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Netflix, Inc. valuation

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Abstract

This Work Project is based on the application of the topics developed and discussed in the class of Financial Statement Analysis with professor Xhanti Gkougkousi. We decided to develop an in depth financial analysis of Netflix Inc. (mentioned as “Netflix Inc.”, “the company” or “it” in the paper) with the purpose to get a final investment strategy that entails whether to buy or sell the share. Netflix represents an interesting case of a new booming industry, which foresees a blurred future due to its rapid evolvement, the increasing competition and the high dependency from the licensed streaming contents, which represent the main Assets of the company (ca. 70% of Total Assets). The Work Project foreseen the reformulation of the Financial Statements of Netflix Inc. under specific rules and consequently the forecasts of its expected incomes for the next five years. Afterwards, two financial models have been applied (Comparable and Residual Income Model), with the aim to estimate the share price of Netflix Inc. as of 31/12/2015. The outputs of the valuation resulted in a share price of $65 with the multiple valuation analysis and a share price of $65 as well with the Residual Income Model. These results, perfectly aligned, entail that the stock price of Netflix Inc. was overvalued as it was trading at $114 at NASDAQ (as of 31/12/2015). Netflix is a particular company with a lot of peculiarities and the models applied are pretty standards entailing some limitations in the evaluation, although the analysis shows a clear result, that the share price was overvalued.

The large gap between the results of the valuation and the traded price can be partly explained by the premium the market could be willing to pay for the stock, even if I believe it is still too large. Therefore, my final recommendation is to short the stock as it does not represent an attractive asset as being highly overvalued and really volatile.

Keywords: 1) Netflix Inc.; 2) Forecasts; 3) Valuation; 4) Investment Strategy
Introduction

The Work Project follows a detailed and organized framework starting from the company overview: Netflix Inc. was founded by Marc Randolph and Wilmot Hastings on August 29th 1997 in Scotts Valley, California. They started as a DVD by mail business and only in 2007 they expanded their business by introducing the streaming media contents, which allowed them to spread out Internationally with low efforts, thanks to its lean and flexible company structure. In January 2016, Netflix Inc. was present in 190 countries with 75 million subscribers and 125 million hours of TV series and movies available. 2013 was an important year for Netflix Inc., since it was the first time they entered the film and television industry, it was a great success for the company, which debuted with the TV show “House of cards”; now it provides more than 126 original series, more than any other Network.

The business model evolved during the years, indeed they started as selling DVD by mails to being the world leader in the Internet Television Network. It currently operates in three main segments, which are: domestic Streaming (62% of total Revenues), International Streaming (29% of total Revenues) and domestic DVD (9% of total Revenues). Prices vary depending on the country, ranging from 8$ per month for the basic package, which offers the access for only one device and medium definition quality, to the premium streaming package of $12 per month, comprising the possibility to use the account on 4 different devices and the upload of videos in 4K, the maximum definition available on the market. Regarding the streaming content, they mainly license the contents from broadcast network, cable network providers and also directly from movie and television studios, but they also develop their own TV series. The idea is that people could watch their favorite movies or TV series, for a fixed and affordable monthly fee, whenever they want and where they want (although Wi-Fi connection is required).
Industry analysis

As already mentioned above, it is extremely important to understand in which industry the company operates and how it is positioned. The porter five forces model for the Netflix Inc. case will be subsequently explained in order to give a detailed and organized overview of its current position within the industry.

**Industry Rivalry (high competition):** First of all, Netflix Inc. operates in the Video On Demand industry, mainly identified as an Internet Television Network. It is a recent industry, indeed Netflix only launched its streaming media products in 2007, being the pioneer. Being the first mover allowed it to gain a strong advantage respect to competitors, indeed current data show that 90% of the households in the U.S. who have a streaming account choose Netflix. Although this supremacy in the industry, Netflix is facing strong rivalry from other companies that recently entered the industry due to the thriving opportunities at stake. The main competitors are Amazon Prime, Hulu, YouTube and HBO, these latter offer similar or equal contents on demand, therefore can be classified as **Direct Competitors.** Furthermore, Netflix Inc. stated that it directly competes against the pirates’ channels that still hold a considerable part of the market share.

**Supplier Power (high):** Netflix Inc. stands in a weak position respect to suppliers because these latter are the owners of movies and TV series, which represent the main asset of Netflix Inc. and only a second source of Revenues for the Television companies. These latter therefore have a strong bargaining power and can influence the price of the licenses granted to Netflix Inc.

On the other hand, Netflix Inc. is also using backward integration, meaning that it produces its own TV series, so reducing the supplier risk.

**Buyer Power (high):** Netflix is the undisputed leader in the industry but the really high competition and the really low switching costs put the customers in a really strong position.
Therefore, Netflix Inc. has to constantly innovate and provide new features in order to increase
the customer retention rate and foster customer loyalty.

