalued. The study's findings will be a valuable resource for analysts and investors seeking information and making sound judgments.

The significance of valuation stems in part from the necessity for firms to assure viability and long-term success. On the other side, it is in educating investors about their plan, which is based on credible research. This requirement is heightened by the current climate of financial instability in which businesses operate.

Because Netflix Inc. is a publicly traded business, the essential information will be derived from both the published financial statements and other sources accessible to investors and the general public. Finally, it should be noted and emphasized that some of the most important factors influencing a company's valuation are the political, social, and economic environment in which the company's financial activities unfold, as well as the company's future course, elements that are based on forecasts to which special attention must be paid.

1.2 Thesis Outline

The format of the master thesis will be as follows in order to appropriately evaluate Netflix Inc:

❖ In Chapter 2, the literature on corporate valuation and the many valuation methodologies produced over the years by several academics and researchers will be critically reviewed, laying the groundwork for the study's conceptual framework.

❖ In Chapter 3, we will define value and valuation, explain why they are essential, the fundamental steps of valuation and how it may be utilized as an investment and finance instrument.

❖ In Chapter 4, there will be an analysis of the major categories and valuation methodologies that have been historically developed and utilized by analysts.

❖ In Chapter 5, a strategic analysis of Netflix, Inc. will be performed where we will elaborate on external and internal factors that affect the company and the industry. Netflix's organizational structure and business plan will be examined, followed by a SWOT analysis of the company.

❖ In Chapter 6, the valuation of Netflix will be completed, using the Discounted Cash Flow method, and finally, the fair share price will be presented.

❖ In Chapter 7, the last of the dissertation, the conclusions of the research will be drawn and comments regarding this valuation will be provided.

CHAPTER 2:

LITERATURE REVIEW

2.1 Historical Background

The Growth of Valuation

The desire to value items may be traced back to antiquity. Plato identified the notion of value as one of the most difficult issues in the fourth century BC. Aristotle, his pupil, thought that the worth of an item was formed and resided exclusively in man's imagination. To a considerable extent, Aristotle's point of view is still applicable today. Seneca translated this in the first century: "A thing is worth just what someone else would pay for it." This may be seen as the beginning of the Market Approach. (Catty, 2008).

Following the fall of the Roman Empire, the Catholic Church dominated Europe, influencing almost every area of economic philosophy. The land was rented or sold by the rulers to the nobles, who subsequently handed it down to the ordinary people. It didn't take long to realize that the more productive areas might fetch a higher rent or be sold for a greater profit. The concept of economic rent, as well as the notion of future benefits, are thought to have emerged around this time as essential principles of value theory. (Catty, 2008)

Another modern method of assessing value, which has its origins in the Middle Ages, is cost of production. The "fair price" was, in reality, the reproduction cost rather than an exchange value. That concept also reflected the notion that the intrinsic value of a thing dictated its worth. Some of us believed a bagel and 50 cents were the same thing when we were kids.

Until the Renaissance, the concept that value, whether in use or in a sale, was an objective characteristic inherent in anything was dominant. Only with the emergence of humanism was an object's worth progressively viewed as a function of its ability to satisfy a need or want, another key component of valuation theory.

The idea of value, which reflects the benefits created or the ability to fulfill need, gained traction with Adam Smith's 1776 publication of "The Wealth of Nations," which marked the beginning of modern economics (Smith, 1776).

Martin Faustmann established the final pillar of value theory over a century later, in 1849. He established that the value of an asset was the present value of its future returns, initially for woods, which were a vital resource for shipbuilding at the time. H. D. Hoskold (Hoskold, 1877) formalized his technique as the Discounted Cash Flows method for valuing mines and mineral reserves in his 1877 book "The Engineer's Valuing Assistant."

Except for precise financial data, most contemporary valuation and corporate finance theories were in place by the end of the nineteenth century.

The Great Crash of the New York Stock Exchange in 1929 prompted the investment community at the time to seek out more comprehensive valuation methodologies. In 1934, Graham and Cottle released "Security Research", in which they asserted that investor analysis and valuation should focus on the operation of a corporation and its ability to earn fixed and unchanged profits (Graham & Dodd, 1934).

Williams made the first attempt to discount predicted cash flows to assess a company's intrinsic value in 1938 (Williams, 1938). MJ Gordon built a model based on this concept a few years later, in which future revenues are discounted in perpetuity based on a constant growth rate g (Gordon, 1959). The Gordon model was the basis for all other valuation models.

Modigliani and Miller went one step further by analyzing the effect of leverage on the value of a business and concluded that there must be the right combination of equity and foreign capital to maximize profits and dividends. (Modigliani & Miller, 1958) They also created two valuation methods.

Modigliani and Miller went even further, examining the impact of leverage on a company's value and concluding that the correct mix of stock and foreign capital is required to maximize profitability and dividends (Modigliani & Miller, 1958). They also devised two systems of valuation. In one methodology, future cash flows are discounted based on the weighted average cost of capital. The other method is known as the adjusted present value method, and it involves discounting loans without taking into account their cost of capital.

Along with cash flow discount models in 1965, Professor Eugene Fama develops the theory of random walk by approaching the issue of valuation from a completely different perspective. He established the efficient market hypothesis idea, claiming that cash flows cannot be foreseen and that the stock price includes all available information, making it impossible for undervalued or overvalued shares to exist. Furthermore, he distinguished the efficient market into three categories: weak, semi-strong, and strong (Fama, 1965).

Economists Rappaport (Rappaport, 1986) and Hackel and Livnat (Hackel, et al., 2000) developed free cash flow as a term in the 1980s and employed it in the company valuation process. Professor Aswath Damodaran wrote Investment Valuation in 1991, in which he looked

at the importance of the discount rate and the zero-risk risk-free rate in valuation methodologies (Damodaran, 1995). Benninga and Sarig in 1997 argued that timing and level of risk are directly related to the present value of cash flows. They also stressed the use of more than one valuation method to ensure better results (Sarig & Benninga, 1997).

CHAPTER 3:

VALUE AND CORPORATE VALUATION

3.1 Concept of Value

3.1.1 Definition of Value

Value has been interpreted and defined over time by several scholars and analysts. In any instance, its conceptual definition varies to cover the respective object to which it refers.

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".

In terms of how shareholders should consider the value of their stock rights on a company, according to finance theory, the worth of every financial claim is just the present value of the cash payoffs received by its claim holders. Because shareholders get cash payouts from a firm in the form of dividends, the present value of future dividends equals the value of their equity (including any liquidating dividend). (Palepu, et al., 2012)

The following definitions have been provided at the level of analysis of a firm. (Pratt, 1989)

- Fair Market Value: The IRS defines fair market value as "the price at which a property would change hands between a willing buyer and a willing seller neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts". In other words, the fair market value of an asset is the amount paid in a transaction between participants if it's sold in the open market.
- Fair Value: As opposed to fair market value, fair value is a legal construct rather than a value set by the market. Fair value tends to be defined by statute—and these statutes vary from one jurisdiction to the next. Fair value is defined in many jurisdictions as the shareholder's proportionate share of the fair market value of the business and it is mostly based on calculations by accounting methods.

- Investment Value: The value that has been found and molded for a certain investor to suit his or her specific investment needs.
- Intrinsic Value: Rather than utilizing the asset's actual trading market price, this metric is calculated objectively or using a sophisticated financial model. In financial analysis, this phrase refers to the process of determining the underlying value of a firm and its cash flow as precisely as feasible. Fundamental analysis is usually utilized to estimate the intrinsic value of a company.
- Going-Concern Value: It is a value that implies the firm will continue to operate indefinitely and profitably. Total value is another term for going concern value. This is distinct from the value that would be obtained if its assets were liquidated—the liquidation value—because an ongoing enterprise might continue to generate a profit, which adds to its worth. (Kenton, 2021)
- Liquidation value: The net worth of a company's physical assets if it goes out of business and sells the assets. The liquidation value of a firm is the worth of its real estate, fixtures, equipment, and inventory. Intangible assets are not included in the liquidation value of a firm.
- Book (or Carrying) Value: The amount as it appears on the balance sheet. It is calculated by subtracting the cumulative depreciation as well as the impairment charges from the balance sheet's initial price.

Based on the foregoing, we conclude that the appropriate value standard should be developed to serve as the foundation for each assessment report. The relevant value standard is primarily influenced by the application for which it is designed. The value standard to be applied is frequently prescribed by a law, rule, or binding legal document regulating a transaction. In any situation, it is critical to identify the right value model and to adhere to the methods and methodology employed.

3.1.2 Factors Affecting the Value of The Business

A business is an investment, and as such, it involves the commitment of cash in order to make a profit. A company's worth is determined by its capacity to create a net profit/income for its shareholders both now and in the future. This ability to benefit, both now and in the future, is impacted by a variety of internal and external variables (Rousis, 2014).

Internal Factors

Internal factors are divided into two subcategories, accounting, and non-accounting. Accounting refers to the determination of expenses, depreciation, taxes, establishment, and installation costs. It has been noted that they cause a decline in the value of the firm since, in addition to assets, they comprise intangible assets that are not integrated into the production of value. Non-accounting elements, on the other hand, include the company's reputation and client base, staff loyalty, and organizational structure.

External Factors

Some of the key external factors in determining a business' value are:

a) Inflation Rate
b) Liquidity of the market and the company's stock
c) Interest Rates
d) The industry's size and potential
e) The quantity and caliber of competitors
f) The macroeconomic environment

The significance of these issues is magnified in publicly traded firms. This is explained by the everyday impact of external influences on value. The impact of an imminent increase in interest rates or inflation on the share price and, as a result, the company's worth, is instantly apparent.

The table below examines the link between the first three factors.

Table 1: Factors affecting the value of the business (Lazarides, 2005)

Factors	Change in Factors	Change in Stock price - Change in Value of Company
Inflation Rate	↑	Negative
	↓	Positive
Liquidity	↑	Positive
	↓	Negative
Interest Rates	↑	Negative
	↓	Positive

3.1.3 Stakeholders in The Company's Value

Several stakeholders are interested in the value of a firm, both directly and indirectly. Because the method in which information is utilized to make strategic decisions varies, this provides varied incentives to individuals who assess the worth of a firm.

Those stakeholders are considered to be the following:

i. <u>Entrepreneurs - Company executives</u>, knowing the position of the company one can make sound decisions about growth, lending, but also wages, bonuses, etc.
ii. <u>Lenders</u>, to set interest rates and loan terms.
iii. <u>Suppliers</u>: development of more favorable credit procedures
iv. <u>Customers</u>, to continue providing services and products by monitoring the reliability of the company
v. <u>Shareholders</u>, to develop an investing plan
vi. <u>Financial Management – Accountants</u>: After determining the value of the company, they can devise a strategic plan for its increase
vii. <u>Internal Auditors</u>: to evaluate and define the objectives of the various departments.
viii. <u>External Auditors</u>: to verify the results and provide a certified opinion to the investors
ix. <u>Securities and Exchange Commission</u>: to assess the entry of the stock in the market and its trajectory.
x. <u>Tax Office</u>: to determine the company's taxation.
xi. <u>Society</u>: the higher a company's value, the greater one's contribution and responsibility.

As previously said, each side sees the value of a company in a completely different light. However, this fact has resulted in some negative outcomes, as many firms resort to administrative and accounting excesses, such as claiming massive sums for research and development that usually do not exist.

3.2 The Concept of Valuation

3.2.1 Definition of Valuation

Valuation is sometimes referred to be the "heart" of finance. Corporate finance analyzes ways to maximize business value by altering investment, financing, and dividend decisions. In portfolio management, resources are invested in search of businesses that trade at a discount to their real worth to profit when prices converge on value. When determining whether markets are efficient, we examine if market prices stray from value and, if so, how quickly they revert. Understanding what drives a firm's value and how to estimate that value appears to be a precondition for making sound judgments.

Valuation is essentially the measurement of a corporation's asset position aimed at its evaluation. The purpose of the valuation process is to ensure that investors and various stakeholders "do not overpay" for an item, and it seeks to determine the real worth of a firm. Therefore, valuation may be defined as the assessment of the worth of a firm based on forecasts.

Many aspects of valuation are open to debate, including how to assess actual value and how long it will take for prices to adapt to the true value. But there is one topic on which all people can agree. Asset prices cannot be justified only on the basis that other investors will be ready to pay a greater price in the future.

In general terms, there are four approaches to valuation. The first, discounted cashflow valuation, relates the value of an asset to the present value of expected future cashflows on that asset. The second, liquidation and accounting valuation, is built around valuing the existing assets of a firm, with accounting estimates of value or book value often used as a starting point. The third, relative valuation, estimates the value of an asset by looking at the pricing of 'comparable' assets relative to a common variable like earnings, cashflows, book value, or sales. The final approach, contingent claim valuation, uses option pricing models to measure the value of assets that share option characteristics. This is what generally falls under the rubric of real options.

3.2.2 Main Reasons for Valuation

According to Professor Aswath Damodaran (Damodaran, 1995), valuation is useful for a variety of activities. However, the role it performs varies depending on the context. The primary reasons for using company value are as follows:

A. Portfolio Management

The valuation function in portfolio management is significantly impacted by the investor's philosophy. Depending on the type of investment, the nature and purpose of valuation differ. A long-term investment plan based on fundamental research, for example, employs valuation as its major emphasis point. The same holds for investors known as franchise buyers, the most well-known of whom is Warren Buffet. In the case of Chartists, who think that investor emotion drives prices as much as any underlying financial realities, valuation plays less of a role.

Nonetheless, valuation is an important activity for determining why a stock sells for the price it does. Thus, an existing investor is facilitated in his decision to hold, buy, or sell the company's shares, while a potential investor can take accordingly the appropriate action.

An investor may design the structure of his portfolio with the best feasible combination of shares by valuing different firms. Given a company's development potential and the degree of risk associated with its shares, investors often choose undervalued stocks. They think that by purchasing them at a lower price than their true value, they will be able to outperform the market on average.

B. Mergers & Acquisitions

Mergers and acquisitions (M&A) are corporate finance transactions that transfer or combine ownership of enterprises, other business organizations, or their operational divisions with other corporations. M&A, as a component of strategic management, may allow firms to expand or contract, as well as change the nature of their business or competitive position.

A merger is the legal combining of two entities into one, whereas an acquisition occurs when one entity buys the stock, equity interests, or assets of another organization. From a business and economic viewpoint, both types of transactions generally result in the consolidation

of assets and liabilities under one firm, and the distinction between a "merger" and an "acquisition" is less clear.

Valuation should be a key component of acquisition analysis. Before placing an offer, the bidding business or individual must assess a fair value for the target firm, and the target firm must calculate a reasonable value for itself before making a choice.

C. Corporate Finance

The relationship between financial decisions, corporate strategy, and company value must be established if the objective of corporate finance is to maximize firm value, which has been the foundation of most of its theory. In recent years, management consulting companies have begun to advise organizations on how to increase value, mostly due to the fear of hostile takeovers. Their recommendations have frequently served as the foundation for these companies' restructure.

A company's value is closely related to the decisions it takes. Understanding this link is essential for making value-added decisions and implementing sound financial restructuring.

