

Current Situation of Online Video Websites: Comparison of Financial Data of Bilibili, Youtube, And Netflix

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Abstract. In this study, the author first analyzes the market situation of advanced online video websites, and is interested in three important video websites: Bilibili, YouTube, and Netflix. He hopes to explore whether they are worth investing by analyzing the financial data of these three companies. By comparing the data of these three companies, this research shows that the market value of Bilibili's equity and debt is relatively low compared with YouTube and Netflix. YouTube's equity beta is significantly lower than that of Bilibili and Netflix, which indicates that its stock is not very sensitive to market fluctuations. Netflix and WACC have the lowest commercial risk among the three companies. YouTube has the highest expected return on all equity, and Bilibili's business model is the same as YouTube. However, due to China's immature system and relatively strict censorship system, its profitability is still very different from that of Youtube. For investors, Netflix is the company with the most stable returns, while YouTube is the company with the highest returns. Since Bilibili was established late, it still needs time to improve and adjust itself to achieve a more stable business model. Whether it is worth investing requires investors to further observe the changes in the market.

Keywords: Finance; Online video website; Business.

1. Introduction

The traditional TV industry has begun to decline since the high-speed development of the internet. As the result, people are more and more inclined to watch film and television works or original videos on more convenient video websites. Especially with the arrival of the epidemic, online entertainment has become an indispensable part of people's lives, and these video websites have also ushered in development. Among many video websites, YouTube from the United States has become a fashion among not only young people but also elder adults. Due to its rich and diversified video elements and free creation environment, Netflix is also favored by consumers because it can provide high-quality film and television works. In China, Bilibili, which is mainly based on ACG video content, is gradually rising with the huge consumer market of young people and has gradually become the most popular video creation website in China. As the most successful enterprises in this industry, the financial reports of these three companies can well reflect the current development of video websites in China and the United States. Through the research and interpretation of their financial reports, we can also understand which market is more stable, more worthy of investment, and which model can best adapt to the contemporary era.

By establishing a model, which can evaluate the impact of social media posts published by the company on brand equity to measure the response value of users of these social media to these posts, Shay and Van Der Horst analyzed the posts posted by 25 enterprises on Instagram, Facebook, and Youtube in September 2017. The study found that positive user response has a positive relationship with online access, and the higher the frequency of Posts initiated by the company, the greater the negative impact on online access [1]. Through analysis of the technology design, service design, organization design, and financial design of TikTok, Mhalla et al. analyzed in detail how TikTok's new business model has rapidly occupied the market of video users within three years. Mhalla and Nasiri found that free and only a small number of advertisements helped Tiktok attract a large number of users, and its advanced data computing capabilities also helped it quickly addict users [2]. By using a breadth-first search (BFS) and classifying the videos based on their length, size, and category, Cheng, Liu, and Dale analyzed the characteristics of youtube videos from February 2007 to

September 2008. The study found that compared with traditional streaming video, youtube video has significantly different statistical data in length, access mode, and active life [3].

The causal loop diagram and system dynamics simulation are used by Choi to study how the adjustment of revenue sharing rules affects the participants of mobile video services, and the resulting changes in the number of users and total revenue. The research finds that changes in revenue-sharing rules among participants can promote the sustainability of the video ecosystem [4]. By using the planned behavior theory, Yang, and Wang analyzed the data of two online surveys conducted by 318 American college students and 370 American ordinary consumers from April to May 2012 and analyzed the attitudes of people who shared online video sharing and their intention and behavior in America. The results show that the important predictors of College Students' and ordinary consumers' attitudes towards online video sharing are pleasure and cost [5]. Hu found that the development of Chinese online video is full of young people's self-creation and cognitive struggle. Under the influence of such complex factors as Chinese subtitle groups, state intervention, and market competition, private video websites have experienced a process of oscillation between piracy and insistence on copyright. Different levels of competition and cooperation are shown among private video websites, state-owned video websites, and subtitle groups. This study also emphasizes the labor input of supporters of some subtitle groups, which paradoxically integrate into the market strategy of the video website, but violate the market strategy of the video website [6].

By using the methods of cluster analysis and factor analysis, and based on the data collected from a national survey of Dutch high school students in the last two years, Constantinides and Zinck try to understand how students choose their future academic direction and goals under the influence of social media. The study found that social media had little impact on these choices of students [7]. Through analyzing how China's online video service platform adapts to changes in the industry pattern when negotiating with national policies, advertisers' interests, and user preferences, Zhao reveals the interaction between the state and the market under the background of globalization and the marketization of the media industry, and how the situation becomes more complex when state-owned or controlled media enter the emerging market sector [8]. In the research, Khang and Ki observe the phenomenon of social media in practice and academic fields and study the main direction of the research focus on social media in the past 14 years. The research results show that the number of research related to social media has increased significantly, which indicates that scholars are paying more and more attention to the impact of social media in recent years. At the same time, the growth of the use and influence of new media has also affected the attention of scholars, who want to keep up with the development of society [9].