**Threats of substitutes (high):** the chances to get the same level of entertainment from another
industry is really high (e.g. video game industry), although costs and product diversities are still
the key leading factors that make customers choose Netflix Inc. rather than its substitutes or
competitors.

**Threats of New Entrants (high):** the barriers to entry are high for small companies, since
economies of scale and reputation are the main drivers for competition used by Netflix Inc. On
the other hand, big corporations with good reputation and great amounts of capital can be
considered as a serious threat for Netflix Inc., since it would be easy for them to enter the
industry and therefore increase competition.

**Business Model**

The basic idea behind Netflix can be easily explained by associating a book with the TV. People
have always been used to watch what they like on a fixed schedule, so what Marc Randolph and
Wilmot Hastings thought is: why don’t we transform the TV model into a book model, where
everybody can watch it when they want and not only when it’s available.

This has been the main trigger that fostered the creation of Netflix Inc.; they started by competing
with Blockbuster, arriving today to compete with Corporations such as Amazon Prime, YouTube
or HBO. Netflix represents a classical service Business Model within the Video On Demand
industry, which takes its roots from the TV industry. Although the similarity between the two
industries in terms of contents, Netflix Inc. has a completely inverse business model, meaning
that they offer streaming contents in exchange of a subscription fee. The model has been
extremely successful so far, but it holds a great part of risk since the only source of Revenues for
Netflix are the user subscription fees and, secondly, its profitability mainly depends from the prices of the content licenses and the number of subscribers. Netflix Inc. has been partly mitigating this risk by producing its own TV series (e.g. House of Cards, Narcos), but also this option comes with a cost, indeed they spent $100 million just for recording the first two seasons. Moreover, its great exposure with TV/movie producers is still high since most of its contents are licensed, indeed they disclosed they will spend $6 billion in 2016, just for content acquisition (Amazon Prime plans to spend $3.2 billion on content). Furthermore, Netflix Inc. has two main factors on which it leverages, these are the rich movie database and a specific algorithm developed by Netflix Inc., that has the purpose to provide a possible list of future content acquisitions based on the historical preferences of subscribers, achieving, therefore, a partial customized database that gives the company a slight competitive advantage respect to its peers. The strategy of Netflix Inc. is to keep continuing to expand internationally and increase the amount of contents available in order to maintain its leadership in the industry and prevent competitors to overtake it. Although, the company acknowledges some major risks may harm its future growth since its business model and its strategy foresee a high CAPEX in the following years, entailing a reduction in Operating flexibility and an exposure in terms of liquidity risk. The industry has been evolving on a fast pace, which makes Netflix Inc. fear about the development of other channels of distribution for entertainment video that may substitute its model.

**SWOT Analysis**

A SWOT analysis has been performed hereafter with the aim to take a snapshot of the current and future Strengths, Weaknesses, Opportunities and Threats that directly affect Netflix Inc.

**Strengths:** brand recognition and good reputation can be considered as the main strengths of the company on which it leverages in order to expand Internationally, indeed nowadays it is present
in 190 countries, an outstanding expansion if compared to 2010 when it first entered a foreign country (Canada). The company also benefits from a lean structure that allows it to easily spread worldwide with low efforts and especially, with low capital requirements. The amounts of contents (125 million hours) and their quality, position Netflix Inc. at the leadership of the industry, benefitting also from the great success of the “in house” produced TV series “House of Cards” and “Narcos”.

**Weaknesses**: its international expansion kicked off early in 2010, but the whole Business Segment is still operating at a loss. Secondly, its owned original contents represent only a small percentage of the current content portfolio (not disclosed), which entails a still high dependence from the content owners.

**Opportunities**: the main opportunity for the company is to establish its presence Internationally and consequently keep up with its growth, since the US market is almost saturated now. Its ability to produce its own contents may lead the company to decrease its dependency from “suppliers” in the future, which would entail a boost in profitability thanks to higher margins.

**Threats**: for sure the main threat for Netflix Inc. is competition, because it is operating in an unpredictable and volatile industry driven by fast technological changes. Low barriers to entry may foster the increase in the number of players within the industry in the future and new and innovative distribution channels could show up as substitutes.

Moreover, the company is threatened by the black market of downloading, since an increasingly number of people, in the age between 20 and 30, are using pirate channels to get the same contents that Netflix offers, for free.
Financial Analysis

The purpose of the first part of the paper was to give an overview of the business as a whole and the company position in the market in order to get the fundamental data upon which to build a reliable financial analysis. This part of the paper will be subdivided into three main parts: the financial statements reclassification, the ratio analysis and the application of the two models known as Comparable and Residual Income Model.

Financial Statements reformulation

Financial Statements represent the pillars upon which I built the analysis, therefore a detailed and scrupulous reformulation should be done in order to get a reliable result.

The Annual Report for the FY2015 is only available in the 10-F form in accordance with the federal securities law of the U.S.A and is presented in U.S. GAAP. It has been audited by Ernst & Young, which declared the statements to be unqualified and in line with the U.S. General Accepted Accounting Principles.

