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Valuation Analysis and Future Trend Outlook of Entertainment & Media Industry Based on DCF Model

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Abstract: As the epidemic's impact on the economy decreases, various industries gradually get on the right track. The rapid development of the entertainment & media industry is also gradually slowing down, and major platforms are also facing the problem of how to overcome the high cost of content creation. Therefore, investors have gradually blurred the valuation accuracy of companies in the industry and have been unable to make accurate decisions. In this paper, Netflix is taken as an example to use the DCF model for valuation to compare the reasons for data differences and use the CAPM model to calculate WACC and try to calculate reasonable capital expenditure. At the same time, qualitative research and macro-economic perspective are used to analyze the reasons for the differences in various terminal values, such as model defects, fierce industry competition, and ESG ranking changes. This reflects the complexity and particularity of the valuation of enterprises in the cultural media industry.

Keywords: Entertainment & Media Industry, Discounted Cash Flow Model, Financial Valuation.

1. Introduction

Efficient enterprise valuation methods can help investors understand the intrinsic value of the enterprise and its position in the overall market, to help consumers make better investment decisions that can create more profits. From a macroeconomic point of view, as the climax of the rapid development of the cultural media industry brought about by the epidemic has gradually faded, GenAI(generative artificial intelligence) is expected to provide a new boost to the cultural media market in the future, especially in reducing the cost of creation [1]. With the continuous and rapid development of the streaming media market, more consumers are transforming from the demand side to the supply side, that is, becoming individual media creators and earning profits from them. According to the industry research report of professional institutions, it is predicted that by 2028, the E&M industry will reach 4.3 trillion US dollars in economies of scale [2]. The cultural media industry can be simply divided into two parts: traditional media and emerging media, such as streaming media platforms such as Netflix and YouTube, which are developed through the innovation of digital platforms. Traditional media mainly focuses on paper media or television broadcasting. However, with the large-scale application of digitalization, the traditional media industry has gradually weakened. Users are more inclined to obtain information through the use of efficient and rich digital media. This has also led to the obvious trend of vertical integration in the cultural media industry, and

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more and more companies are facing the crisis of merger or restructuring. Content creation has always been the core of the cultural media industry. Personalized content push, acquisition and retention of existing subscribers, and online and offline marketing are the keys for enterprises to improve market competitiveness. At the same time, the upward trend of cross-media integration in recent years is obvious, and the improvement of digitalization and Internet technology also brings more possibilities for the integration of various platforms. The future growth potential of enterprises in the cultural media industry cannot be ignored, especially when the industry is likely to be in a period of rapid development in the future. Therefore, this paper will use the DCF model to conduct a comprehensive valuation analysis on the intrinsic value of leading enterprises in the cultural media industry and the company's shares and cash flow, to try to provide an updated evaluation method for the average valuation of the cultural media industry.

2. Company Description: Netflix

Netflix Inc., a leading company in the world's cultural and entertainment industry, was founded in 1997 and is an American company listed on the NASDAQ GS Exchange. The company offers subscriptions to more than 230 million users worldwide in 2023 [3]. In addition to providing subscription services, the company's main source of revenue is through merchandise sales or cross-activity with other platforms to increase the company's profits. According to the macro environment, due to the gradual reduction of the impact of the epidemic, people's demand for streaming media services has gradually weakened, and they are more willing to obtain sports, tourism, and other services. At the same time, the economic downturn has led people to choose short-term rather than long-term subscription services to reduce consumer spending. However, due to the further development of Netflix's international expansion structure strategy, Netflix did not reduce the yield due to the saturation of the US market but deeply cultivated in the emerging and rapidly developing Southeast Asian market. As a result, Netflix has a P/E ratio of 44 times in 2024, which indicates consumer confidence in the company's ability to do business in the future. At the same time, the company's P/B ratio (14.1x) and P/S ratio (8.6x) are also much higher than the market average ratio of 1.1x and 1.4x respectively [4]. That could push up the market's valuation of Netflix. Although the company's profitability shows a strong upward trend in 2024, the continued high cost of content production also puts pressure on the company's debt. Therefore, in recent years, Netflix has tried to increase the company's cash flow by operating marketing activities, to alleviate the problem of excessive debt caused by the previous capital structure. From a qualitative perspective, in the past five years, Netflix's debt-to-equity ratio has decreased from 206.3% to 63.2%, which indicates that the debt problem has been fully alleviated [4]. In this paper, the CAPM model will be used to provide a rate of return that combines the systemic risks that consumers need to bear, and then the DCF model will be used as the discount rate for valuation analysis.