Other important reasons for valuation may be:

- Legal and property disputes
- Informing shareholders
- Financial reports
- Impairment of goodwill
- Redefining the market price
- Purchase/sale agreements
- Business planning

To conclude this section, we should stress a very important cautionary note that should be remembered. Valuation is not an impartial activity, and any assumptions and biases brought to the process by the analyst will find their way into the value.

3.2.3 Procedures Before Valuation

During the process of designing the valuation of a company, various procedures should be followed and those factors that affect it should be taken into account. According to Krishna G.

Palepu, Paul M. Healy, and Victor L. Bernard (Palepu, et al., 2012), the factors and procedures to be considered to make an assessment could be categorized as follows:

- Understanding the purpose of valuation
- Understanding customer preferences
- Understanding the purpose of using the valuation by the customer
- Determining the standard value and its definition
- Determining the prerequisite value
- Defining users of value
- Determining the interest rate or items to be valued
- Verification of the necessity of including discounts or premiums
- Analysis of the company's financial information
- Gathering information about the company and its real estate
- Collection of information regarding the sector in which the company operates and the general economic environment
- Examine all value approaches and select the most appropriate one
- Implementation of value approaches through various methods
- Balance of values
- Application of discounts and insurance premiums, if required
- Report recording in which their analyses and conclusions are reported

The availability of publicly available information and statements is an important factor in determining the worth of a company. As mentioned before, the selection of the suitable valuation technique, which offers the necessary information to the interested parties, also plays an essential role.

3.2.4 Myths in Valuation

According to Damodaran (Damodaran, 1995), one of the most important scholars of valuation, some myths have developed around valuation over the years. Some of them are analyzed below:

Myth No1: V*aluation is objective since its models are quantitative*

Although the valuation methods we utilize are mathematical, the inputs provide plenty of space for subjective judgments. As a result, the final value that we receive from these models is influenced by the bias that we introduce into the process.

Given our exposure to outside information and opinions about a company, it is doubtful that we will begin on most appraisals without any prejudice. Furthermore, institutional considerations have a role in determining the amount of valuation bias.

When using a third-party valuation, examine the biases of the analyst(s) providing the valuation before making decisions on its basis. In an acquisition, for example, a target firm's self-evaluation is likely to be positively biased. While this does not invalidate the evaluation, it does suggest that it be used with caution.

Myth No2: *Good valuations do not changeover time*

There is no such thing as an eternal value. When new information about the firm, its competitors, and the overall economy becomes available, the value generated from any valuation model changes. As a consequence, the value will change as new information is revealed. Because of the constant flow of information into financial markets, the value of a company develops quickly and must be updated to reflect current realities. A great example of this continuous fast-paced that indicates the constant change in value, is a recent study by McKinsey that found that the average lifespan of companies listed in Standard & Poor's 500 was 61 years in 1958. (Garelli, 2016) Today, it is less than 18 years.

When analysts change their values, they will very probably be called upon to justify their actions. In certain cases, the fact that values change through time is seen negatively. Lord Keynes may have had the best response when reprimanded for changing his opinion on a critical economic issue: "When my information changes, I change my conclusions." Sir, what do you do?".

Myth No3: A good valuation provides a precise estimate of value

Expecting or demanding complete certainty in valuation is unrealistic since cash flows and discount rates are computed with inaccuracy. Even after the most careful and extensive

evaluation, there will be uncertainty about the final numbers as long as we assume the company's and the economy's future.

The amount of precision in appraisals is likely to vary greatly amongst assets. The problems aren't with the valuation systems we use, but with the difficulties we face when making future forecasts.

Contrary to common perception, full-fledged appraisals always have a positive return, even when the future is unknown or there is a lack of evidence to explain them.

Myth No4: The more quantitative a model, the better the valuation

It may seem obvious that making a model more complete and complex should yield better valuations, but it is not necessarily so. Complexity brings along with it the potential for input errors.

The valuation's outcome is dependent not only on the gathering of quantitative data but also on the quality of the data that was chosen. It is thus proportionate to the time spent on data collecting and comprehension of the company's surroundings.

Myth No5: To profit from valuation, you must believe that markets are inefficient.

The concept that markets make mistakes and that we can spot them, frequently by using information that tens of thousands of other investors have access to, is usually inherent in the valuation process.

On the one hand, we believe that markets make mistakes; yet, spotting these errors requires a combination of skill and luck.

If there are substantial variations from the market's current data, we should double-check our analysis for any inaccuracies rather than misjudging the market's current value.

Myth 6: It is only the end result, value, and not the process, which matters.

By focusing only on the product of valuation, we miss some valuable insights that can be obtained from the process. The process can tell us a great deal about the determinants of value and help us answer some fundamental questions.

Table 2: Bermuda Triangle of Valuation (Damodaran, 2012).

The Bermuda Triangle of Valuation

Bias & Preconceptions
- Denial
- Deception
- Self delusion

Valuation First Principles & Good Sense

Complexity & Detail
- Confusion
- Intimidation
- Blind faith in models

Uncertainty & the Unknown
- Paralysis
- Outsourcing
- Herding
- Mental accounting
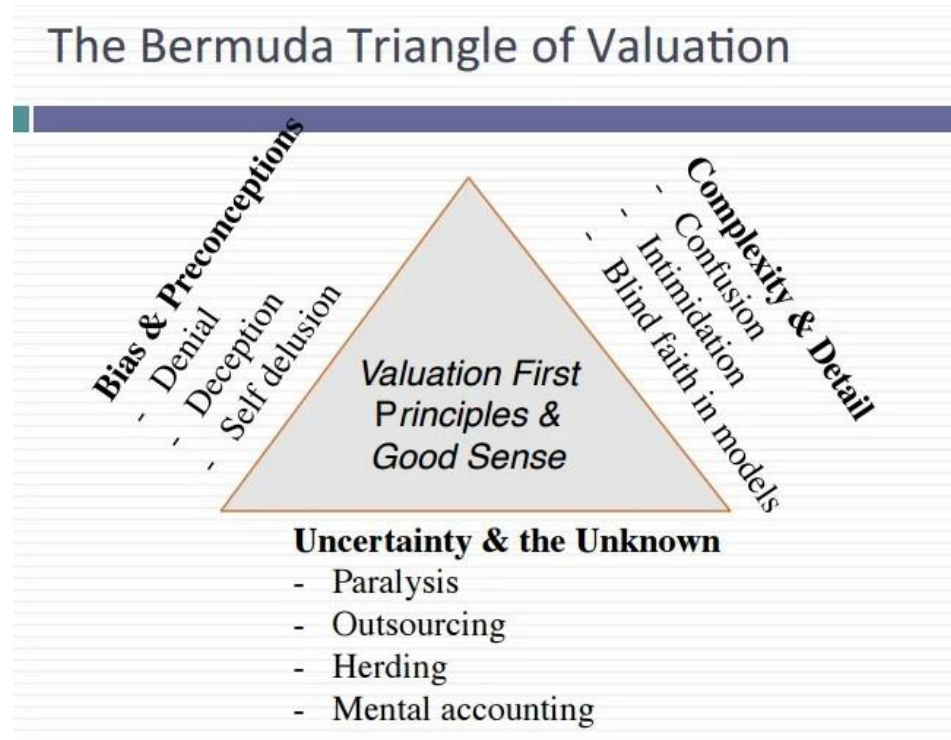
To conclude this chapter, Damodaran notes the existence of a Bermuda Triangle in the vicinity of Valuation. That triangle boils down to the three components listed below, which will decide the outcome (Damodaran, 2012).

1) Bias & preconceptions

An ideal valuation would begin with no preconceived notions about the companies being evaluated, followed by sound judgments about how much value to assign to them. In practice, an analyst almost never starts from scratch. Every valuation is biased, the only question is to what extent and in which direction.

2) Uncertainty & the Unknown

Uncertainty is a feature of valuation, not a flaw, and it comes to the fore, especially when valuing young start-ups and transitional companies. It comes from a variety of sources, both within and outside the firm, and analysts are frequently paralyzed in its presence, leading them to seek mental shortcuts or outsource the problem.

3) Complexity & Detail

Multiple forces are combining to complicate valuations. First, as companies go global, analysts are increasingly confronted with decisions about country risk and currency estimation. Second, analysts are seeing spillover effects as accounting standards and corporate holding structures become more complex. Third, easy access to data and modeling tools enables analysts to quickly and affordably create complex models. (Damodaran, 2015)

CHAPTER 4:
VALUATION METHODS

4.1 Introduction to Valuation Methods

When it comes to the accuracy of an individual analyst or investor, his or her estimations are determined by their expertise in interpreting changes as well as their ability to quantify the effect of these changes (Powell, 1984).

Once the evaluation of the business is completed, it is time for the analyst to consider the business strategy translated into specific forecast numbers. The company, based on its strategy and how it will implement it, is asked to give the prospective investor the numbers that will make the investment attractive or not.

For the analyst-investor to be able to make the valuation of the company, he has at his disposal certain forecasts of the company expressed in the financial statements. When placing a value on a company, an analyst looks at the business's management, the composition of its capital structure, the prospect of future earnings, and the market value of its assets, among other metrics. Most corporations use a five-year period for these forecasts. Through these forecasts, the analyst is able to develop the cash flow statement and proceed to the valuation of the business.

To have the best possible result, one should pay particular attention to the basic assumptions on which the forecasts are made, be able to export certain items to calculate cash flows and be able to relate with the appropriate way the "story" behind the corporation with the model of its forecasts.

4.1.2 Efficient Market Hypothesis (EMH)

When an analyst begins a valuation, he should have a certain viewpoint that reflects the philosophy of the item under consideration, which will affect his investing approach. Eugene F. Fama's Efficient Market Hypothesis, first proposed in 1965, is the fundamental theory underlying this viewpoint, which is still being explored today. (Fama, 1965).

According to the theoretical and historical literature (Merton, 2006) (Bernstein, 1992), EMH's authorship has to be attributed to the works of Eugene Fama and Paul Samuelson (Samuelson, 1965). Both Fama and Samuelson explain the randomness of prices as a result of

rational markets. The distinction between the two writers is in the probabilistic model employed to characterize random variation. While Fama opts for the well-known Random Walk Model, Samuelson proposes the Martingale model.

For the first time in 1965, Fama defined a "efficient" market, concluding that it follows a random walk. He described how the idea of random walks in stock market prices poses significant problems to supporters of both technical and fundamental analysis.

The canonical study on the efficient markets hypothesis is Eugene F. Fama's first of three review papers, 'Efficient capital markets: A review of theory and empirical studies,' published in 1970 (Fama, 1970). He describes an efficient market as follows: "An efficient market is one in which prices always "completely reflect" available information."

One of the assumptions is crucial to the validity of the efficient markets hypothesis: the notion that all information relevant to stock prices is freely and publicly available, "universally shared" by all investors.

Price fluctuations are always efficient since there are always a big number of both buyers and sellers in the market (i.e., in a timely, up-to-date manner). As a result, stocks are always priced at their current fair market value (Corporate Finance Institute, 2021).

The efficient market hypothesis is based on the following assumptions:

- All market players have equal access to historical stock price data, which includes both public and private information. This criterion demonstrates that no arbitrage opportunity exists. As a result, none of the investors has an edge over the others when it comes to making investing selections.
- Investors are rational, which means they are risk averse. Simply said, if two investments offer the same return but differ in risk, a rational investor would always choose the one with lesser risk.
- It is difficult to beat the market in the long run, which means that it is impossible to continuously earn returns that are greater than the market average.
- Stock values vary randomly, which means that trends or patterns in the past do not help someone to anticipate their future movements. As a result, the efficient market theory renders both technical and fundamental analysis obsolete.

According to Fama, there are three levels of market efficiency (Fama, 1970):

1. Weak-form efficiency

Securities prices reflect all information from past prices promptly and thoroughly. This means that future price movements cannot be anticipated using prior prices, implying that historical stock price data is worthless for forecasting future stock price changes.

2. Semi-strong efficiency

According to the semi-strong version of efficiency, disclosed information (such as corporate balance sheets, earnings releases, dividends, and so on) is reflected in current prices and cannot be utilized by investors to forecast future prices and obtain excessive profits. As a result, only investors with additional inside information may have a competitive advantage in the market. Any price abnormalities are immediately identified, and the stock market reacts accordingly.

3. Strong-form efficiency

All relevant public and inside information is correctly reflected in asset pricing. As a result, no one can gain a competitive advantage in the market by predicting prices because there is no data to provide added value to investors.

The theory's major conclusion is that because stocks always trade at their fair market value, buying cheap stocks at a bargain or selling overpriced stocks for a profit is almost impossible. Neither competent stock research nor well-executed market timing methods can hope to outperform overall market performance. If this is correct, the only option for investors to outperform the market is to take on far more risk.

The efficient-market theory has been experimentally and theoretically questioned by several investors, including Peter Lynch and Jim Simmons. Investors do not have equal access to all accessible information in the actual world. Moreover, behavioral economists believe that financial market inefficiencies are produced by a combination of cognitive biases such as overconfidence, information bias, and a range of other predictable human errors in thinking and information processing.

4.2 Benjamin Graham's Value Investing

In 1949, Benjamin Graham, a Columbia University professor, published The Intelligent Investor, which laid the groundwork for what is today known as value investing. Since then, Graham has been dubbed the "Father of Value Investing." The Intelligent Investor is described by Warren Buffett as "the finest book about investing ever published." Many well-known investors, like Bill Ackman, have complimented him for bringing to light certain key criteria for selecting a stock and considering the reasons for investing in a specific stock.

Graham's criteria were formulated as follows (Graham & Zweig, 2006):

1. An earnings-to-price yield at least twice the AAA bond rate
2. P/E ratio less than 40% of the highest P/E ratio the stock had over the past 5 years
3. Dividend yield of at least 2/3 the AAA bond yield
4. Stock price below 2/3 of tangible book value per share
5. Stock price below 2/3 of Net Current Asset Value (NCAV)
6. Total debt less than book value
7. Current ratio greater than 2
8. Total debt less than 2 times Net Current Asset Value (NCAV)
9. Earnings growth of prior 10 years at least at a 7% annual compound rate
10. Stability of growth of earnings in that no more than 2 declines of 5% or more in year-end earnings in the prior 10 years are permissible.

The first five criteria measure 'reward' and are sensitive to price and earnings changes. The second set of five provides a measure of 'risk,' and it does not change rapidly in response to fluctuations in price and earnings.

The criteria are based on the notion of optimizing the 'reward' to 'risk' ratio of the stock chosen.

Under the current circumstances, many companies either do not pay dividends or due to the financial crisis have changed the way they evaluate leverage and debt. Therefore, not all criteria for the selection of shares are used. However, many of the criteria, such as 1,2, and 6, could still be effectively used to evaluate and differentiate one company from another.

4.3 Absolute and Relative Valuation Models

Equity valuation can be performed using one of two types of models. Of course, each model type has its subclasses. However, when it comes to broad categorization, there are only two techniques that may be taken. One is known as the absolute valuation method, while the other is known as the relative value approach (Juneja, 2021).