Income Statement (Appendix 1): the aim of reformulating the Income Statement is to group items into Operating and Financial categories and adjust it for the dirty surplus accounting, meaning it is on a comprehensive Income basis. Starting from the top line (Sales), I deducted the Cost of Sales and consequently all the Operating Costs, which led to the Operating Income from Sales before tax. The next step was about tax allocation, which has a great weight in the reformulated Income Statement, since it comprises the Taxes as reported and a further adjustment, called tax shield, that derives from the tax benefit of Net Financial Expenses or the further tax burden resulting from Net Financial Income. In the Netflix Inc. case Net financial result is negative leading to a positive influence on taxes of ca. $57m. This latter tax shield needs to be deducted from the Operating Income with the taxes as reported in order to get the real Core
Operating Income that comes from the core operations of the company. Although the great increase in Sales (23%), the company had a Core Operating Income of ca. $230m versus $300m in FY2014. This loss in marginality is attributable to the un-proportioned increase in Operating Expenses respect to Sales, linked to the expansion plan recently undertaken and the acquisition of new contents that made operating expenses surge. The following step entails the adjustment for the Dirty Surplus Accounting deriving from the Comprehensive Income; these latter usually are not comprised in the Income Statement because they don’t directly belong to operations, but should be added back for reclassification purposes. Netflix Inc. this year incurred into ca. $39m losses on currency translations, a $30m increase respect to FY2014, mainly related to the higher International exposure and the unfavorable foreign currency translations. The bottom line foresees the deduction of the Financial expenses and the Interest Income upon which is summed the tax shield previously deducted. As a result, I obtained the Comprehensive Income, aligned with the one presented in the Annual Report.

**Balance Sheet (Appendix 2):** the balance sheet comprises total Assets (current and non current), which are offset by an equal amount if summing Equity and total Liabilities (current and non current). When reformulating the balance sheet the current and non current approach is left aside, since the main purpose is to separate the Financial items from the Operating. The first step foresees to divide the Cash and Cash equivalents into Working cash (Operating) and Cash equivalents (Financial), in this case $1.7billion and $102m respectively for the FY2015. $1.7billion of working cash is uncommon in a Balance Sheet of $10billion, although this is a consolidated Statement, meaning that some amounts of that cash is hold in overseas subsidiaries (ca.$200million as of 31/12/2015) and will not be transferred to the parent for fiscal reasons. Moreover, the company declared will be investing into new streaming content in 2016, which
require payment upfront, therefore I assume the $1.7 billion to be all working cash due to the future likely liquidity requirements. Moreover, the fact that no Interest Income is registered consolidates this assumption even more. In the voice marketable securities of the Balance Sheet, Netflix Inc. also comprised the Short Term investments in Corporate Debt securities and Government securities for a total of $501 million, which I allocated to the Financial Assets of the reformulated Balance Sheet. All the other assets have been used to generate operating Revenues and therefore reclassified as Operating Assets. On the liabilities side the same reasoning holds; first of all, I reclassified the Notes payable outstanding as a financial liability due to its intrinsic financial nature for a total of $2.3 billion, a $1.5 billion increase from the previous year associated with the issuance of two new bonds in FY2015. A further distinction should be done between interest and non-interest bearing trade payables. In this case, Netflix Inc. does not have any Interest bearing account payables, therefore I reformulated them into Operating Liabilities for a total amount of $253 million. All the other liabilities were operations related and therefore reclassified as Operating Liabilities. The items that hold a considerable stake on the liabilities side and therefore should be highlighted are Deferred Revenues for a total of $346 million and Content Liabilities for a total of $4.8 billion, which increased from the previous years ($3.7 billion in FY2014 and $3.2 billion in FY2013). Although, a great part of the content obligations ($6 billion) are considered as off-Balance Sheet items, since they still do not meet the criteria for asset recognition. Equity has been reclassified as reported for a total amount of $2.2 billion (versus $1.8 billion in FY2014), which financed ca. 22% of total Assets, against 26% in FY2014.

The next step entails the derivation of Net Operating Assets, by detracting Operating liabilities from Operating assets; in the Netflix Inc. case they amount to $3.9 billion, a $1.8 billion increase from the previous year, mainly attributable to the increase in content Assets. The same has been
done for the financial related items, where I obtained Net Financial Obligations for a total of $1.7billion, a $1.4billion increase from the previous year, entirely attributable to the issuance of two senior unsecured Notes in February 2015, respectively $700million and $800million.

**Cash Flow (Appendix 3):** the cash flow statement comprises all the cash outflows and inflows that consequently affect the balance sheet and the Income Statement. It is divided into Cash from Operations, Cash from Investing activities and Cash from Financing activities. The main purpose of the reformulation is to obtain the Free Cash Flow, meaning the residual cash used to pay dividends and Debt, or, put it differently, the difference between cash flow from operations and cash invested in operations. It is commonly used in DCF analysis and liquidity analysis and it can be calculated in different ways, but for our purpose I derived it using the Cash Flow statement by detracting the cash invested in operations from the cash inflow of operations.