3. Calculation of WACC

$$WACC = E/V * Re + D/V * Rd * (1 - T) + Rp * P/V \quad (1)$$

Rx = cost of particular type of capital(i. e. the required return)

E = market value of common stock = # outstanding shares times price per share

P = market value of preferred stock

D = market value of debt = outstanding bonds times bond price

Value of firm = market value of the firm = P + D + E

Tc = tax rate (corporate)

The risk-free rate is the yield on a bond when it is deemed to have no risk of default. This is usually measured by the yield on the US 10-year Treasury note, which reflects the risk expectations of the

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long-term market in the future [5]. The beta coefficient is a standard to measure the degree of market volatility, when the beta value is high (>1), it indicates that the volatility of the company's stock is greater than the market volatility, when the beta value is small (<1), the opposite is true. According to the Financial Network Platform, as of October 2024, Netflix's Beta (5Y) is 1.26 [6]. That means Netflix's stock price moves about 26 percent more than the overall cultural media market. The market return (Rm) is determined by the long-term average return of Netflix's stock of 13.8%, which indicates that the market expects strong economic growth in the future [7]. At the same time, because Netflix does not issue preferred stock, the profit from the preferred stock is not calculated into the WACC value [8]. According to the CAPM model ($re = rf + beta(rm - rf)$), the expected return (Re) of the market will be 16.2% [9]. For relatively high return expectations, this indicates a high-risk premium and a perception that Netflix has high growth potential. Because Netflix does not issue preferred stock, the profit from the preferred stock is not calculated into the WACC value. According to the latest data, the sum of the Yield to Maturity of all bonds held by Netflix divided by the number of types of bonds held gives an average yield to maturity figure of 5.475% (Rd) [10]. Over the past year, Netflix has paid $1.09 billion in taxes, an effective tax rate of 13.33 percent. According to the latest Netflix financial report, the total value of the company's short - and long-term debt is $13.98billion, and the total market value of all common shares is $314.249billion, making Netflix one of the most valuable companies in the cultural media industry [10]. Therefore, according to the calculation, Netflix's WACC equals 15.76% as of October 2024. However, according to GuruFocus, Netflix's official WACC as of October 2024 is 15.66% [11].

4. DCF Valuation

Table 1: Basis Factors in 2024 for Forecast

US risk free rate	Beta	Rm	Market premium
4.4%	1.26	13.8%	9%
Re (CAPM)	Current yield to maturity=Rd	Tax rate	Total value of equity (E)
16.2%	5.475%	13.33%	$314.24B
Total value of bonds (D)	D/E	WACC	Net Income ($million)
$13.98B	0.0449	15.76%	7,090
Depreciation Expense ($million)	Cashflow From Operation (CFO) ($million)	Interest Expense ($million)	Capital Expenditure ($million)
15,114	22,087.852	741	339.560

Table 2: Firm Value Estimation in 2024-2029

	2024	2025	2026	2027	2028	2029
FCFF ($)	22,390,516,700.00	23,883,964,163.89	25,477,024,573.62	27,176,342,112.68	28,989,004,131.60	30,922,570,707.18
Growth rate		6.67%	6.67%	6.67%	6.67%	6.67%
Terminal value				$340,182,296,008.53		
Valuation of Netflix at 2024 (EV=NPV of cash flow) ($)				262,749,880,790.87		

Discounted cash flow is to predict the company's future free cash flow through historical financial data and assume that the company is in a state of continuous growth, and then calculate the weighted

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average capital cost maximum discount rate through the capital asset pricing model, and then discount the future cash flow to the present to calculate the terminal value [12]. At the end, add its terminal value to all the predicted cash flows to get the total value of the company. In order to calculate the free cash flow in 2024, this paper takes net income plus depreciation expense in 2024 and then adds adjustment of working capital in 2024, cashflow from operation (CFO) in 2024 (see Table 1). After calculating the cashflow from operation for 2024, add interest expense and subtract capital expenditure to arrive at the FCFF for 2024.Since the major part of Netflix's revenue model is realized through long-term subscriptions by users, the DCF model can more clearly analyze the future growth potential of Netflix, because the model shows the future competitiveness and potential long-term return by calculating the future cash flow. Another benefit of using the DCF model is flexibility, as the DCF model is very much affected by different assumptions to change the situation. Different researchers may create different assumptions. Therefore, investors can make correct judgments based on their personalized calculation of the valuation changes of the company. Third, the DCF model calculates the internal value of Netflix rather than the external value, which can help investors better focus on the long-term value of the company and not give up investment in the company due to short-term market fluctuations. This study assumes that Netflix's growth rate will be constant over the next five years. This means that Netflix's annual revenue will grow at a steady rate of 6.67%, but this is obviously in the actual application of error. Because this does not take into account changes in the market environment and the internal revenue organization of Netflix. According to the stock analysis, Netflix's net income, depreciation expense, growth rate, and capital expenditure for 2024 are disclosed. According to Table 2, the WACC is 15.76% and the long-term growth rate is 6.67% [13]. This means that the long-term growth rate is approaching the weighted average cost of capital. As a result, Netflix is expected to maintain its upward growth potential in the coming years, but the above-growth rate WACC through 2024 indicates that investors are concerned about the company's continued profitability. If this trend continues, Netflix may need to further restructure its capital structure to achieve efficient use of capital.