Most assets are valued based on how similar assets are priced in the market. The value of an asset in relative valuation is determined from the price of 'similar' assets, which are standardized using a common variable such as profits, cashflows, book value, or revenues.

Analysts and investors are endlessly inventive when it comes to using relative valuation. Some compare multiples across companies, while others compare the multiple of a company to the multiples it used to trade in the past. The price-to-earnings (P/E) ratio is one of the most commonly used metrics for this type of valuation. Typically, the relative valuation model is a lot easier and quicker to calculate than the absolute valuation model.

Absolute valuation methods, on the other hand, seek to determine an investment's intrinsic or "real" worth. The defining feature of an absolute valuation model is that the value of the asset is calculated only based on its features. There is no thought given to the valuation of other comparable assets that are traded in the market. These models are referred to as "discounted cash flow" or DCF models. These models are often used in the business. Discounted cash flow models are classified into numerous kinds.

The Discounted Cash Flow Model (DCF) will be explained in depth below since it will be Netflix Inc.'s primary valuation approach in the specified assignment.

4.4 Valuation Methods According to Aswath Damodaran

Professor A. Damodaran believes that there are three ways to evaluating a (financial) asset (Damodaran, 2005).

1. Discounted cashflow valuation, which relates the value of an asset to the present value of expected future cashflows on that asset.
2. Relative valuation, which has been discussed previously and calculates an asset's worth by examining the pricing of similar assets to a common variable.
3. Contingent claim valuation, also known as option pricing models, which measures the value of assets that share option characteristics.

Mr. Damodaran warns that depending on the technique employed, there might be substantial disparities in outcomes.

4.5 Valuation Methods According to Pablo Fernadez

Pablo Fernadez, professor at IESE Business School, examines the Main Valuation Methods from a new angle in his book, 'Valuation Methods and Shareholder Value Creation.' The methods are illustrated below (Fernandez, 2002):

Table 3: Main Valuation Methods (Fernandez, 2002)

Main Valuation Methods					
Balance Sheet	Income Statement	Mixed (Goodwill)	Cash flow Discounting	Value Creation	Options
Book value	Multiples	Classic	**Equity cash flow**	EVA	Black & Scholes
Adjusted book value	PER	Union of European Accounting	**Dividends**	Economic profit	Investment option
Liquidation value	Sales	Abbreviated income	**Free cash flow**	Cash value added	Expand the project
Substantial value	P/EBITDA	Others	**Capital cash flow**	CFROI	Delay the investment
	Other multiples		**APV**		Alternative use

Following is a more extensive study of the aforementioned approaches, so that they may be thoroughly understood.

4.5.1 Balance Sheet-Based Methods

Balance sheet methods are the methods that utilize the balance sheet information to value a company. These techniques consider everything for which accounting in the books of accounts is done.

4.5.1.1 Book Value

In this method, book value as per balance sheet is considered the value of equity. Book value means the net worth of the company. Net worth is calculated as follows:

Net Worth = Equity Share capital + Preference Share Capital + Reserves & Surplus – Miscellaneous Expenditure (as per B/Sheet) – Accumulated Losses.

The drawback of this definition lies in the fact that its criteria are based only on accounting. They are therefore subject to a certain degree of subjectivity that differs from "market" criteria. As a result, the book value rarely matches the "market" value.

4.5.1.2 Adjusted Book Value

When the valuation strategy of "historical prices" is used, the approach of adjusted book value helps address any flaws that may occur. As a result, using this technique, all assets and liabilities are adjusted to market value. (Fernandez, 2002)

4.5.1.3 Liquidation Value

This is the company's value if it is liquidated, that is, its' assets are sold, and its debts are paid off. As defined, "liquidation is the process of bringing a business to an end and distributing its assets to claimants." (Kenton, 2021). This value is calculated by deducting the business' liquidation expenses from the adjusted net worth.

Liquidation Value = Adjusted Book Value – Liquidation Expenses

Although confined to a very particular circumstance, this technique always represents the business's minimal worth since the value of a company, assuming it continues to operate, is larger than its liquidation value.

4.5.1.4 Substantial Value

Substantial value is, in essence, the investment required to create a firm from the ground up under identical conditions as the company being appraised. Another meaning may be the cost of replacing the company's assets if it continues to operate.

4.5.2 Income Statement-Based Methods

Unlike balance-sheet-based approaches, these methods are based on the company's income statement and seek to estimate the company's value by utilizing numbers such as earnings, sales, or other ratios as a foundation.

4.5.2.1 Value of Earnings, PER

In the specific method, the value of the equity is calculated by the multiplication of the annual net income by a ratio called PER (price to earnings ratio), that is:

$$\text{Equity value} = \text{PER x earnings}$$

4.5.2.2 Value of The Dividends

The value of a share, according to this method, is the net present value of the dividends expected from it. (Fernandez, 2002)

When we anticipate a firm to pay out consistent dividends every year, the perpetuity scenario, this value might be stated as follows:

$$\text{Equity value} = \text{DPS} / \text{Ke}$$

If, on the other hand, the dividend is expected to grow indefinitely at a constant annual rate g, the above formula becomes the following:

$$\text{Equity value} = \text{DPS}_1 / (\text{Ke} - g)$$

Where:

- DPS = dividend per share distributed by the company in the previous year
- DPS_1 = dividend per share for the next year
- Ke = required return to equity
- g = annual growth rate

In practice, it has been discovered that the more dividends paid by the firm, the less likely the share price would rise. This phenomenon is explained by the fact that distributing dividends to shareholders in return for investments reduces growth.

4.5.2.3 Sales Multiples

This valuation approach involves multiplying a company's sales by a particular factor to determine its worth.

The ratio can be calculated as follows:

$$\text{Price/Sales} = (\text{price/earnings}) \times (\text{earnings/sales})$$

The first ratio is the beforementioned PER and the second one is normally known as return on sales.

This method is applied for the valuation of a company after determining the average desired multiplier of the company's sector of activity.

4.5.2.4 Other Multiples

Some of the other frequently used multiples are

- Value of the company / Earnings before interest and taxes (EBIT)
- Value of the company / Earnings before interest, taxes, depreciation and amortization (EBITDA)
- Value of the company / Cash flows from operating activities
- Value of Equity / Book value

4.5.2.5 Multiples Used to Value Internet Companies

- Price/sales,
- Price/subscriber,
- Price/pages visited
- Price/inhabitant

4.5.3 Goodwill-Based Methods

In this case, the reference point is the goodwill of the company.

Broadly speaking, goodwill is the value that a company has above its book value or the adjusted book value. The value of a company's brand name, solid customer base, good customer relations, good employee relations, and proprietary technology represents some reasons why goodwill exists (Hargrave, 2021).

4.5.3.1 The "Classic" Valuation Method

Fernadez states "that a company's value is equal to the value of its net assets plus the value of its goodwill". Specifically, the goodwill of the business is calculated by multiplying the profits by a certain factor. The formula that expresses a company's value is:

$$V = A + (n \times B)$$

Where:

- A = Net asset value
- n = Coefficient between 1.5 and 3
- B = Net income

4.5.3.2 The Simplified "Abbreviated Income" Method or The Simplified UEC Method

The formula applied to this method is:

$$V = A + a_n(B - iA)$$

Where:

- A = Net substantial value.
- a_n = Present value, at o rate t, of n annuities, with n between 5 and 8 years.
- B = Net income for the previous year
- i = interest rate
- $a_n(B - iA)$ = Goodwill

Goodwill, therefore, arises based on capitalization, through a rate, of a surplus equal to the difference between net income and the investment of net assets at a zero-interest rate.

4.5.3.3 Union of European Accounting Experts (UEC) Method

The following equation is used to calculate the value of a firm when using this method:

$$V = A + a_n(B - iV)$$

Where:

$$V = [A + (a_n \times B)] / (1 + i \times a_n)$$

The difference with the previous method lies in the value of the goodwill, which in this case is calculated as a function of the value V.

4.5.3.4 Others

Other Goodwill-based methods include the following:

- Indirect method
- Anglo-Saxon or direct method
- Risk-bearing and risk-free rate method
- Annual profit purchase method

4.5.4 Cash Flow Discounting-Based Methods

These approaches attempt to calculate the company's worth by predicting future cash flows and then discounting them at a rate proportionate to the risk of the flows.

This approach has its foundation in the present value rule, where the value of any asset is the present value of expected future cashflows that the asset generates.

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

Where: n = Life of the asset; CF_t = Cashflow in period t; r = Discount rate reflecting the riskiness of the estimated cashflows

The cash flow discounting technique is widely utilized nowadays since it is the only theoretically accurate valuation method. The firm is seen as a cash flow generator in these techniques, and the company's value should be the present value of the expected cash flows at a discount rate that reflects the proper rate of uncertainty.

More specifically, when the method of discounted cash flows is applied, we proceed to a short-term calculation of free cash flows (3-5 years), and then they are discounted at the weighted average cost of capital. (WACC). The free cash flow is the amount of "cash not required for operations or reinvestment" (Brealey, Myers, & Allen, 2006, p. 998)

4.5.4.1 Discounted Cash Flow Valuation – DCF

A Discounted Cash Flow or DCF is one of the most important methods used to value a company. Studies of ancient Egyptian and Babylonian mathematics suggest that they used techniques similar to discounting of the future cash flows. Discounted cash flow valuation was used in industry as early as the 1700s or 1800s; it was first officially stated in modern economic terms by Irving Fisher in his 1930 book "The Theory of Interest" (Fisher, 1930); it was widely discussed in financial economics in the 1960s; and became widely used in U.S. courts in the 1980s and 1990s.

A DCF is carried out by estimating the total value of all future cash flows (both inflowing and outflowing), and then discounting them (usually using Weighted Average Cost of Capital – WACC) to find a present value of that cash. The aim of a discounted cash flow is to estimate the total amount of cash you will receive from an investment, and if this value is higher than the cost of the investment, it is usually worth doing. The process behind creating a DCF model is as follows (Wall Street Oasis, 2021):

- Project Future Cash Flows - this is usually done from a 3-statement projection model or by using simple assumptions about Revenue, Tax, Depreciation, Amortization etc. and calculating free cash flow from there
- Calculate the Discount Rate - this is either taken to be a simple percentage or is calculated using WACC
- Discount Future Cash Flows - either by using the Mid-Year discount or a simple discount period, it is fairly simple to calculate the present value of future cash flows
- Estimate Terminal Value - Terminal Value is then estimated either by using a terminal exit multiple (usually an EBITDA multiple) or with a Terminal Growth Rate (Gordon Growth Method)
- Find the Net Present Value - to find the net present value simply discount the terminal value (again using WACC or a simple %) and then add that to the sum of the discounted cash flow values

The most basic mathematical type for the DCF can be written as follows (Damodaran, 2006):

$$V = \frac{CF_1}{(1+r)} + \frac{CF_2}{(1+r)^2} + \frac{CF_3}{(1+r)^3} + \cdots + \frac{CF_n + RV_n}{(1+r)^n}$$

Where:

CF_i = cash flows in period i

RV_n = residual value of the company in year n

r = the discount rate, typically a firm's Weighted Average Cost of Capital (WACC)

n = Period Number, each cash flow is associated with a time period

The above formula can be extended if the residual value in year n is discounted by the future flows that follow this period. For the course of flows in perpetuity we assume a constant growth rate (g). The RV (Residual value) at year n is:

$$RV = \frac{CF_n(1+g)}{(r-g)}$$

In this situation, it is common to ignore the value of flows after a given period because their current value steadily diminishes when the time horizon is extended. The firms' competitive edge has been lost at this point.

4.5.4.2 Weighted Average Cost of Capital

As Fernandes defines it (Fernandes, 2014), the weighted average cost of capital (WACC) is the rate that a company is expected to pay on average to all its security holders to finance its assets. The WACC is commonly referred to as the firm's cost of capital. Importantly, it is dictated by the external market and not by management.

A firm's WACC increases as the β (beta) and rate of ROE (return on equity) increase because an increase in WACC denotes a decrease in valuation and an increase in risk.

Debt and equity are the two components that constitute a company's capital funding. Lenders and equity holders will expect to receive certain returns on the funds or capital they have provided. Since the cost of capital is the return that equity owners (or shareholders) and debt holders will expect, WACC indicates the return that both kinds of stakeholders (equity owners

and lenders) can expect to receive. Put another way, WACC is an investor's opportunity cost of taking on the risk of investing money in a company.

The WACC represents the minimum return that a company must earn on an existing asset base to satisfy its creditors, owners, and other providers of capital, or they will invest elsewhere.

Because of this, company directors will often use WACC internally in order to make decisions, like determining the economic feasibility of mergers and other expansionary opportunities. WACC is the discount rate that should be used for cash flows with a risk that is similar to that of the overall firm.

As already mentioned above, investorsmay often use WACC as an indicator of whether or not an investment is worth pursuing since WACC is the minimum acceptable rate of return at which a company yields returns for its investors. To determine an investor's personal returns on an investment in a company, the WACC is subtracted from the company's returns percentage.

The fact that several parts of the WACC formula, such as the cost of equity, have varying values means that individuals who use it may provide different reports in various seasons. This indicates that Weighted Average Cost of Capital may not be as trustworthy as previously thought. As a result, while making an investment choice in a firm, it must be used in conjunction with other indicators (Gordon, 2020).

More details on WACC and its calculation formula will be provided in Netflix's valuation, in Chapter 6.

4.5.4.3 Free Cash Flow

FCF result 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 (Farooq & Thyagarajan, n.d.):

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

Unlike earnings or net income, free cash flow is a measure of profitability that excludes the non-cash expenses of the income statement and includes spending on equipment and assets as well as changes in working capital from the balance sheet. (Fernando, 2021) It is an indicator of a company's financial flexibility and is of interest to holders of the company's equity, as well as potential lenders and investors.

4.5.4.4 Disadvantages of Discounted Cash Flows

Despite the advantages of the DCF analysis, it is also exposed to some disadvantages. The main drawback of DCF analysis is that it requires a large number of assumptions, and it is easily prone to errors, overcomplexity and overconfidence in knowing what a company is actually "worth". Initially, an investor should correctly calculate the future cash flows from an investment. Future cash flows will be based on various factors, such as the overall state of the economy, unforeseen obstacles, market demand, etc. Another major drawback of the method is looking at company valuation in isolation without taking into consideration relative valuations of competitors. Estimating a proper discount rate accurately and the Weighted Average Cost of Capital (WACC) is also very challenging.

4.5.5 Value Creation Methods

According to James L. Grant, Associate Professor of Accounting and Finance at the University of Massachusetts Boston, there is a plethora of stock cross-combinations that fill out the equity style box. However, none of these conventions reveal the fundamental ability of a company to create wealth. (Abate, et al., 2004)

Investors are ultimately concerned with economic reality rather than accounting constructions, and the stock price of any firm is equal to the discounted value of its projected cash flows, not its accounting flows. As a result, the fundamentally faulty conventional criteria that are frequently employed to differentiate between value and growth investment have no direct link to wealth generation. Economic Value Added is a popular approach for determining a company's capacity to produce wealth through financial rather than accounting gains. This investment approach stresses a company's underlying potential to build wealth through the production of economic earnings rather than accounting earnings.