The same reasoning applied for the reformulation of the other Financial Statements holds also for the reformulation of the Cash Flow statement, meaning that the purpose is to get the intrinsic value obtained through operations by detracting all the financial related items from the operating cash. I started from the Cash from Operations as reported and adjust it for the Net Interest payments after tax, calculated as Net Interest payments minus the tax shield; this latter is the benefit of interest expenses on taxes and it is calculated as the Federal statutory rate (35%) times Net interest payments. The result is the reformulated Cash from operations. At this point, the next step entailed the calculation of the Cash invested in Operations; I started from Cash from Investing activities as reported and detracted all the financial related items, which comprised the difference between the proceeds from Short Term Investments and the purchase of Short Term Investments (-$8million). As a result, I obtained the reformulated Cash from financing activities. The difference between the two results obtained, gave me the Free Cash Flow for the FY2015,
which, in this case, is negative and equal to -$847million. The result is in line with the company expansion strategy that required a considerable capital investment in 2015.

The reformulation also foresees the reconciliation of the Free Cash Flow, calculated as the difference between Cash from operations and Cash invested in operations, to the Free Cash Flow obtained from the reformulation of the Cash from financing activities. The purpose here is to get the Cash Flow deriving from Debt financing and adjust it for the financial related items that have been previously detracted when reformulating the upper part of the Cash Flow statement (CFO, CFI) and, consequently, derive the part related to Equity financing; the sum of the two gives the Free Cash Flow, that should equal the one previously calculated (-$847million). The first step entailed to adjust the change in Debt, meaning the difference between the issuance and the payment of bonds (in this case $1481million), for the Net purchase of financial Assets (-$8million) and the Net Interest payments (-$72million). On the top of this, it needs to be added the Investment in cash equivalents, meaning the Net change in cash for the year adjusted for the effect of exchange rate; the result is the Cash Flow from Debt financing that amounted to $689million in FY2015. The following step foreseen the calculation of the Equity financing part, which, in this case, comprised the share issuance for ca. $78million and the tax benefit from stock based compensation for $80million; The sum of the debt financing and equity financing provided the Free Cash Flow of $847million, in line with the one previously calculated.

**Statement of Stockholder’s Equity (Appendix 4):** the Statement of Stockholder’s Equity shows the items that impacted and changed Equity between two financial years. In the reformulation it applies the same reasoning as the one applied in the other Financial Statements, therefore the purpose is to group the flows related to operations (Comprehensive Income) and the flows linked to capital contributions, dividends and stock buy-back transactions. To be noted that the
reformulated statement excludes preferred equity since it should be treated as an obligation; Netflix Inc. does not have any preferred stock. The first step in the reclassification of the statement is to start from the balance of Equity from the end of the previous year, $1858million as of 31st December 2014. At this point, the analyst can start to add all the items that occurred during the year and that affected Equity. In the “transactions with shareholders”, Netflix Inc. reported two voices: Stock issued for stock options for $77million and excess Stock options income tax benefit for $80million. Consequently, all the comprehensive Income related items should be added, that in the Netflix case are Net Income as reported for $123million and FX losses for $39million. After that, Stock based compensation for $125million should be added as well to the previously mentioned items, which then result into Equity of $2.2billion at the end of the FY2015.

**Operating performance analysis**

The reformulation of the Financial Statements of Netflix Inc. was the first part of the Financial Analysis. The following step aims to get an overview of the current performance of the company and its current financial situation in order to assess its performance and whether it is able to meet its obligations. The Appendix 5 shows the key figures of Netflix Inc. for the last three financial years. As it can be assessed from the table, Netflix Inc. has been outperforming with an average growth rate in Sales of 23% per year, which is mainly attributable to the recent expansion in foreign countries (190 as of January 2016), indeed International Streaming Content Revenues registered abnormal growth for the FY2014 and FY2015, respectively 83% and 49%, which have been partially offset by a decrease in Sales from the Domestic DVD segment (-16% in FY2015). Cost of Sales increased proportionally through the years and resulted in a Gross Margin stable at 32% of Sales for the FY2015. Operating Costs registered an overall increase to $1.8billion (28%
of Sales versus 25% in FY2014), which is mainly attributable to the increase in Marketing Expenses to $824million from $607million in FY2014, as a result of the expansion program undertaken by the company and to the increase in Technology and Development costs to $650million from $472million in 2014, linked to personnel related costs. I thought it was also relevant to calculate the EBITDA margin, which is usually not provided under the US GAAP, because it represents the intrinsic value that the company is able to generate before detracting D&A and all the other non-recurring or non-operating items. The table shows a strong EBITDA of $3.8billion with a margin at ca. 57%, slightly decreased from the previous year (-110bps).