5. Experimental Data Analysis

Based on the above model, the final enterprise value is $340,182,296,008,53. However, Netflix officially disclosed that the final value of 2024 is $154billion [11]. Therefore, the final value of Netflix obtained by the model is much higher than the actual enterprise final value disclosed by Netflix. This phenomenon can be divided into three aspects. First, in terms of model calculation, a constant and optimistic growth rate assumption is adopted in the DCF model in this paper. Because in reality, the growth rate will not be maintained at a constant level according to market changes, and the growth rate of the final value will usually be lower than the long-term growth rate of GDP, to avoid overestimating the final value of the enterprise. This results in an overestimation of Netflix's enterprise value in this model and less pressure to estimate content costs. Compared with the officially disclosed WACC, WACC tends to be similar but still slightly higher, which may be a higher forecast of the return required by the company's shareholders and creditors and a higher risk estimate for Netflix. In addition, this paper lacks the impact of competitors, changes in content costs, changes in subscriber numbers, and global economic or policy changes that lead to higher projections of Netflix's future cash flow (FCFF). Because market uncertainty and competition risk are the cultural media industry, such a rapidly developing industry, a risk factor that cannot be ignored. At the same time, the DCF model also considers the long-term intrinsic value of the enterprise and ignores the short-term reversal signal, which leads to blind optimism about the valuation of the enterprise. Second, as mentioned above, the valuation of Netflix will also be affected by the macroeconomic environment of the cultural media industry, thus affecting the company's profit potential. According to Porter's Five Forces model, the platforms with strong brand influence in the cultural media industry are those

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with high market share, such as Disney+ and Amazon Prime Video [14]. Each of these companies has a very rich content IP and a very loyal subscriber base. However, although the cultural media industry is easy to enter the market, the development potential for new companies will be relatively reduced when Netflix and other big brands have almost occupied the European American markets, and Asian markets and have formed brand effects. As a result, Netflix's terminal value may not change dramatically in the future. But it's worth noting that the threat of alternatives, such as TikTok or video games, could make Netflix overvalued. Because users may be attracted to other novelties to reduce subscription stickiness to Netflix, this may also be a factor in user mobility that is not considered in this article. In addition, the expense chosen in this paper may be low because it does not take into account the bargaining power of suppliers, such as well-known directors, actors, film production companies, etc. These people may make Netflix pay higher fees for exclusive IP and popularity, which will make content creation more expensive than expected. At the same time, when users are more sensitive to price, users have more options for subscribing to services. To retain customers, Netflix has to increase discounts or packages, but this will lead to lower profits for Netflix. The third reason for the difference in valuation is that ESG scoring factors are taken into account in this model. The ESG score is designed to reflect a company's governance performance in three aspects: environmental protection, social responsibility, and corporate governance [15]. A high ESG score may mean that the company has a high corporate reputation and brand value. According to Sustainalytics, Netflix has an ESG risk rating of 15.5, which is low risk. This suggests that investors with a long-term focus on sustainability would be more inclined to invest in Netflix. Because a company with lower risk may be perceived as having a good ability to manage risk and a lower risk premium, the WACC index of Netflix will decrease due to the lower cost of capital, resulting in the DCF valuation in this study being higher than the official disclosed valuation.

6. Conclusion

As investors pay more and more attention to the streaming market, the market capacity continues to expand. At the same time, the subscription model of streaming media has changed from a single monthly or annual package to a multi-platform partnership. At the same time, the future cultural media industry will introduce Gen AI as the basis for content innovation, to provide future users with more personalized services and increase the user stickiness of the platform. In recent years, Netflix has gradually expanded into the Southeast Asian market to find more profit opportunities. In particular, Netflix has a large market share in the European and American markets and has diversified profit models, so it will be easier to enter emerging markets. However, the competitive environment in other areas of streaming is also fierce, with companies in the industry facing significant financial challenges due to the increasing cost of content. As a result, companies are trying to expand into the gaming business to balance costs and profits, thereby contributing to future company valuations. Secondly, the results obtained by using the DCF model for valuation vary from person to person, because it is very difficult to accurately predict the cash flow of a rapidly developing enterprise, and the solvency of an enterprise cannot be accurately calculated. Several macroeconomic factors such as persistently high inflation, fluctuations in the RMB exchange rate, and natural environmental impacts will affect the company's ability to operate. Therefore, investors need to combine multiple factors to reasonably evaluate enterprises and make investment decisions.

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