4.5.5.1 Economic Added Value or Economic Profit

From an accounting perspective, EVA is simply net operating profit after taxes (NOPAT) minus the dollar cost of capital:

$$EVA = NOPAT - WACC \times C$$

NOPAT can be expressed in simple terms as tax-adjusted EBIT as follows (Fabozzi, et al., 2000):

$$NOPAT = EBIT(1 - t)$$

WACC is the weighted average cost of capital; C denotes the amount of net invested capital (debt and equity equivalents).

EVA can also be expressed in terms of the after-tax return on capital and the cost of capital:

$$EVA = [ROC - WACC]C$$

Where:

$$ROC = \text{Return on Capital} = \frac{Net\ Income}{Shareholders'Equity}$$

The difference between the after-tax return on capital and WACC is variably referred to as the EVA spread, the residual return on capital, the excess return on invested capital, or the surplus return on capital.

Essentially, EVA is used to calculate the value that a firm creates from funds invested in it. If a company's EVA is negative, it means the company is not generating value from the funds invested into the business. A positive EVA, on the other hand, indicates that a firm is generating value from the capital invested in it (Chen, 2021).

EVA is a highly important performance measure since it indicates how a firm produced wealth by including balance sheet elements. Economic Value Added, on the other hand, is heavily dependent on the amount of invested capital and is best suited for asset-rich businesses that are stable or mature. Companies with intangible assets, such as technology enterprises, may not be appropriate candidates for an EVA assessment.

4.5.6 Options-Based Methods

An option is a right, but not an obligation, to exercise an asset at a preset date (Damodaran, 2012). The purpose of an option-based valuation is to determine the value of the flexibility to postpone, expand or dispose of a project. (Kallestad & Møller, 2016)

In 2007, Warren Buffet and his lifelong investment partner Charlie Munger, in Berkshire Hathaway's annual meeting, characterized options as a Financial Weapon of Mass Destruction. Despite that, they have also supported their use many times in the past and consider them a key part of an investment.

The process of option-based valuation consists of two parts. First, a static value of the company is estimated using fundamental valuation. Then, a value estimation of the option is carried out, either by using the Black & Scholes model for option pricing or binomial models/ (Damodaran, 2012)

Option-based valuation is ideally suited for sectors with rapidly changing dynamics and significant uncertainty. On the other hand, while computing the input parameters, such as volatility and life expectancy of the real option, the model introduces significant uncertainty. Because an option-based valuation necessitates a fundamental assessment of the static value, there is an increased danger of double counting if the present value of the flexibility period is included in the discounted cash flow or the growth factor (Kallestad & Møller, 2016). Thus, the method is not suitable for companies at mature growth stages. On the other hand, it will be useful for companies that possess licenses, patents, permissions, etc. that can be developed or carried out. Such companies often find themselves in the initial phase or growth phase, with a wide range of uncertainties that option-based valuation can be applied to.

4.5.6.1 Black and Scholes

The Black-Scholes model (also known as Black-Scholes-Merton) was the first widely used model for pricing options. It is used to calculate the theoretical value of European-style options using current stock prices, expected dividends, option price, expected interest rates, maturity, and expected volatility.

The equation and model are named after economists Fischer Black and Myron Scholes while Robert C. Merton, is often credited as he was the first person to have written an academic paper on the subject.

Back in 1973, Black and Scholes first introduced the term in their paper, "The Pricing of Options and Corporate Liabilities," published in the *Journal of Political Economy* (Black & Scholes, 1973). Black passed away two years before Scholes and Merton were awarded the 1997 Nobel Prize in economics for their "work in finding a new method to determine the value of derivatives".

In order to use the Black-Scholes model, a certain number of assumptions must be made. (Hayes, 2021)

- The option is European and can only be exercised at expiration.
- No dividends are paid out during the life of the option.
- Markets are efficient (i.e., market movements cannot be predicted).
- There are no transaction costs in buying the option.
- The risk-free rate and volatility of the underlying are known and constant.
- The returns on the underlying asset are log-normally distributed.

Despite not being originally created to account for the effects of dividends paid during an option's life or for options that can be exercised before expiration, certain modifications of the model have allowed for the implementation of these scenarios.

As previously noted, the Black-Scholes model is exclusively used to price European options and does not account for the possibility that US options would be exercised before the expiration date. Furthermore, the model implies that dividends and risk-free rates remain constant, which may not be the case in reality. It is also implied in the model that volatility remains constant over the option's life, which is not the case as volatility fluctuates with the level of supply and demand.

In 2008, Warren Buffet, in a letter to Berkshire shareholders (Cornell, 2010), criticized the valuation model based on Black & Scholes' options. He disagreed about the possibility of producing unusual values for long-term selling options. Future stock nominal prices are not very well approximated by a normal distribution with volatility estimated from historical data.

CHAPTER 5:

ANALYSIS OF NETFLIX INC.

5.1 Historical Background

A Brief look at the Timeline of Netflix

Netflix was founded on August 29, 1997, in Scotts Valley, California by Marc Randolph and Reed Hastings. Randolph served as a marketing director for Pure Atria, Hastings' firm. Randolph co-founded MicroWarehouse, a computer mail-orders firm and then worked for Borland International as vice president of marketing (Wikipedia, 2021). In 1997, Hastings, a computer scientist, and mathematician sold Pure Atria to Rational Software Corporation for $700 million, the largest transaction in Silicon Valley history at the time. Hastings has provided numerous explanations for the birth of the idea of Netflix (Netflix, Inc., 2021).

Netflix began with a $2.5 million cash investment. Hastings and the company's co-founders began it with a plan of renting DVDs, which were just introduced at the time. The firm began with 30 workers and 925 films available for DVD rental outlets at the time, with rentals or due dates comparable to blockbuster movies. Netflix.com is established a year later. Following that, in 1999, Netflix launched its subscription service, allowing its customers unlimited DVD rentals with no due dates, late penalties, or monthly rental limitations.

Netflix welcomes the 21st century with the introduction of a personalized movie recommendation system that uses members' ratings on past titles to accurately predict future choices. In 2001, the company makes its initial public offering (IPO), at a selling price of $1 a share under the NASDAQ ticker NFLX. Two years after, Netflix is issued a patent by the U.S. Patent & Trademark Office to cover its subscription rental services as membership surpasses 1 million. (Netflix, Inc., 2021)

In 2005, the Profiles feature launches, allowing members to create different lists for different users and/or different moods. Only a year after that and its membership has grown to 5 million.

Moving forward to 2007, a cornerstone to Netflix's development takes place, the introduction of Streaming which allows members to instantly watch series and films.

In 2008, Netflix furtherly expands its streaming on Xbox 360, Blu-ray players and TV set-top boxes by partnering with multiple consumer electronics brands. After nearly three years and 40,000 submissions, the $1 million Netflix Prize is awarded to the team Bellkor's Pragmatic Chaos for improving the accuracy of recommendations by 10%. Streaming partnerships expand to internet connected TVs as membership surpasses 10 million and the Netflix Culture Deck is published.

In 2010, Netflix crosses the borders of the US and arrives in Canada, while its streaming is now available on mobile devices. The next is for Netflix to launch in Latin America and the Caribbean.

In 2012, Membership reaches 25 million members, and the company expands into the United Kingdom, Ireland and the Nordic Countries. Netflix ventures into stand-up specials with 'Bill Burr: You People Are All the Same.' and its first signature button appears on remote controls.

The year is 2013 and 'House of Cards,' 'Hemlock Grove,' 'Arrested Development' and 'Orange Is the New Black' usher in the first slate of original series programming. 'House of Cards' goes on to win three Primetime Emmy awards - the first for an internet streaming service. The Profiles and My List features debut on streaming. Membership surpasses 50 million one year later and extends to Austria, Belgium, France, Germany, Luxembourg, and Switzerland.

In 2015, Netflix's first original feature film, first non-English original series, and first Asian original debut, while audio descriptions for the visually impaired launch with 'Daredevil. Membership extends to Australia, Cuba, Italy, Japan, Spain, and New Zealand.

The next two years find Netflix expanding to 130 new countries, bringing the service to members in more than 190 countries and 21 languages around the world. The Download feature

is added for offline and on-the-go viewing. Membership is now at 100 million members globally. Netflix wins its first Academy Award.

In 2018, Netflix is the most-nominated studio at the Emmys, winning 23 for series including 'GLOW,' 'Godless' and 'Queer Eye.' While in 2019, it wins four Academy Awards and debuts its first original animated film with 'Klaus.' New production hubs open in London, Madrid, New York, and Toronto. 'Bandersnatch' wins the first major Emmy for an interactive title.

Another streaming innovation, the Top 10 Lists, makes its entrance in 2020, which allows members to see what's popular for the first time. Once again, Netflix is the most nominated studio at the Academy Awards and Emmys.

As of 2021, membership has surpassed 200 million. (Netflix, 2021)

5.2 Financial Performance

Netflix's financial performance has improved sharply over the past five years. Its revenue has more than trebled since 2015. The operating margin also more than doubled in the meantime. The company's operating margin grew to 18.34% in 2020 from 13% in 2019. Its profitability is expected to grow faster in the future. Netflix's annual revenue for 2020 was $24.99 billion, a 24.01% increase from 2019, in which it accumulated $20.15billion. Netflix, also, generated $1.21 billion in 2018 in net income. Its net income grew to $1.86 billion in 2019 and then $2.76 billion in 2020, a 47.91% increase from the previous year. Its EPS (diluted) rose to 9.65$ in 2020 from $4.13 in 2019. (MacroTrends, 2021)

However, while the company's net income has grown substantially in recent years, Netflix has also accumulated massive debt. It can be a cause of worry for the company in the future. Still, its growing operating margin is a positive sign, and the company could successfully service its debt in the future. Netflix has invested most of its revenues and profits in creating original content. This will only improve its competitive moat. While Netflix has accumulated a lot of debt to create original content, it is still a smart move. Its debt-to-equity ratio has improved since 2015. With an audience size of more than 200 million, its profitability is poised to improve significantly in the future. So, even if the company accumulates more debt to create more original content, it has strong leverage in its subscriber base. Content costs are fixed costs, and

an enormous audience size guarantees enormous returns. So, the chances are thin that its debt could become a major burden in the future. While Netflix can exercise some caution in this area, its operating margins are expected to grow tremendously. Overall, Netflix is in a financially strong position. More than its debt, its competition is a cause of worry for Netflix. (Netflix, Inc., 2021)

Stock Price History

Twenty years after its Initial Public Offering in 2001, the company is ranked 115th on the Fortune 500 and 219th on the Forbes Global 2000 with a market cap of US$ 262 billion. On July 10, 2020, Netflix became the largest entertainment/media company by market capitalization. As already mentioned in Chapter 1, Netflix was the top-performing stock in the S&P 500 stock market index, during the 2010s decade, with a total return of 3,693%. (Fitzgerald, 2019)

Table 4: Netflix's stock performance compared to the S&P 500 index (Netflix, 2021)
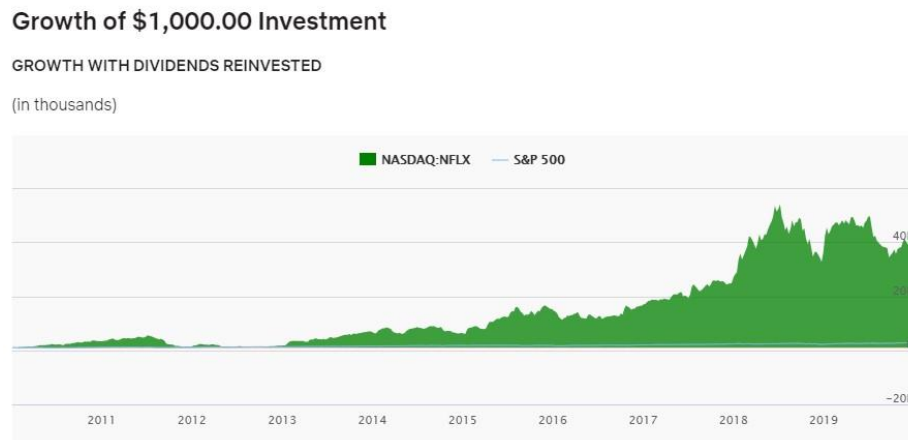
The all-time high Netflix stock closing price was US$ 606.71 on September 7, 2021, while its 52-week high stock price is US$ 615.80, which is 3.9% above the current share price. On the other hand, Netflix's 52-week low stock price is US$ 458.60, which is 32% below the current share price, while the average Netflix stock price for the last 52 weeks is US$ 520.67. (Yahoo Finance, 2021)

Netflix's current stock price is US$ 592,40, 25th September 2021.

Table 5: Historical Stock Price Chart of Netflix (Trading Economics, 2021)

5.3 Organizational Structure

5.3.1 Organizational Mission

A corporate mission statement is a broad, but ongoing, declaration of a company's goals. Its particular dedication distinguishes a firm from others and acknowledges the flexibility of its operations in terms of product, market, and technology (Pearce). Netflix does not have a publicly available mission statement; however, during the Dublin Founders conference in October 2011, Netflix's then-CEO Reed Hastings discussed the company's vision, which includes becoming the best global entertainment distribution service; licensing entertainment material all over the world; opening markets to filmmakers; and assisting content creators. Netflix did publish their brand promise, which many people regard as its mission statement, which states: "We promise our customers stellar service, our suppliers a valuable partner, our investors the prospect of sustained profitable growth, and our employees the allure of massive impact." Netflix has revealed its core principles, which include judgment, productivity, creativity, intellect, honesty, communication, selflessness, dependability, and enthusiasm (Shaughnessy, 2011).

5.3.2 Organizational Structure

A firm's organizational structure is the practical manifestation of organizational design elements that influence how various components of the business function and work together.