The increase in Interest expenses to $132million from $50million is a consequence of the issuance of two senior unsecured notes in FY2015 for a total of $1.5billion ($700million at 5.5% maturing in 2022 and $800million at 5.875% maturing in 2025). Financial Income instead suffered a lot from the loss deriving from the FX transactions occurred in the first quarter of FY2015, it stood at -$31million respect to -$3million in FY2014. The bottom line gained some marginality thanks to lower effective taxes paid (14%) primarily due to the release of tax reserves that had not been recognized before; the Federal statutory tax rate is at 35%. Net Income stood at $122million and suffered from the sharp increase in Interest expenses and the negative result of the Financial Income that narrowed margins.

**Financial structure**

When looking at the Balance Sheet it is deducible that the company is operating in a technological sector due to its intangible nature. Indeed, in the Assets side ca. 70% or $7.2billion of Assets are Intangible and refer to Streaming content, another 17% or $1.7billion refer to Cash and only 1.7% or $173million refer to Fixed Assets. The liabilities side encountered some major changes in the last year, driven by new Notes for $1.5billion for a total of $2.3billion that
financed ca. 23% of Total Assets compared to $885 million in FY2014; Equity financed ca. 22% of Total Assets, the remaining 55% was mainly financed through streaming content obligations and other current Liabilities. It is important to underline that the company has a Net Leverage (Net Debt/EBITDA) of 0.02, thanks to its large cash reserves, meaning that Net Debt (Gross Debt – available cash) is equal to the 2% of EBITDA. When using this ratio, it is important for the Net debt to be bigger than zero, indeed in the previous years the ratio was not applicable due to its “cash rich” position, meaning that cash & cash equivalents were higher than its obligations.

**Liquidity Analysis**

Liquidity is always a key issue in a booming company like Netflix Inc. because the company may struggle in financing operations or meet its obligations due to lack of liquidity. The benefit for Netflix Inc. of receiving a monthly subscription fee from customers and therefore not having Trade Receivables on the Balance Sheet is offset by the fact that producing its own TV series and purchasing licensed Content require large payments upfront, which may lead to a shortage of liquidity. Till 2014 Netflix Inc. had been able to finance its operations almost entirely through the cash generated during the year, indeed its indebtedness was really low with cash exceeding its obligations. In 2015 the company undertook major investments, which fostered additional cash requirements and led to a negative Free Cash Flow for $847 million.

There are three ways of financing new operations, either through Cash or through Equity or through Debt. Netflix Inc. decided to raise capital in the Debt market by issuing two new bonds, as previously mentioned, in order to finance its new Investment program, indeed the increase in Cash to $1.8 billion from $1.1 billion in 2014 is entirely attributable to the cash coming from new Debt. The company didn’t hold any short term bank facility due to its really low amount of Working Capital (always positive in the past years). The company benefitted from a sound
liquidity as of 31st December 2015, although new capital may be raised shortly in order to finance new CAPEX.

**Ratio Analysis (Appendix 6)**

Ratio analysis is also commonly mentioned as profitability analysis because it analyses ROCE (Return On Common Equity) drivers and therefore where profitability comes from.

ROCE refers to the return attributable to common Shareholders, which can be split into three main drivers: **return on Net Operating Assets**, (also stated as Operating Income on Net Operating Assets), which is then affected by **Financial Leverage** (also stated as Net Financial Obligations on Common Shareholder Equity) times the **Operating Spread between the return on Net Operating Assets and the Net Borrowing Cost**. Therefore, the aim of the analysis is to derive the roots of ROCE by looking at its single components. First of all, ROCE can also be stated as: ROCE= (Comprehensive Income/CSE), which results as 3.8% in FY2015 for Netflix Inc., a low return if compared to the previous years, respectively 13.9% in FY2014 and 8.5% in FY2013. Its peers are performing better in terms of ROE, indeed Alphabet Inc. registered a ROE of 14.5% in 2015, Amazon ca. 5% and Time Warner ca. 16%. However, this is just a superficial comparison, which should be accompanied by a detailed examination in order to understand which are the main drivers of the ROE for its peers. Although, it can be stated that the return is lower than the average of the industry, therefore not so appealing for investors. At this point it is relevant to decompose ROCE in order to see the single drivers; Return On Net Operating Assets stands at 4.8%, which is also low if compared to the previous years (13.7% in FY2014 and 13.5% in FY2013) and can be explained as lower Operating Income on increased Net Operating Assets. As previously discussed, the lower Operating Income is a consequence of the increase in Operating Expenses and the penalization from the FX losses. Financial Leverage represents the
second component of the ratio, which tells the degree to which the company finances NOA using NFO rather than Equity. The leverage of Netflix Inc. stood at 0.8, much higher respect to the previous years (0.15 in FY2014 and -0.16 in FY2013) and higher than its peers on average. The last component of the ROCE ratio is represented by Operating Spread, which refers to the difference between the Return On Net Operating Assets and Net Borrowing Costs; this latter can also be stated as Net Financial expenses over Net Financial Obligations. In 2015 the Operating Spread was negative for Netflix Inc. and equal to -0.013, since the borrowing costs were higher than the Return on Net Operating Assets. This result negatively impacted the Return on Equity that indeed dropped by 10.1% compared to the previous year.

ROCE can therefore be summarized as following:

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ROCE = RNOA + (FLEV \times (RNOA - NBC)) 
\]

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\Leftrightarrow 4.8\% + (0.8(4.8\%-6\%)) = 3.8\% 
\]

Further ratios that may be relevant for the purpose of the valuation have been calculated; for instance, \textbf{Content Assets/Sales} is a relevant measure of Return on Assets and Return on Investment, since almost the entire CAPEX of the company is committed in the purchase of streaming content. An increase in this latter is supposed to boost Sales, although the results show that, through the last three years, the ratio increased from 87% in FY2013 to 100% in FY2015, meaning that the increase in streaming content assets was not proportional with the increase in Sales, thus entailing that the forecasted CAPEX on streaming content for the future years may not boost Sales and could even lower margins. The same trend does not hold for the ratio \textbf{Content Liabilities/Sales}, which passed from 73% in FY2013 to 72% in FY2015.

Another ratio to be considered in order to test the health of the company is the \textbf{Net Debt/Operating Income}; in the last two years (FY2013 and FY2014) it was not applicable due to the relatively good financial position of the company with Cash exceeding the amount of Debt,
instead in FY2015 it arrived up to 3.0x, meaning that Net Debt was circa three times bigger than Operating Income.

**Forecasts**

At this point, after discussing all the relevant topics and after reformulating all the Financial Statements, I believe I acquired the information needed in order to develop the forecasts for the consequent years.

First of all, the analysis is based on forecasting the Income Statement and the Balance Sheet statement on a time horizon of five years, the main purpose is to get reliable values, which can be used afterwards as inputs for the valuation analysis.

**Income Statement (Appendix 7):** the aim is to forecast the Core Operating Income for the next five years, going from 2016 to 2020, basing the whole work on the available data for the FY2015. Therefore, the starting point was the Revenues for the FY2015 amounting to $6779million, from which I started to detract all the Operating expenses, more specifically Advertising expenses ($824million) and Other core expenses ($1058million) till getting to Operating Income before taxes. Tax rate stood at 35% as reported by the Federal statutory tax of the California State, after which it resulted the Operating Income after tax ($198million in FY2015). This latter differs from the one calculated in the reformulated Income Statement ($229million in FY2015) because I assumed taxes are paid on the OI before tax at a fixed rate of 35%.

At this point, I had the starting values upon which I based my forecasts; the first figure to forecast is Revenues. After the declaration of the company of the considerable Investment program undertaken in FY2016 ($6billion) in new streaming contents and the recent expansion in new countries, I expect the growth in Revenues to remain constant at 24% for the next 5 years as being the CAGR for the last three years. My bullish assumption is also supported by taking into
consideration the peculiarities of this industry, which has high growth expectations. The next
forecasted figure regards **Gross Margin**, which stood at 32% in FY2015 and I expect it to
slightly increase by 100bps in FY2016-2017 and then 200 more bps from FY2018 on following
the trend of the past three years, which showed a constant increase in Gross Margin (+200bps
since FY2013). Afterwards, I forecasted the **Advertising expenses** to remain at 11.5% of Sales
till 2020, as being the average percentage of the last three years; these latter expenses should be
treated as fixed costs but in the past years they grew in line with Sales as a consequence of the
aggressive marketing plan; the future advertising campaign, as a result of the large expected
CAPEX in streaming content, fostered my assumption to treat them as variable rather than fixed
costs. **Other Operating expenses** are mainly related to SG&A expenses and I assumed them to
remain constant at $1,058 billion till 2020 and therefore treat them as fixed costs. At this point, by
detracting these latter mentioned expenses (Advertising and Other expenses) from the Gross
Margin I obtained the **Operating Income before taxes**, from which I further detracted taxes at a
constant rate of 35% according to the Federal statutory rate of the State of California, and I
finally obtained the **Core Operating Income after tax** for all the years going from 2016 to 2020.

**Balance Sheet (Appendix 8):** the same approach has been implemented also for forecasting the
Balance Sheet for the same time horizon of 5 years. Starting from the Assets side I assumed the
**Working Cash** to remain constant for the next 5 years. The assumption is based on the
uncommon amount of working cash hold by the company (17% of Total Assets), which will
probably decrease in the next future, in terms of percentage of Total Assets, due to the large
CAPEX program declared by Netflix Inc., which will grow the Balance Sheet and consequently
reduce the stake of Cash on Total Assets. The second item to be forecasted is the **Streaming
Content**, which currently represents the main item of the Balance Sheet (71% of TA); my
assumption for the forecast foresees that this latter will grow at 24% (CAGR of Sales); the assumption is based on the fact that the revenues are correlated with the amount of Streaming Content as it can be assessed from the graph in Appendix 9. The same reasoning holds for the item **Other Current Assets**, which I forecasted to grow at 24% in line with streaming content. **Other Operating Liabilities** (87% of which are Streaming Content liabilities), I assume them to grow constantly at 25%, as being the CAGR of the Operating Liabilities for the last three years. At this point, the difference between the forecasted Assets and Liabilities resulted in the forecasts of **Net Operating Assets** (for the years going from 2016 to 2020), which represent the second input to be further used in the company valuation.