Netflix Inc. features a U-form or unitary organizational structure which includes a hierarchy for maintaining executive control and direction across the company. However, as compared to many firms that have a hierarchical organizational structure, this company's structure is comparatively flat. For example, in Netflix's organizational chart, all the main business executives directly report to the CEO (Anderson, 2019). The number of management layers required to escalate concerns from the online company's bottom line to its organizational headquarters is reduced as a result of this organizational structure design. The key aspects of Netflix's corporate structure are as follows:

1. Functional groups for online and non-online operations
2. Geographical divisions for managing regional markets
3. Divisions for various product types and operation types

Functional Groups are organized around corporate functions like human capital management. These groupings serve as the foundation for the online company's structural system's hierarchy. Strategic initiatives from Netflix's CEO, for example, are transmitted downward via vertical lines of authority and communication. Because of the reduced layers of middle management, the company's relatively flat organizational structure is connected to Netflix Inc.'s corporate culture, which emphasizes open communication and cooperation. Top executives at the corporate headquarters make strategic management decisions for the organization's streaming operations as a whole. Netflix's organizational structure is broken down into the following primary functional groups or offices, as shown in the chart below:

- CEO
- Legal
- Talent/HR
- Finance
- Product
- Content
- Communications

Geographical divisions in Netflix's organizational structure enable regional market-specific strategic management. Through the assistance of its organizational structure, the online entertainment firm solves strategic marketing issues. Netflix, for example, designs their advertising campaigns with this organizational structure feature in mind. These geographical groups indicate the worldwide market trends that are most relevant to the company's strategic aim of growing its member base in terms of coordinating marketing activities to target customers' leisure choices. The on-demand digital content streaming company's corporate structure has the following divisions:

- Domestic Streaming
- International Streaming

Divisions for products and operations are a corporate structural aspect that represents the two main types of outputs in Netflix Inc.'s business model: original programming and other content. Given that the internet platform distributes or broadcasts such material, the company's organizational structure is more closely connected with "other content." Original programming

activities, on the other hand, are a key component in Netflix's corporate structure since the company draws consumers and earns money through its original TV shows and movies. The strategic objective of these organizational structure divisions is to create operational effectiveness in managing content distribution and production autonomously. In summary, Netflix's corporate structure includes the following divisions:

- Original Programming
- Other Content

Table 6: Organizational chart of Netflix Inc.'s corporate structure (Anderson, 2019)
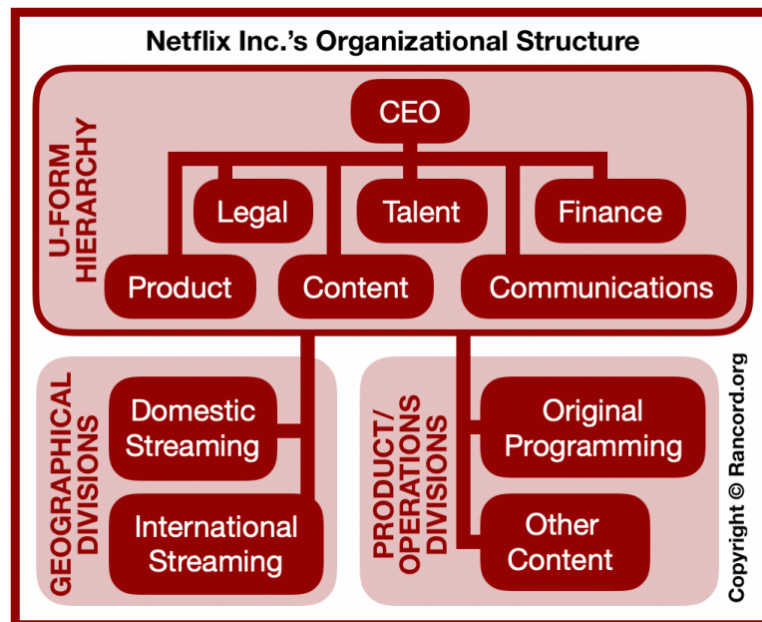
5.3.3 Leadership and Recent Changes

As of August 2021, Netflix's Executive Officers are as follows:

Netflix's Board of Directors is formed by 12 experienced, talented, and qualified Members with experience as board members and executives at some of the world's most successful companies.

Ted Sarandos was appointed to the Board of Directors in July 2020 and promoted to Co-Chief Executive Officer. Reed Hastings remains Chairman of the Board and Co-Chief Executive Officer of Netflix. Greg Peters was named Chief Operating Officer in July 2020, in addition to his job as Chief Product Officer, which he has held since 2017. (Netflix, Inc., 2021)

Executive Officers		Position
Reed Hastings	60	Co-Chief Executive Officer, President, and Chairman
David Hyman	55	Chief Legal Officer and Secretary
Jessica Neal	44	Chief Talent Officer
Spencer Neumann	51	Chief Financial Officer
Greg Peters	50	Chief Operating Officer and Chief Product Officer
Bozoma Saint John	44	Chief Marketing Officer
Ted Sarandos	56	Co-Chief Executive Officer and Chief Content Officer
Rachel Whetstone	53	Chief Communications Officer

5.4 Strategic Analysis

5.2.1 General Overview

Netflix grew quickly to become the world's largest online streaming platform. Because of the pandemic, its popularity grew quickly as people stayed indoors following lockdowns in numerous major markets, with Netflix serving as their primary source of entertainment. It currently has over 200 million paying users spread over 190 countries. Netflix's core markets, from where it earns the majority of its revenue, are the United States and Canada. Its market footprint in Europe, Latin America, and Asia Pacific has grown as well. Netflix has a major competitive advantage due to a distinct user experience, a large library of Netflix originals, a strong focus on innovation, and a low pricing structure that has boosted its appeal across all demographics. The site offers a wide range of original material, including movies and TV shows popular among millennials. Netflix users may access digital material via their smartphones, laptops, and other internet-enabled devices such as smart TVs. Its emphasis on original content and an enhanced viewing experience resulted in increased market penetration. Overall, while Netflix continues to see a rapid increase in popularity and greater engagement rates than competitors, its emphasis on innovation grows stronger. (MacroTrends, 2021) Netflix's yearly net revenue increased from $6.8 billion in 2015 to $25 billion in 2020. In addition, the company's operating margin increased from 4.5% in 2015 to 18.3% in 2020. It indicates the firm's growing profitability over the past five years.

5.2.2 Industry

The Over-the-Top market is undergoing a paradigm upward shift as more and more people are switching to the range of OTT platforms. No longer are people much interested in watching movies in multiplexes or renting DVDs to watch digital content. Over time, the bandwidth of OTT subscribers is swelling emphatically. According to Statista, revenue in the Video Streaming (SVoD) segment is projected to reach US$71,237m in 2021 (Statista, 2021). Its revenue will follow an annual growth rate (CAGR 2021-2025) of 11.04%, leading to a market volume of $108,3 billion by 2025. Moreover, 30% of this revenue will be generated in the United States. By 2021, User penetration will be 14.3% and is expected to hit 18.2% by 2025.The average revenue per user or ARPU is expected to reach above $66 in 2021. The number of users worldwide in SVoD is expected to hit 1.4 billion users by 2025.

Without a doubt, the industry is booming as a result of shifting consumer behaviors, OTT is a massive industry that grows rapidly mainly due to technological developments that enhance the consumer experience.

5.2.3 Competition

Netflix is clearly the worldwide entertainment industry leader since it caters to a varied audience through internet streaming services. Netflix provides everything for people of all interests and preferences. The company has completely altered and overhauled the entertainment industry. It includes on-demand videos for every mood, occasion, and genre. It has progressed from primarily selling and renting DVDs to becoming the industry leader in offering online video streaming services in just a few years. It has seen remarkable global expansion and has managed to gain a total of 200 million users in 2020 (Wikipedia, 2021), something no other platform has ever done in a single year. The following is a quick list of the major competitors that Netflix has to deal with.

Main Competitors

Amazon Prime:

Apart from free delivery on a large range of products sold on Amazon's marketplace, Amazon Prime membership includes access to a large collection of videos and shows on the Prime Video Network. Prime is the largest competitor of Netflix. Apart from its services'

competitive pricing, Amazon has also added a large number of original videos to its collection that makes it stand out, including several shows in local languages targeted at its ever-growing audience in the emerging markets. Over 100 million people subscribed to Amazon Prime in the U.S. as of December 2019.Prime Video is expected to amass over 180 million subscribers worldwide by 2026.In 2020, Prime Video had over 100 million subscribers worldwide, trailing only after Netflix. The platform has seen particularly high audience growth in early 2020 as a result of the coronavirus (COVID-19) pandemic. Prime Video recorded a 35 percent audience surge in March. As of 2020, Amazon Prime Video, ranked third among companies with the biggest impact on digital video, after Netflix and Disney. (Statista, 2021)

Hulu:

Hulu is a U.S.-based subscription video-on-demand service that primarily focuses on the broadcast of past and current television series and episodes and is among the leading competitors of Netflix. Hulu has experienced sharp growth in its subscriber base in recent years. In 2021, Hulu had 42.8 million paid subscribers, up from 35.5 million in the corresponding quarter of the previous fiscal year. Hulu has also adopted many different pricing plans to cater to the different needs of various user segments. The most basic plan costs $5.99 per month. However, there are pricier premium options also for Hulu viewers. Netflix is a global brand, but Hulu is available only in the US states, territories, and military bases.

YouTube:

YouTube has also established itself as a serious Netflix rival. The social media platform features a vast video library that attracts viewers from all around the world, with the majority of it being user-generated material. However, YouTube has also started offering movies for rent or purchase. With its vast collection of movies in various languages, YouTube competes with Netflix and other online streaming services providers. As of 2020, there was an estimate of 2.1 billion YouTube users worldwide.

Disney+:

Launched in November 2019, Disney+ has experienced rapid growth in its subscriber base. Its memberships grew to 50 million in just five months following its launch. To put the service's subscriber number into perspective, it took Netflix several years to achieve a similar

figure despite navigating a much quieter market with limited competition. The Walt Disney Company reported that Disney+ had 116 million subscribers worldwide as of its third quarter of 2021.The rapid growth Disney+ enjoyed in its first few months may not continue long term, particularly as the service benefited heavily from coronavirus pandemic as audiences across the globe increased their SVoD consumption. With its launch, all the movies and TV shows previously available on other streaming services were made exclusive to Disney+. Disney has also included content from its Marvel, Star Wars, National Geographic, and Pixar franchises. A survey conducted in late March 2020 revealed that Netflix and Disney+ were considered the best video services for content for under-18s, with 46 percent of adults saying that they thought those platforms had good content for children.

5.2.4 Swot Analysis

Below is the SWOT analysis of Netflix:

Strengths – Internal Strategic Factors

1. *Exponential Growth*:

    In the past ten years, Netflix has become an influential brand for online streaming content not only in the US but across the world. (Business Strategy Hub, 2020)

2. *Brand Reputation*:

    Netflix has risen to become a household name within a short period. In 2019, Netflix was ranked at #4 top regarded companies by Forbes.

3. *Global Customer Base*:

    Netflix is the largest online streaming site providing its services across 190 countries. It enjoys the highest market penetration of all the online streaming services providers globally. Its market share is at 50% as of 2021. (Business Strategy Hub, 2020)

Table 7: Market Share of Netflix, Inc. (Shaw, 2021)
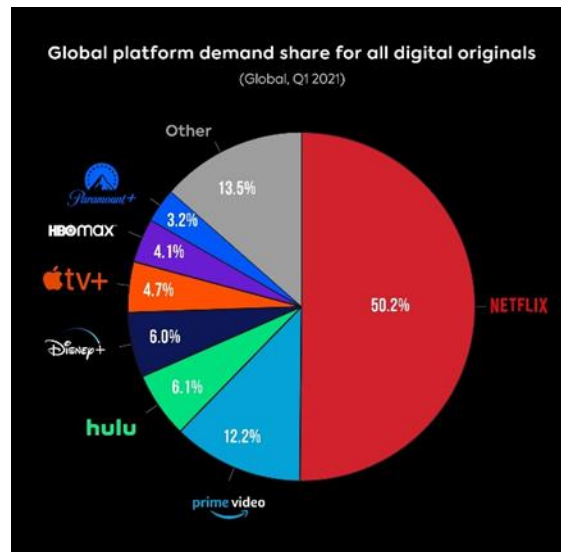
4. *Originality:*

Another one of its strengths is that Netflix has been producing original and award-winning content over the years. Some of its shows became so popular that its subscriber count kept increasing over the quarters. (Netflix, Inc., 2021)

5. *Adaptability*:

Netflix adapted to various technologies instantly by providing streaming on all internet-connected devices. Due to this, their business grew immensely over the years. (Rivera, 2019)

6. *Affordable Pricing*:

The pricing strategy of Netflix has given it leverage over its competitors. Subscribers can watch unlimited movies, either on DVD or streaming for an affordable price of $8.99 a month. It is less expensive than cable movies or going to the cinema and also offers a wider selection.

Weaknesses – Internal Strategic Factors

1. *Limited Copyrights*:

Netflix does not own most of its content, and this affects the company negatively. The rights taken from other studios expire after few years, and that content starts appearing on other sites. (Rivera, 2019)

2. *Substantial long-term debt:*

Netflix has accumulated heavy long-term debt, which can be a cause of worry for the investors. The long-term debt of the company according to its annual report for 2019 grew by around 42% and for 2020 it was $15.809B, a 7.11% increase from 2019. (Netflix, Inc., 2021)

3. *Rigid Pricing*:

Customers demand customized pricing with more options. Unfortunately, Netflix's pricing model is rigid, and the lack of different options has contributed to stagnation in the number of new subscriptions.

4. *Raising Prices*:

Netflix has raised its subscription prices, while other new video streaming services such as Disney+ have introduced their services at much lower prices. (Statista, 2019)

5. *Heavy operating expenses*:

While Netflix has successfully grown its profitability, the company has to bear hefty operating expenses each year to operate profitably. In 2019, the cost of revenues of Netflix was around $12.4 billion, or 62% of the net revenue of the company for the year.

Opportunities – External Strategic Factors

1. *More competitive Pricing*:

Netflix can offer a lower-priced option to entice and retain subscribers in the international market. Netflix has been testing a cheaper mobile-only plan in India that costs only $3/month.

2. *Exploit Ad-Based Model*:

Other service providers make billions in revenue from advertisements. Netflix can boost its revenue by adopting an advertising-based business model. (Business Strategy Hub, 2020)

3. *Penetration of emerging markets***:**

Increased penetration of emerging areas such as India and Brazil might help the firm to increase its sales and income more quickly. Aside from a significant number of net-savvy millennials, developing economies provide an opportunity in the shape of a

huge group of middle-class customers whose lifestyles have become increasingly digital in recent years.

4. *Refresh Content library:*

It can increase its content licensing by signing new partnerships with other movie distributors. Furthermore, because it is now generating original material, Netflix should update its content collection.

5. *Diversification:*

By expanding into newer and related sectors, the firm can increase its sales and revenue. Netflix has a heavy debt load, and if its subscriber growth rate decreases in the future, the firm will need to diversify its operations to service its debt. The firm may also try further diversification tactics, such as game creation based on some of its best-performing originals, as it has done in the past. (Business Strategy Hub, 2020)

Threats – External Strategic Factors

1. *Competitive pressure:*

Netflix is not the only company that offers digital streaming all over the world. Its competitors are becoming more numerous by the year. Disney+, Amazon, Hulu, and YouTube are always competing with Netflix by providing its members with fresh and original material on a regular basis. (Business Strategy Hub, 2020)

2. *Regulatory threats:*

Strict governmental laws and regulations governing service providers such as Netflix might pose a significant danger to businesses in many nations. Netflix, for example, will be unlikely to expand into China due to the country's restrictions on foreign material.

3. *Growing costs of content creation:*

Netflix's content development expenditures have continued to rise. To keep its dominance in the internet streaming business, the corporation must continue to invest in unique content. This puts strain on the company's balance sheet because it comes at the expense of increasing indebtedness. (Rivera, 2019)

4. *Account Hacking*:

    The number of hacked Netflix user accounts increased drastically in Q1 and Q2 of 2020 with the increase in daily users due to lockdown. If account hacking persists into the future, frustrated Netflix users can mass migrate to rival companies.

5. *Market Saturation:*

    Netflix will find it harder to add new subscribers in the future due to market saturation.