**Company Valuation Analysis**

As previously stated, the forecasts of the **Core Operating Income after tax** and the **Net Operating Assets** represent the base upon which I built my valuation for Netflix Inc. The valuation analysis foresees the implementation of two models: The **Comparable** and the **Residual Income Model**.

**The comparable model (Appendix 10):** this latter is commonly used in valuation analysis; its intrinsic approach is based on the comparison of the underlying company with analogous corporations operating in the same industry by using specific multiples (e.g. P/E, P/B, and P/S). For the purpose of the valuation I picked the main competitors of Netflix Inc., these are Amazon Prime, YouTube and HBO (they have been previously mentioned in the industry analysis), which are analogous in size and identical in terms of business, although they don’t provide Individual Financial Statements, therefore I had to use the Consolidated Financials of their parent companies, respectively Amazon Inc., Alphabet Inc. and Time Warner, all listed at Nasdaq.
The comparison is based on three key multiples, namely **Price to Earnings**, **Price to Sales** and **Price to Book**, which have been calculated for the three, previously mentioned, competitors on the base of their Financial Statements for the FY2015 and the Market Cap as of 14/12/2016 provided by Bloomberg. The results for the single companies have been averaged out, which resulted in: **P/S at 4.47, P/E at 223 and P/B at 11.7**. These latter have been used as a benchmark and multiplied for the Sales, Book Value and Earnings of Netflix Inc. for the FY2015. The results of the multiplication have been averaged out again and resulted in the **Enterprise value** of Netflix Inc. from the comparable valuation, which is equal to $27.8billion (the value refers to 31/12/2015). This amount is than divided by the number of shares outstanding, amounting to 428 million, resulting to **$65 per share**. This is the first output of the two models applied, which implies that the share price dated 31/12/2015 is overvalued since it was trading at $114.38. Anyways, I remain cautious on the result of this latter model due to the large gap, in terms of size, between Netflix Inc. and the three corporations used as comparable. Moreover, Amazon strongly affected the valuation with uncommon values for the P/E ratio (612) and the P/B ratio (27), which partly explains the gap with the market price, therefore I believe a further analysis should be applied in order to assess another prospective based on different inputs.

**Residual Income Model (Appendix 11):** the Residual Income Model is based on the forecast of future Residual Incomes, meaning the previously forecasted Core Operating Income after tax minus the required return times NOA. As the required return I picked the Weighted Average Cost of capital, as being the most common cost of capital method used in valuation and the more appropriate and reliable hurdle rate because each category of capital is proportionally weighted. The WACC can also be stated as:

\[
WACC = \text{Cost of Equity} \times \left(\frac{\text{Eq.}}{\text{Eq.} + \text{Debt}}\right) + \text{Cost of Debt} \times \left(\frac{\text{Debt}}{\text{Eq.} + \text{Debt}}\right) \times (1 - \text{tax rate})
\]
The Cost of Equity has been calculated by applying the Capital Asset Pricing Model, which is widely used to price securities or to calculate the cost of capital. It follows the subsequent calculation: \( \text{CAPM} = rf + \beta (\text{market return} – rf) \)

As the risk free rate, I took the 10-year T-bill as of 14/12/2016 that stood at 2.48%, I acknowledge that LIBOR/EURIBOR could be used as the best risk free rate because the probability of default of the U.S.A cannot be exactly zero, although the 10 year T-bill covers the time horizon of the valuation differently from the other two. The Beta is equal to 1.44, according to Nasdaq; the large beta can be explained by the high volatility of the stock as showed in appendix 13. The market return, instead, refers to the market return of the Nasdaq Composite Index (8.67%) for the FY2015, since Netflix Inc. is listed under the Nasdaq Index that comprises all the technological corporations, therefore I believe it is the most appropriate market return to be considered for the calculation of the Cost of Equity. As a consequence, the cost of equity is equal to 11.4%.

Regarding the Cost of Debt, its calculation is as follow:

\[
\text{Cost of Debt} = \left(\frac{\text{Financial expenses} + \text{Interest Expenses}}{\text{NFO}}\right)
\]

All the items have been taken from the reformulated Financial Statements for the FY2015 and resulted in a Cost of Debt of 9.3%.

At this point, I was able to calculate the WACC, equal to 9.0%, which will be used as the required rate of return for the Net operating Assets and also as the hurdle rate to discount the future cash flows.