CHAPTER 6:

VALUATION OF NETFLIX INC.

6.1 Valuation Stages for Netflix, Inc.

The company's annual published financial statements for the years 2016-2021 will be considered to conduct the valuation. Following that, forecasts for the years 2021-2025 will be made. The cash flow statement, the balance sheet, and the income statement are the most important elements to examine.

In detail, we will calculate the following:

1. Growth rate (g) and Perpetuity Growth rate (g_n).
2. Free Cash Flow (FCF) for the next 5 years and in perpetuity.
3. Weighted Average Cost of Capital (WACC) or discount rate.
4. Present Value of Free Cash Flows (P.V. FCF) and Value of the Firm.
5. Value of Equity and Value per Share.

6.2 Growth Rate (G) And Perpetuity Growth Rate (G_n).

The first thing we have to do is figure out the growth rate (g) of Netflix's Revenue and Earnings Before Interest Tax Depreciation and Amortization (EBITDA). Afterwards we will continue with the calculation of its projected Capital Expenditure, Net Working Capital, and Depreciation & Amortization for the next 5 years and in perpetuity.

To calculate the company's Revenue and EBITDA growth rate, we will consult the forecasts of some of the most renowned international rating agencies. This will lead to a safe and scientifically backed-up assumption for our Discounted Cash Flow model.

Revenue Growth Forecast is defined as period over prior period growth in forecasted revenue.

According to 36 analysts (Yahoo Finance, 2021), Netflix's revenue growth forecast for 2021 is **18.7%.** In addition to this, Netflix's revenue growth forecast is expected to average 15.0% over the next five fiscal years (2021-2025), while it is also expected to deliver a median revenue growth forecast of 14.6% over the same period.

Based on those forecasts and assuming a 5Y Revenue Compounded Annual Growth Rate of 15.0%, we have the following projections for Revenue Growth Rate:

- 2021 →18.7%
- 2022 →14.9%
- 2023 →14.8%
- 2024 →13.1%
- 2025 →13.6%

EBITDA growth rate is defined as period over prior period growth in forecasted earnings before interest, taxes, depreciation, and amortization.

According to Netflix's performance summary (Finbox, 2021), its EBITDA growth forecast for 2021 is 43.4%, while it also is expected to average 27.4% EBITDA growth forecast from 2021 to 2025. Netflix is also projected to deliver median EBITDA growth forecast of 24.4% over the next five fiscal years.

Based on those forecasts and assuming a 5Y EBITDA Compounded Annual Growth Rate of 24.4%, we have the following projections:

- 2021 → 43%
- 2022 → 22%
- 2023 → 27%
- 2024 → 24%
- 2025 → 20%

We can also express EBITDA as a percentage of Revenue, in which case our Revenue & EBITDA Forecast could be summed up in the following table:

Figure 1: Revenue and EBITDA Forecast

Revenue and EBITDA Forecast

(USD in millions)		Input Projections				
Fiscal Years Ending	**Dec-20**	**Dec-21**	**Dec-22**	**Dec-23**	**Dec-24**	**Dec-25**
Revenue	24,996	29,682	34,095	39,155	44,293	50,322
% Growth	*24.0%*	*18.7%*	*14.9%*	*14.8%*	*13.1%*	*13.6%*
EBITDA	4,701	6,726	8,234	10,466	13,022	15,635
% Growth		*43%*	*22%*	*27%*	*24%*	*20%*
% of Revenue	*18.8%*	*22.7%*	*24.1%*	*26.7%*	*29.4%*	*31.1%*

Capital Expenditures Forecast is the projected capital expenditures.

To calculate the CapEx for the next 5 years we will use the 5-year average percentage of Revenue from 2016-2020. The same rate will apply to the Terminal Value of Netflix.

Figure 2: Capital Expenditures Historical Spending

Historical Spending	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20
Capital Expenditures	108	173	174	253	498
% of Revenue	*1.2%*	*1.5%*	*1.1%*	*1.3%*	*2.0%*
5-Year Average	*1.4%*				

Using the 5-year average of the percentage of Revenue which CapEx amount to, our forecast is shown in the table below:

Figure 3: Capital Expenditures Forecast

Capital Expenditures Forecast

(USD in millions)			Input Projections				
Fiscal Years Ending	**Dec-20**	**Dec-21**	**Dec-22**	**Dec-23**	**Dec-24**	**Dec-25**	**Terminal**
Capital Expenditures	498	431	480	532	654	694	694
% of Revenue	*2.0%*	*1.5%*	*1.4%*	*1.4%*	*1.5%*	*1.4%*	*1.4%*

Net Working Capital Forecast will be calculated similarly to CapEx forecast. The average percentage of Revenue that accounts for NWC is -21.1%. According to this, our forecast for both the next 5 years and in perpetuity is the following:

Figure 4: Net Working Capital Forecast

Net Working Capital Forecast							
(USD in millions)		**Input Projections**					
Fiscal Years Ending	**Dec-20**	**Dec-21**	**Dec-22**	**Dec-23**	**Dec-24**	**Dec-25**	**Terminal**
Net Working Capital	(5,280)	**(6,270)**	**(7,202)**	**(8,270)**	**(9,356)**	**(10,629)**	**(10,948)**
% of Revenue	*-21.1%*	*-21.1%*	*-21.1%*	*-21.1%*	*-21.1%*	*-21.1%*	*-21.1%*
NWC Investment	*1,022*	*990*	*932*	*1,069*	*1,085*	*1,273*	*319*

Depreciation & Amortization Forecast

Similarly, we calculate the projected annual Depreciation & Amortization as 1.5% of the Revenue.

Figure 5: Depreciation & Amortization Forecast

Depreciation & Amortization Forecast						
(USD in millions)		**Input Projections**				
Fiscal Years Ending	**Dec-21**	**Dec-22**	**Dec-23**	**Dec-24**	**Dec-25**	**Terminal**
Depreciation & Amortization	**591**	**518**	**554**	**673**	**630**	659
% of Revenue	*2.0%*	*1.5%*	*1.4%*	*1.5%*	*1.3%*	
Terminal Deprec. % of Capex						*95.0%*

Perpetuity Growth Rate

The perpetuity growth rate is typically between the historical inflation rate of 2-3% and the historical GDP growth rate of 4-5%. In this case, we will use a perpetuity growth rate of 2.5%, which is the average historical inflation rate, from 1960 to 2020, of the United States. (Macrotrends, 2021)

6.3 Free Cash Flow (FCF)

To calculate the Free Cash Flows for the next 5 years and in perpetuity, we will also need to define the tax rate for Netflix.

According to the latest reports (Netflix, Inc., 2021), Netflix's effective tax rate has been 12.1% the past twelve months. In order to come down to a safe tax rate prediction we will take into consideration the rounded average effective tax rate of the last 5 fiscal years.

Figure 6: Pro Forma Tax Rate

Pro forma Tax Rate					
(USD in millions)			*Fiscal Years Ending*		
Historicals	**Dec-16**	**Dec-17**	**Dec-18**	**Dec-19**	**Dec-20**
Income Before Taxes	261	485	1,226	2,062	3,199
Income Taxes	(74)	74	(15)	(195)	(438)
Effective Tax Rate	*28.3%*	*NM*	*1.2%*	*9.5%*	*13.7%*
5-Year Average	*13.2%*				
Selected Tax Rate Assumption	**13.0%**				

The calculation of the Free Cash Flows (FCF) for the next 5 years and in perpetuity (terminal), based on Damodaran's theory (Damodaran, 2005), are presented in the table below.

Figure 7: Calculation of Free Cash Flow

Calculation of Free Cash Flow						
Projected Unlevered Cash Flow						
(USD in millions)	**Dec-21**	**Dec-22**	**Dec-23**	**Dec-24**	**Dec-25**	**Terminal**
EBITDA		**6,726**	**8,234**	**10,466**	**13,022**	**15,635**	**15,635**
Other Income / (Exp)		0	0	0	0	0	0
D&A		(591)	(518)	(554)	(673)	(630)	(659)
EBIT		6,135	7,716	9,912	12,349	15,006	14,976
Pro forma Taxes		(797)	(1,003)	(1,289)	(1,605)	(1,951)	(1,947)
NOPAT	3,989	5,337	6,713	8,623	10,744	13,055	13,029
Capital Expenditures	(498)	(431)	(480)	(532)	(654)	(694)	(694)
NWC Investment	1,022	990	932	1,069	1,085	1,273	319
(+) D&A	116	591	518	554	673	630	659
Free Cash Flow	**4,629**	**6,487**	**7,683**	**9,714**	**11,848**	**14,264**	**13,313**
% Growth		*40%*	*18%*	*26%*	*22%*	*20%*	*-7%*

6.4 Weighted Average Cost of Capital

The opportunity cost of making a certain investment is referred to as the cost of capital. Given the increased risk, an investor will expect a larger return (Sharpe, 1964). Generally speaking, a company's assets are financed by debt and equity. WACC is the average of the costs of these sources of financing, each of which is weighted by its respective use in the given situation. By taking a weighted average, we can see how much interest the company has to pay for every dollar it finances.

As shown below, the WACC formula is:

$$\text{WACC} = (w_e \times r_e) + (w_d \times r_d) \times (1 - t)$$

Where:

- w_e = percentage of capital that is equity
- w_d = percentage of capital that is debt
- r_e = cost of equity (required rate of return)
- r_d = cost of debt (yield to maturity on existing debt)
- t = tax rate

1. <u>Weights:</u>

Generally speaking, a company's assets are financed by debt and equity. We need to calculate the weight of equity and the weight of debt.

The market value of equity (E) is also called "Market Cap". As of today, Netflix's market capitalization (E) is US $262,189 Mil. (Yahoo Finance, 2021)

The market value of debt is typically difficult to calculate, therefore, we will use the fair value of debt (D) to do the calculation. According to Netflix's 2021 Annual Report (Netflix, Inc., 2021) we conclude that the total Fair Value of Debt (D) is US $18,805 Mil. (Stock Analysis on Net, 2021)

a. weight of equity = E / (E + D) = 0.93 = 93%
b. weight of debt = D / (E + D) = 0.07 = 7%

2. Cost of Equity:

The cost of equity is calculated using the Capital Asset Pricing Model (CAPM). The CAPM model estimates the discount rate using systematic risk. Below is the formula for the cost of equity:

$$r_e = r_f + \beta \times (r_m - r_f)$$

Where:

r_f = the risk-free rate

The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

To accurately calculate the risk-free rate of return, we will use the current 10-year US treasury yield. The current risk-free rate, as of September 25th is 1.470%. We use the 10-Year Treasury Constant Maturity Rate of the country/region where the company is headquartered. (Yahoo Finance, 2021)

β = equity beta (levered)

Beta is the sensitivity of the expected excess asset returns to the expected excess market returns. Netflix's beta is 1.02. (Finbox, 2021)

r_m = market risk premium

The market risk premium is the rate of return that an investor will demand when investing in a risky asset instead of a risk-free asset (Penman, 2013).

(Expected Return of the Market - Risk-Free Rate of Return) is also called market premium. According to the most recent studies, the estimated annual expected return (r_m) for U.S. large-capitalization stocks from January 2021 to December 2030 is 4.7%. (Damodaran, 2021)

Cost of Equity = 1.470% + 1.02 * 4.7% = **6.30%**

Figure 8: Cost of Equity

Cost of Equity	
Cost of Equity	
Selected Beta	1.02
(x) Country Market Risk Premium	4.70%
Adjusted Market Risk Premium	4.80%
(+) Risk-free Rate	1.50%
Cost of Equity	**6.30%**

Next, we need to calculate the Cost of Debt. To calculate the cost of debt we will use last fiscal year's end Interest Expense divided by the Fair value of Debt. (Stock Analysis on Net, 2021)

As of Dec. 2020, Netflix's interest expense (positive number) was US $893.791 Mil. Its total Book Value of Debt (D) is US $18,805 Mil.

Cost of Debt = 893.791 / 18,805 = **4.7%.**

Because interest payments are tax-deductible, the cost of debt needs to be multiplied by (1 – tax rate).

Figure 9: Cost of Debt

Cost of Debt	
Interest rate × Debt amount	$893,791.00
Cost of Debt	
Fair Value of Debt	$18,805,000.00
Pre-Tax Cost of Debt	4.75%
Tax Rate	13.00%
After-tax Cost of Debt	**4.14%**

Since we have already calculated both the Cost of Debt and the Cost of Equity, we can continue with the calculation of WACC. The calculation of the weights of the Equity and Debt percentages has already been conducted.

WACC = (we x re) + (wd x rd) x (1 – t) =

= E / (E + D)   * Cost of Equity + D / (E + D) * Cost of Debt * (1 - Tax Rate) =

=   0.93 * 6.3% + 0.07 * 4.14% * (1 - 13%) =

=   6.15%

Figure 10: Calculation of WACC

Weighted Average	
Cost Estimates	
Cost of Equity	6.30%
After-tax Cost of Debt	4.14%
Weights	
Equity % of Capital	93.0%
Debt % of Capital	7.00%
WACC	**6.15%**

6.5 Present Value of Free Cash Flows (P.V. FCF) And Value of The Firm

The value of the firm can be measured as the present value of the operating free cash flows.

The value of the firm can be expressed using the following formula:

$$\sum_{t=1}^{\infty} \frac{FCF_t}{(1 + WACC)^t}$$

Where:

- FCF = Free Cash Flow of period t
- WACC = Weighted Average Cost of Capital

Figure 11: Value of Firm Calculation

Value of Firm Calculation				
(USD in millions)	**FCF**	**Low**	**High**	**Conclusion**
Dec-21	2,745	2,743	2,743	2,743
Dec-22	7,683	7,313	7,366	7,339
Dec-23	9,714	8,670	8,815	8,742
Dec-24	11,848	9,915	10,177	10,044
Dec-25	14,264	11,192	11,596	11,392
(A) PV of Discrete Cash Flows		**39,832**	**40,697**	**40,261**
Perpetuity Growth Rate		2.00%	3.00%	2.50%
Terminal Free Cash Flow		13,260	13,260	13,260
Terminal Discount Factor		76.0%	79.1%	77.5%
(B) PV of Terminal Value		**220,998**	**407,650**	**288,655**
(A + B) Value of Firm		**260,830**	**448,348**	**328,916**

6.6 Value of Equity and Value per Share

The total value of the firm attributable to equity investors is described as equity value, often known as market value of equity or market capitalization.

To calculate equity value from enterprise value, we use the following formula:

Equity Value = Enterprise Value (Value of Firm) – Debt – Non-Controlling Interest – Preferred Stock + Cash & Cash Equivalents + Investments

Afterwards, to infer the fair share value of Netflix, we will divide the Value of Common Equity with the number of Shares outstanding, which in the case of Netflix are 443.000.

The last step in our valuation process, will be to calculate the upside/downside between the calculated fair share value and the current stock price.

Figure 12: Equity Waterfall

Equity Waterfall		
(USD in millions)	*Model*	
	Conclusion	**Market**
Value of Firm	**328,916**	**272,359**
(+) Cash & Short Term Investments	7,778	7,778
(+) Investments & Other	0	0
(-) Debt	(17,943)	(17,943)
(-) Other Liabilities	0	0
(-) Preferred Stock	NA	NA
(-) Other	0	0
Value of Common Equity	**318,749.96**	**262,194**
(/) Shares Outstanding	**443**	443
Implied Stock Price (USD)	**720.18**	**592.40**
Upside / (Downside)	**21.6%**	

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6.7 Model Summary

The results of the Discounted Cash Flow Valuation of Netflix can be summed up in the following table:

Figure 13: Netflix, Inc. Model Summary

Netflix, Inc.	592.40
5-Year DCF Model: Gordon Growth Exit	**Stock Price in USD**
NasdaqGS:NFLX	**9/25/2021**

Model Summary		
	Conclusion	**Fair Value**
		720.18
Cost of Capital	6.15%	USD
Perpetuity Growth Rate	2.5%	
Fair Value	720.18	
Upside	21.6%	

Netflix's market price at the date of the Valuation was $592.40 US. According to our valuation, the Fair Value of Netflix's stock price is $720.18 US. This indicates that the stock price is currently undervalued and there is 21.6% upside. It can be inferred that in the next period, there will be a tendency for the share price to increase in order to approach its fair value.

CHAPTER 7:
CONCLUSION

Valuation is a process that determines the value of an entity. The main purpose of a valuation is initially to determine the entity's value as well as the factors that influence it. It's a highly difficult procedure because there are so many different valuation techniques. Furthermore, the multidimensional business concept adds additional hurdles for analysts, who then add subjective elements based on their unique judgment, which may affect the conclusion. The valuation's objective is to fulfill the demands and expectations of all stakeholders in terms of the business's worth, while keeping in mind that every choice and evaluation has some risk.

The purpose of this master's thesis was to determine Netflix, Inc.'s equity value and fair share value. The Discounted Cash Flow model was used for fundamental valuation, which was chosen as the primary technique. We will summarize the major findings and make an investment suggestion in this section.

Overall, Netflix has been a huge success since its inception and is anticipated to maintain its stellar performance in the near future. It began as a modest American corporation and has now expanded to become a worldwide behemoth. The firm has amassed over 200 million members, which has allowed it to produce constantly growing sums of revenue and profitability, with a net income of 2.7 billion US dollars.

Netflix competes for a share of members' time and spending for relaxation and stimulation, against linear networks, pay-per-view content, DVD watching, video gaming, and much more. Over the coming years, most of these forms of entertainment will improve. Despite that, the Over-the-Top market is currently undergoing a paradigm upward shift as more and more consumers migrate to a variety of OTT platforms.

Video piracy is currently Netflix's most serious threat and prospective rival. It is completely free and has a pretty large selection. If video piracy becomes simple, dependable, and socially acceptable, it could become its most significant competitor. On the other hand, there are several chances for Netflix to grow even further and maintain its leadership position in the rapidly developing entertainment sector. Having a significant first-mover advantage and being

the content leader demonstrate how far ahead of the competition Netflix truly is. Another positive for investors is that Netflix has ample new revenue opportunities, yet to be explored.

In the last chapter, the analysis of Netflix was performed. The approach of discounted cash flows was utilized to extensively analyze the company's yearly reported financial statements. More precisely, the expected cash flows of the firm were estimated after predicting the growth rate for the following five years and in perpetuity. Finally, the Capital Asset Pricing Model (CAPM) was used to calculate the Weighted Average Cost of Capital. Cash flows were discounted in terms of present value using this data. The final chapter identified the firm's real value and fair value per share.

The valuation findings revealed that the company's stock is undervalued. This would imply that the best investing plan for the time being is to buy the stock. Netflix's market price on September 25th, 2021, was $592.40 US per share, but the fair price calculated using the DCF model is $720.18 US per share. According to the conclusions of this study, Netflix, Inc. will continue its upward trajectory, with its share price increasing above $ 700.00 US to achieve its estimated fair price. The estimated fair value represents a premium of 21.6% above the market price.

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APPENDIX

Appendix A: Netflix's Financial Statements

Consolidated Statements of Operations 2016-2020

NETFLIX, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

		Year ended December 31,				
		2018		2017		2016
Revenues	$	15,794,341	$	11,692,713	$	8,830,669
Cost of revenues		9,967,538		8,033,000		6,257,462
Marketing		2,369,469		1,436,281		1,097,519
Technology and development		1,221,814		953,710		780,232
General and administrative		630,294		431,043		315,663
Operating income		1,605,226		838,679		379,793
Other income (expense):						
Interest expense		(420,493)		(238,204)		(150,114)
Interest and other income (expense)		41,725		(115,154)		30,828
Income before income taxes		1,226,458		485,321		260,507
Provision for (benefit from) income taxes		15,216		(73,608)		73,829
Net income	$	1,211,242	$	558,929	$	186,678
Earnings per share:						
Basic	$	2.78	$	1.29	$	0.44
Diluted	$	2.68	$	1.25	$	0.43
Weighted-average common shares outstanding:						
Basic		435,374		431,885		428,822
Diluted		451,244		446,814		438,652

NETFLIX, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

		Year ended December 31,				
		2020		2019		2018
Revenues	$	24,996,056	$	20,156,447	$	15,794,341
Cost of revenues		15,276,319		12,440,213		9,967,538
Marketing		2,228,362		2,652,462		2,369,469
Technology and development		1,829,600		1,545,149		1,221,814
General and administrative		1,076,486		914,369		630,294
Operating income		4,585,289		2,604,254		1,605,226
Other income (expense):						
Interest expense		(767,499)		(626,023)		(420,493)
Interest and other income (expense)		(618,441)		84,000		41,725
Income before income taxes		3,199,349		2,062,231		1,226,458
Provision for income taxes		(437,954)		(195,315)		(15,216)
Net income	$	2,761,395	$	1,866,916	$	1,211,242
Earnings per share:						
Basic	$	6.26	$	4.26	$	2.78
Diluted	$	6.08	$	4.13	$	2.68
Weighted-average common shares outstanding:						
Basic		440,922		437,799		435,374
Diluted		454,208		451,765		451,244

Consolidated Balance Sheets 2016-2020

NETFLIX, INC.

CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

		As of December 31,		
		2020		2019
Assets				
Current assets:				
Cash and cash equivalents	$	8,205,550	$	5,018,437
Other current assets		1,556,030		1,160,067
Total current assets		9,761,580		6,178,504
Content assets, net		25,383,950		24,504,567
Property and equipment, net		960,183		565,221
Other non-current assets		3,174,646		2,727,420
Total assets	$	39,280,359	$	33,975,712
Liabilities and Stockholders' Equity				
Current liabilities:				
Current content liabilities	$	4,429,536	$	4,413,561
Accounts payable		656,183		674,347
Accrued expenses and other liabilities		1,102,196		843,043
Deferred revenue		1,117,992		924,745
Short-term debt		499,878		—
Total current liabilities		7,805,785		6,855,696
Non-current content liabilities		2,618,084		3,334,323
Long-term debt		15,809,095		14,759,260
Other non-current liabilities		1,982,155		1,444,276
Total liabilities		28,215,119		26,393,555
Commitments and contingencies (Note 7)				
Stockholders' equity:				
Preferred stock, $0.001 par value; 10,000,000 shares authorized at December 31, 2020 and 2019; no shares issued and outstanding at December 31, 2020 and 2019		—		—
Common stock, 0.001 par value; 4,990,000,000 shares authorized at December 31, 2020 and December 31, 2019, respectively; 442,895,261 and 438,806,649 issued and outstanding at December 31, 2020 and December 31, 2019, respectively		3,447,698		2,793,929
Accumulated other comprehensive income (loss)		44,398		(23,521)
Retained earnings		7,573,144		4,811,749
Total stockholders' equity		11,065,240		7,582,157
Total liabilities and stockholders' equity	$	39,280,359	$	33,975,712

CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	As of December 31,	
	2018	2017
Assets		
Current assets:		
Cash and cash equivalents	$ 3,794,483	$ 2,822,795
Current content assets, net	5,151,186	4,310,934
Other current assets	748,466	536,245
Total current assets	9,694,135	7,669,974
Non-current content assets, net	14,960,954	10,371,055
Property and equipment, net	418,281	319,404
Other non-current assets	901,030	652,309
Total assets	$ 25,974,400	$ 19,012,742
Liabilities and Stockholders' Equity		
Current liabilities:		
Current content liabilities	$ 4,686,019	$ 4,173,041
Accounts payable	562,985	359,555
Accrued expenses	477,417	315,094
Deferred revenue	760,899	618,622
Total current liabilities	6,487,320	5,466,312
Non-current content liabilities	3,759,026	3,329,796
Long-term debt	10,360,058	6,499,432
Other non-current liabilities	129,231	135,246
Total liabilities	20,735,635	15,430,786
Commitments and contingencies (Note 5)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized at December 31, 2018 and 2017; no shares issued and outstanding at December 31, 2018 and 2017	—	—
Common stock, $0.001 par value; 4,990,000,000 shares authorized at December 31, 2018 and December 31, 2017, respectively; 436,598,597 and 433,392,686 issued and outstanding at December 31, 2018 and December 31, 2017, respectively	2,315,988	1,871,396
Accumulated other comprehensive loss	(19,582)	(20,557)
Retained earnings	2,942,359	1,731,117
Total stockholders' equity	5,238,765	3,581,956
Total liabilities and stockholders' equity	$ 25,974,400	$ 19,012,742

CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

		As of December 31,		
		2017		2016
Assets				
Current assets:				
Cash and cash equivalents	$	2,822,795	$	1,467,576
Short-term investments		—		266,206
Current content assets, net		4,310,934		3,726,307
Other current assets		536,245		260,202
Total current assets		7,669,974		5,720,291
Non-current content assets, net		10,371,055		7,274,501
Property and equipment, net		319,404		250,395
Other non-current assets		652,309		341,423
Total assets	$	19,012,742	$	13,586,610
Liabilities and Stockholders' Equity				
Current liabilities:				
Current content liabilities	$	4,173,041	$	3,632,711
Accounts payable		359,555		312,842
Accrued expenses		315,094		197,632
Deferred revenue		618,622		443,472
Total current liabilities		5,466,312		4,586,657
Non-current content liabilities		3,329,796		2,894,654
Long-term debt		6,499,432		3,364,311
Other non-current liabilities		135,246		61,188
Total liabilities		15,430,786		10,906,810
Commitments and contingencies (Note 5)				
Stockholders' equity:				
Preferred stock, $0.001 par value; 10,000,000 shares authorized at December 31, 2017 and 2016; no shares issued and outstanding at December 31, 2017 and 2016				
Common stock, $0.001 par value; 4,990,000,000 shares authorized at December 31, 2017 and December 31, 2016, respectively; 433,392,686 and 430,054,212 issued and outstanding at December 31, 2017 and December 31, 2016, respectively		1,871,396		1,599,762
Accumulated other comprehensive loss		(20,557)		(48,565)
Retained earnings		1,731,117		1,128,603
Total stockholders' equity		3,581,956		2,679,800
Total liabilities and stockholders' equity	$	19,012,742	$	13,586,610

Consolidated Statements of Cash Flows 2016-2020

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net income	$ 1,211,242	$ 558,929	$ 186,678
Adjustments to reconcile net income to net cash used in operating activities:			
Additions to streaming content assets	(13,043,437)	(9,805,763)	(8,653,286)
Change in streaming content liabilities	999,880	900,006	1,772,650
Amortization of streaming content assets	7,532,088	6,197,817	4,788,498
Amortization of DVD content assets	41,212	60,657	78,952
Depreciation and amortization of property, equipment and intangibles	83,157	71,911	57,528
Stock-based compensation expense	320,657	182,209	173,675
Excess tax benefits from stock-based compensation	—	—	(65,121)
Other non-cash items	40,428	57,207	40,909
Foreign currency remeasurement loss (gain) on long-term debt	(73,953)	140,790	—
Deferred taxes	(85,520)	(208,688)	(46,847)
Changes in operating assets and liabilities:			
Other current assets	(200,192)	(234,090)	46,970
Accounts payable	199,198	74,559	32,247
Accrued expenses	150,422	114,337	68,706
Deferred revenue	142,277	177,974	96,751
Other non-current assets and liabilities	2,062	(73,803)	(52,294)
Net cash used in operating activities	(2,680,479)	(1,785,948)	(1,473,984)
Cash flows from investing activities:			
Purchases of property and equipment	(173,946)	(173,302)	(107,653)
Acquisition of DVD content assets	(38,586)	(53,720)	(77,177)
Other assets	(126,588)	(6,689)	(941)
Purchases of short-term investments	—	(74,819)	(187,193)
Proceeds from sale of short-term investments	—	320,154	282,484
Proceeds from maturities of short-term investments	—	22,705	140,245
Net cash provided by (used in) investing activities	(339,120)	34,329	49,765
Cash flows from financing activities:			
Proceeds from issuance of debt	3,961,852	3,020,510	1,000,000
Issuance costs	(35,871)	(32,153)	(10,700)
Proceeds from issuance of common stock	124,502	88,378	36,979
Excess tax benefits from stock-based compensation	—	—	65,121
Other financing activities	(1,956)	255	230
Net cash provided by financing activities	4,048,527	3,076,990	1,091,630
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(39,682)	29,848	(9,165)
Net increase (decrease) in cash, cash equivalents and restricted cash	989,246	1,355,219	(341,754)
Cash, cash equivalents and restricted cash, beginning of year	2,822,795	1,467,576	1,809,330
Cash, cash equivalents and restricted cash, end of year	$ 3,812,041	$ 2,822,795	$ 1,467,576
Supplemental disclosure:			
Income taxes paid	$ 131,069	$ 113,591	$ 26,806
Interest paid	375,831	213,313	138,566
Increase (decrease) in investing activities included in liabilities	2,560	(32,643)	27,504

NETFLIX, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

		Year Ended December 31,			
		2020		2019	2018
Cash flows from operating activities:					
Net income	$	2,761,395	$	1,866,916 $	1,211,242
Adjustments to reconcile net income to net cash provided by (used in) operating activities:					
Additions to content assets		(11,779,284)		(13,916,683)	(13,043,437)
Change in content liabilities		(757,433)		(694,011)	999,880
Amortization of content assets		10,806,912		9,216,247	7,532,088
Depreciation and amortization of property, equipment and intangibles		115,710		103,579	83,157
Stock-based compensation expense		415,180		405,376	320,657
Foreign currency remeasurement loss (gain) on debt		533,278		(45,576)	(73,953)
Other non-cash items		293,126		228,230	81,640
Deferred income taxes		70,066		(94,443)	(85,520)
Changes in operating assets and liabilities:					
Other current assets		(187,623)		(252,113)	(200,192)
Accounts payable		(41,605)		96,063	199,198
Accrued expenses and other liabilities		198,183		157,778	150,422
Deferred revenue		193,247		163,846	142,277
Other non-current assets and liabilities		(194,075)		(122,531)	2,062
Net cash provided by (used in) operating activities		2,427,077		(2,887,322)	(2,680,479)
Cash flows from investing activities:					
Purchases of property and equipment		(497,923)		(253,035)	(173,946)
Change in other assets		(7,431)		(134,029)	(165,174)
Net cash used in investing activities		(505,354)		(387,064)	(339,120)
Cash flows from financing activities:					
Proceeds from issuance of debt		1,009,464		4,469,306	3,961,852
Debt issuance costs		(7,559)		(36,134)	(35,871)
Proceeds from issuance of common stock		235,406		72,490	124,502
Other financing activities		—		—	(1,956)
Net cash provided by financing activities		1,237,311		4,505,662	4,048,527
Effect of exchange rate changes on cash, cash equivalents and restricted cash		36,050		469	(39,682)
Net increase in cash, cash equivalents and restricted cash		3,195,084		1,231,745	989,246
Cash, cash equivalents and restricted cash, beginning of year		5,043,786		3,812,041	2,822,795
Cash, cash equivalents and restricted cash, end of year	$	8,238,870	$	5,043,786 $	3,812,041
Supplemental disclosure:					
Income taxes paid	$	291,582	$	400,658 $	131,069
Interest paid		762,904		599,132	375,831

See accompanying notes to consolidated financial statements.