The next step involved the calculation of the future residual incomes from the year 2016 to 2020, which can be derived as follows:

\[
\text{RE} = \text{Core OI after tax} – (\text{NOA} \times \text{WACC})
\]
At the end of the year 2020, I forecasted a perpetuity \( \frac{CF*(1+g)}{(r-g)} \), because forecasts exceeding 5 years could be unreliable for the valuation; therefore, I used the residual income for the year 2020 as the base year; for the perpetual growth I took the expected World GDP growth for the FY2020 (3.8%) according to the IMF and as hurdle rate I maintained the WACC previously calculated. At this point, I had obtained the residual incomes for the years going from 2016 to 2020 and the perpetuity value, which was already discounted at year 2020. The following step entailed calculating the Present Value of all these latter Cash Flows and sum them with the Net Operating Assets, as of 31/12/2015, ($3.9billion) in order to get the Enterprise Value, which was equal to $29.5billion. From this value, I then further subtracted Net Financial Obligations ($1.7billion) as of 31/12/2015 and obtained the EV net of NFO according to the model. The last step entailed the derivation of the share price, calculated as the value of Equity over the number of shares outstanding (428million), which amounted to $64.95, $49 lower respect to the share price traded at NASDAQ on December 31st 2015. The model suggests that the share price was highly overvalued at the time and in line with the comparable model previously applied, which provided a share price of $65. The large gap of $49 could be partly justified by the conservative assumptions I made in the model (e.g. advertising expenses as variable costs) and also by the premium the market is willing to pay for the stock, fostered by the high growth expectations.

**Sensitivity Analysis**

A sensitivity analysis was conducted in order to depict different possible developments for Netflix Inc. stock price deviating from the forecasts made above. For the development of this latter analysis I picked two main variables that in my opinion will have a strong weight on the performance of the company, these are: the **growth in Sales** (CAGR of 24% for the last three years) and the **perpetual growth** used for the calculation of the continuum value in the Residual
Income Model. I believe that the growth in Sales is difficult to forecast due to the high volatility of the industry and consequently also the perpetual growth due to its intrinsic uncertainty. The range for the Sales growth goes from 14% to 34%; starting from the forecasted value of 24% I adjusted the two adjacent values for 200bps, the subsequent two for 300bps and the last two for 500bps, in this manner I was able to obtain three central values, which are the most likely to occur and, as moving towards the edge of the range, obtaining values which represent the extreme cases. The same reasoning holds also for the perpetual growth range even if the adjustments are made in decimal (20bps,30bps,50bps). In the Appendix 12, it is interesting to assess how these two variables could influence the share price of Netflix Inc. in the future, ranging from the lowest value of $41 in the worst case scenario and the best case scenario with the share price at $97. Therefore, not even the most bullish assumption (34% Sales growth and 4.7% perpetual growth) of the model provide a share price close to the traded one. Although, I thought there is another important variable that may have a great weight on Netflix Inc.’s performance, which is Advertising expenses as percentage of Sales. In Appendix 12, it can be assessed that a decrease in these latter costs could make the share price surge up to $134 in the best case scenario, since marketing costs directly affect profitability and therefore the Core Operating Income after tax. To be noted that I considered these costs as variable rather than fixed in the forecasts, since I based my assumption on their historical trend; this means that there could be some headroom for a decrease of advertising costs in terms of percentage of Sales, although it remains really difficult to predict, that’s why I preferred to apply a conservative approach in the forecasts of marketing expenses.
Conclusions

The Work project was mainly centered on the analysis of the company as a whole, although the final purpose was to develop a trading strategy for investors interested in Netflix Inc. The first valuation, based on a multiple analysis, clearly shows that the share is overvalued by $49 and suggests to short the stock, although, as already stated above, the output should be considered just as a benchmark and not as an absolute value due to the high variance of the inputs used in the analysis (Sales, Earnings, Market Cap). Therefore, I mainly focused on the forward-looking approach, which is more reliable, although more sensible to changes. After forecasting the expected incomes for the next five years, the result of the Residual Income Model concludes a share price of 65$, perfectly in line with the comparable model, hence, it can be deducted that the share of Netflix Inc. (Appendix 13), which was trading at $114 on December 31st 2015 was strongly overvalued. At the same time, it can be assessed from the chart that a large drop occurred in the first two months of 2016, where the stock hit $79 in February 2016, which partly justifies the result of the valuation.

To conclude, the sensitivity analysis suggests that there is headroom for an increase in the share price but only in relatively bullish circumstances, which are unlikely to occur, or in the drop of marketing expenses, difficult to predict. Anyways, the $49-dollar gap could be partly justified by the fact that the market priced the stock for its future thriving expectations and not only on its past performance, therefore comprising a premium for its future expected returns, but still too large to be considered a premium. After analyzing the outputs of the valuation and considering the high volatility of the stock, my final recommendation is to short the stock of Netflix Inc., as being highly overvalued and therefore not a thriving and attractive asset for investors.
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