Consolidated Statements of Stockholders' Equity 2016-2020

NETFLIX, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share data)

	Common Stock and Additional Paid-in Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balances as of December 31, 2017	433,392,686	$ 1,871,396	$ (20,557)	$ 1,731,117	$ 3,581,956
Net income	—	—	—	1,211,242	1,211,242
Other comprehensive income	—	—	975	—	975
Issuance of common stock upon exercise of options	3,205,911	123,935	—	—	123,935
Stock-based compensation expense	—	320,657	—	—	320,657
Balances as of December 31, 2018	436,598,597	$ 2,315,988	$ (19,582)	$ 2,942,359	$ 5,238,765
Net income	—	—	—	1,866,916	1,866,916
Other comprehensive loss	—	—	(3,939)	—	(3,939)
Issuance of common stock upon exercise of options	2,208,052	72,565	—	—	72,565
Stock-based compensation expense	—	405,376	—	—	405,376
Adoption of ASU 2016-02, Leases (Topic 842)	—	—	—	2,474	2,474
Balances as of December 31, 2019	438,806,649	$ 2,793,929	$ (23,521)	$ 4,811,749	$ 7,582,157
Net income	—	—	—	2,761,395	2,761,395
Other comprehensive income	—	—	67,919	—	67,919
Issuance of common stock upon exercise of options	4,088,612	238,589	—	—	238,589
Stock-based compensation expense	—	415,180	—	—	415,180
Balances as of December 31, 2020	442,895,261	$ 3,447,698	$ 44,398	$ 7,573,144	$ 11,065,240

NETFLIX, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share data)

	Common Stock and Additional Paid-in Capital		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balances as of December 31, 2015	427,940,440	$ 1,324,809	$ (43,308)	$ 941,925	$ 2,223,426
Net income	—	—	—	186,678	186,678
Other comprehensive loss	—	—	(5,257)	—	(5,257)
Issuance of common stock upon exercise of options	2,113,772	36,979	—	—	36,979
Stock-based compensation expense	—	173,675	—	—	173,675
Excess stock option income tax benefits	—	64,299	—	—	64,299
Balances as of December 31, 2016	430,054,212	$ 1,599,762	$ (48,565)	$1,128,603	$ 2,679,800
Net income	—	—	—	558,929	558,929
Other comprehensive income	—	—	28,008	—	28,008
Issuance of common stock upon exercise of options	3,338,474	89,425	—	—	89,425
Stock-based compensation expense	—	182,209	—	—	182,209
Cumulative Effect Adjustment of ASU 2016-09	—	—	—	43,585	43,585
Balances as of December 31, 2017	433,392,686	$ 1,871,396	$ (20,557)	$1,731,117	$ 3,581,956
Net income	—	—	—	1,211,242	1,211,242
Other comprehensive income	—	—	975	—	975
Issuance of common stock upon exercise of options	3,205,911	123,935	—	—	123,935
Stock-based compensation expense	—	320,657	—	—	320,657
Balances as of December 31, 2018	436,598,597	$ 2,315,988	$ (19,582)	$2,942,359	$ 5,238,765

Appendix B: 5-year DCF Model 2021-2025 Supporting Calculations

Projected Unlevered Cash Flow

(USD in millions)

		Dec-21	Dec-22	Dec-23	Dec-24	Dec-25	Terminal
EBITDA			6,726	8,234	10,466	13,022	15,635	15,635
Other Income / (Exp)			0	0	0	0	0	0
D&A			(591)	(518)	(554)	(673)	(630)	(659)
EBIT			6,135	7,716	9,912	12,349	15,006	14,976
Pro forma Taxes			(797)	(1,003)	(1,289)	(1,605)	(1,951)	(1,947)
NOPAT		3,989	5,337	6,713	8,623	10,744	13,055	13,029
Capital Expenditures		(498)	(431)	(480)	(532)	(654)	(694)	(694)
NWC Investment		1,022	990	932	1,069	1,085	1,273	266
(+) D&A		116	591	518	554	673	630	659
Free Cash Flow		4,629	6,487	7,683	9,714	11,848	14,264	13,260
% Growth			*40%*	*18%*	*26%*	*22%*	*20%*	*-7%*

Discounting Periods

	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25
Balance Sheet Beginning Date	6/30/2021	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Balance Sheet End Date	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025
Mid-Year Convention	9/30/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025
Discount Periods	0.01	0.77	1.77	2.77	3.77
Terminal					*4.27*
Valuation Date	9/25/2021				

Discounting Factors

	Discount	Low	High	Conclusion
Dec-21	0.06	99.6%	99.7%	99.7%
Dec-22	0.81	94.9%	95.7%	95.3%
Dec-23	1.81	89.0%	90.5%	89.8%
Dec-24	2.81	83.5%	85.7%	84.6%
Dec-25	3.81	78.3%	81.1%	79.7%
Terminal	4.31	75.8%	78.9%	77.3%
Discount Rate		6.7%	5.7%	6.2%

Value of Firm Calculation

(USD in millions)	FCF	Low	High	Conclusion
Dec-21	2,745	2,735	2,737	2,736
Dec-22	7,683	7,293	7,349	7,321
Dec-23	9,714	8,647	8,795	8,721
Dec-24	11,848	9,888	10,153	10,019
Dec-25	14,264	11,162	11,570	11,364
(A) PV of Discrete Cash Flows		**39,726**	**40,604**	**40,161**
Perpetuity Growth Rate		2.00%	3.00%	2.50%
Terminal Free Cash Flow		13,260	13,260	13,260
Terminal Discount Factor		75.8%	78.9%	77.3%
(B) PV of Terminal Value		**220,405**	**406,718**	**287,938**
(A + B) Value of Firm		**260,131**	**447,322**	**328,099**

Equity Waterfall

(USD in millions)

	Model				Market
	Low	**Conclusion**	**High**		**Market**
Value of Firm	**260,131**	**328,099**	**447,322**		**272,359**
(+) Cash & Short Term Investments	7,778	7,778	7,778		7,778
(+) Investments & Other	0	0	0		0
(-) Debt	(17,943)	(17,943)	(17,943)		(17,943)
(-) Other Liabilities	0	0	0		0
(-) Preferred Stock	NA	NA	NA		NA
(-) Other	0	0	0		0
Value of Common Equity	**249,965.41**	**317,933.03**	**437,156.55**		**262,194**
(/) Shares Outstanding	443	**443**	443		443
Implied Stock Price (USD)	**564.77**	**718.34**	**987.71**		**592.40**
Upside / (Downside)	**-4.7%**	**21.3%**	**66.7%**		

Historical Financials

(USD in millions)		*Fiscal Years Ending*				
	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Jun-21
	FY-4	FY-3	FY-2	FY-1	FY	YTD
Revenue	**8,831**	**11,693**	**15,794**	**20,156**	**24,996**	**14,505**
Growth		*32.4%*	*35.1%*	*27.6%*	*24.0%*	
Cost of Revenue	(6,257)	(8,033)	(9,968)	(12,440)	(15,276)	(7,887)
Gross Profit	2,573	3,660	5,827	7,716	9,720	6,619
R&D Expense	(780)	(954)	(1,222)	(1,545)	(1,830)	(1,063)
SG&A Expense	(1,413)	(1,867)	(3,000)	(3,567)	(3,305)	(1,749)
Other Expenses / (Income)	(119)	(353)	(379)	(542)	(1,386)	(179)
Total Expenses	(2,313)	(3,174)	(4,600)	(5,654)	(6,520)	(2,990)
EBT	**261**	**485**	**1,226**	**2,062**	**3,199**	**3,628**
(+) Net Interest Expense	142	225	378	549	726	377
(+) Other Non Op Expenses, Total	(23)	128	1	(7)	660	(198)
(+) Depreciation & Amortization	58	72	83	104	116	74
(+) Restructuring Charges	0	0	0	0	0	0
(+) Merger / Acquisition Expenses	0	0	0	0	0	0
(+) Goodwill Impairment	0	0	0	0	0	0
(+) Gain (Loss) On Sale Of Invest.	0	0	0	0	0	0
(+) Gain (Loss) On Sale Of Assets	0	0	0	0	0	0
(+) Asset Writedown	0	0	0	0	0	0
(+) In Process R&D Expenses	0	0	0	0	0	0
(+) Insurance Settlements	0	0	0	0	0	0
(+) Legal Settlements	0	0	0	0	0	0
(+) Other Unusual Items	0	0	0	0	0	0
Adjusted EBITDA	**437**	**911**	**1,688**	**2,708**	**4,701**	**3,882**
% Margin	*5.0%*	*7.8%*	*10.7%*	*13.4%*	*18.8%*	*26.8%*
Adjusted EBIT	**380**	**839**	**1,605**	**2,604**	**4,585**	**3,807**
% Margin	*4.3%*	*7.2%*	*10.2%*	*12.9%*	*18.3%*	*26.2%*

			Fiscal Quarters Ending				
	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21
	FQ-6	FQ-5	FQ-4	FQ-3	FQ-2	FQ-1	FQ
Revenue	**5,467**	**5,768**	**6,148**	**6,436**	**6,644**	**7,163**	**7,342**

Balance Sheet

(USD in millions)		*Fiscal Quarters Ending*				Latest
Historical	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21
	FQ-5	FQ-4	FQ-3	FQ-2	FQ-1	FQ
Short-term Borrowings	NA	NA	NA	NA	NA	NA
Current Portion of LT Debt	499	499	500	500	699	699
Capital Leases, Current	196	227	237	256	268	275
Current Portion of Debt	**695**	**726**	**737**	**756**	**967**	**974**

Historical Valuation: EV / EBITDA Multiples

		Fiscal Years Ending				
	Dec-16	**Dec-17**	**Dec-18**	**Dec-19**	**Dec-20**	**Jun-21**
	FY-4	FY-3	FY-2	FY-1	FY	LTM
EV / EBITDA Multiple	157.2x	105.9x	71.2x	61.3x	59.2x	38.6x

5 Year Median Multiple	**71.2x**

Stock Price	598.80
Stock Price Close	598.80
Restatment Type	Original
Reporting Currency	USD
Trading Currency	USD
FX Rate: USD/USD	1.00
Market Cap	264,590.4
Shares Outstanding	442.6
Share Exchange Ratio	1.00
Liquid Long-term Investments	0

Note: FY stands for Fiscal Year

Key Projections for 2021-2025

Key Projections

(USD in millions)	**Dec-20**	**Dec-21**	**Dec-22**	**Dec-23**	**Dec-24**	**Dec-25**
		FY+1	FY+2	FY+3	FY+4	FY+5
Revenue	24,996	29,682	34,095	39,155	44,293	50,322
EBITDA	4,701	6,726	8,234	10,466	13,022	15,635
D&A	116	591	518	554	673	630
Other Income / (Exp)	0	0	0	0	0	0
EBIT	4,585	6,135	7,716	9,912	12,349	15,006
Capital Expenditures	498	431	480	532	654	694
% YoY Revenue Growth	*24.0%*	*18.7%*	*14.9%*	*14.8%*	*13.1%*	*13.6%*
% EBITDA Margin	*18.8%*	*22.7%*	*24.1%*	*26.7%*	*29.4%*	*31.1%*
% DA Margin	*0.5%*	*2.0%*	*1.5%*	*1.4%*	*1.5%*	*1.3%*
% CapEx Margin	*2.0%*	*1.5%*	*1.4%*	*1.4%*	*1.5%*	*1.4%*

Appendix C: Weighted Average Cost of Capital Supporting Calculations

Netflix, Inc. 524.89

Weighted Average Cost of Capital

NasdaqGS:NFLX 8/4/2021

Model Summary

Cost of Equity

		Selected WACC
Selected Beta	1.02	**6.15%**
Market Risk Premium	4.8%	
Risk-free Rate	1.5%	
Implied Cost of Equity	6.30%	

Cost of Debt Inputs

Pre-tax Cost of Debt	4.8%
Tax Rate	13.0%
Implied Cost of Debt	4.14%

Cost of Equity

Cost of Equity	
Selected Beta	1.02
(x) Country Market Risk Premium	4.70%
Adjusted Market Risk Premium	4.80%
(+) Risk-free Rate	1.50%
Cost of Equity	**6.30%**

Cost of Debt

Interest rate × Debt amount	$893,791.00
Cost of Debt	
Fair Value of Debt	**$18,805,000.00**
Pre-Tax Cost of Debt	4.75%
Tax Rate	13.00%
After-tax Cost of Debt	**4.14%**

Select Re-levered Beta

Comparable Companies	Levered Beta	Debt / Capital	Marginal Tax Rate	Unlevered Beta	Adjusted Unlevered Beta
Facebook, Inc.	1.30	1.3%	18.0%	1.28	1.19
Alphabet Inc.	1.01	1.5%	15.0%	1.00	1.00
Fox Corporation	1.27	30.0%	33.0%	0.99	0.99
BCE Inc.	0.33	33.6%	26.0%	0.24	0.49
Amazon.com, Inc.	1.15	6.7%	19.0%	1.09	1.06
NasdaqGS:NFLX	**1.02**	**7.0%**	**13.0%**	**0.96**	**0.97**

	Low	High
Selected Unlevered Beta	**0.90**	**1.05**
Debt % of Capital	7.0%	7.5%
Equity % of Capital	93.0%	92.5%
Tax Rate	13.0%	13.0%
Re-levered Beta	**0.96**	**1.12**

Debt & Equity Weights

(USD in millions)

Comparable Companies		Debt	Market Cap	Debt Adj Factor
Facebook, Inc.	NasdaqGS:FB	12,563	990,302	1.3%
Alphabet Inc.	NasdaqGS:GOOG.l	28,101	1,812,802	1.5%
Fox Corporation	NasdaqGS:FOX	8,453	19,765	30.0%
BCE Inc.	NYSE:BCE	22,876	45,204	33.6%
Amazon.com, Inc.	NasdaqGS:AMZN	123,115	1,704,800	6.7%
Netflix, Inc.	**NasdaqGS:NFLX**	**18,805**	**262,189**	**7.0%**
Average				**13.3%**