Previous studies have described the market situation of online video websites. To explore whether this market is worth investing in, the financial data of the three large enterprises will be calculated and compared. The three companies are YouTube, Bilibili, and Netflix.

2. Method and data

2.1 Method

In this study, many important financial indexes and formulas of the companies studied will be calculated and compared. The market value and equity and the market value of debt are two basic and direct data that can show a company's financial situation.

The leverage ratio refers to how enterprises use liabilities to adjust the return on equity capital. In other words, it reflects the situation of the company's financing through debt.

Leverage ratio = Total Debt / (Debt + Equity + Minority Interest + Preferred Stock)

Equity beta and business risk (asset beta) both measure the volatility of a company's stock return against market fluctuations, and the difference between them is that equity beta takes debt into account while the other does not.

D/E= (Short term debt + long term debt + other fixed payment)/ shareholder's equity

Equity Beta = (p1 * r1) + (p2 * r2) + + (pn * rn)

Business risk (asset beta) = Equity Beta / (1+((1-Tax Rate) *(Total Debt/Equity)))

All-equity-expected return on asset measure how profitable a company is about its assets.

All-equity expected return on assets = Net income/Total assets

WACC refers to weighted average cost of capital, which represents the overall average capital cost of the company and can be used to measure whether a project is worth investing - the return of the project must not be lower than WACC.

$$\text{WACC} = \sum_{i=1}^N r_i * MV_i / \sum_{i=1}^N MV_i$$

2.2 Selected companies

As a website with ACG content as its core, Bilibili was originally a video website with animation secondary creation videos and Japanese animation videos as its main content. However, with the participation of more and more young users, Bilibili's content has become more and more diversified, and it has gradually become the largest video creation platform in China. It has been listed in the US stock market and Hong Kong stock market, becoming the most successful video website in China.

YouTube, as the most popular and recognized as the most successful video website in the world, is well known by consumers from all countries. Through the mature business system and advanced big data processing system, the tubing can always accurately provide users with interesting videos to maintain the user's activity. Therefore, many commercial companies hope to put advertisements on their platforms, which brings them huge commercial profits.

Netflix is one of the most important video websites in the United States. It can stably provide consumers with high-quality genuine film and television dramas to attract consumers to become paying users. It also actively participated in the production of film and television works and invested in popular TV dramas such as squid games, love death, and robots, which are loved by consumers.

3. Results

As shown in Table 1, The market value of equity of these three companies is 1,500 billion, 9.99 billion, and 100.01 billion, and the market value of debt of these three companies are 19,100 million, 2,568 million, and 27,583 million. YouTube has the highest market value of equity, Netflix has the highest market value of debt, and Bilibili has the lowest market value of equity and debt. Netflix has the highest leverage ratio, which is 2.81, YouTube has a leverage ratio of 1.41, and Bilibili's is 0.37. Bili has the highest debt-to-equity ratio, which is 0.92, while YouTube and Netflix are 0.08 and 0.75 respectively. The WACC of each company is 13.17%, 11.30%, and 8.40% [10]. The business risk of YouTube and Bilibili is 2.21 and 1.57, while Netflix has the lowest, which is 0.94.

Table 1. Financial values of three listed companies

	YouTube	Bilibili	Netflix
The market value of equity	1,500 Billion	9.99 Billion	100.01 Billion
The market value of debt	19,100 Million	2,568 Million	27,583.5 Million
Leverage ratio	1.41	0.37	2.81
Debt-to-equity ratio	0.08	0.92	0.75
Equity beta	1.1	1.57	1.28
WACC	13.17%	11.30%	8.40%
Business risk	2.21	1.57	0.94
All-equity expected return on assets	20.50	2.9	11.7

4. Discussion

Firstly, it can see that Bilibili, as a relatively young enterprise, has a relatively low market value of equity and debt compared to YouTube and Netflix. This is because YouTube and Netflix have been trying and innovating in the market for a long time, thus establishing a complete business model.

At the same time, these two enterprises participate in more markets and are more internationalized, so they are more familiar to investors and consumers. Therefore, investors can have more confidence in the value of these two enterprises. The equity beta of YouTube is significantly low compared to that of Bilibili and Netflix, which proved that its stock is not very sensitive to the volatility of the market, which also proves that investors are very confident in its business performance, which makes them keep calm with the changes in the market. Netflix has the lowest business risk and WACC compared to the other two companies since it can provide consumers with high-quality TV dramas and movies stably. The user activity of YouTube and Bilibili is not stable, because they are very dependent on the work quality of video creators, which is difficult to control. Last but not least, YouTube has the highest all-equity expected return on assets, which proves that it is still the most effective company in the field of making profits. Due to its mature advertising system and a huge number of users, it has always been a live streaming platform trusted by various advertisers. Although Bilibili's business model is the same as YouTube's, its profitability is still very different from YouTube's due to the immaturity of its system and China's relatively strict review system. Taken together, YouTube and Netflix have gained investor confidence with their earlier establishment time and years of business experience, so they are better than Bilibili in almost all data, and their business returns are more stable. Bilibili, on the other hand, has maintained its competitiveness in China's huge market and is successfully listed on the US stock market.

5. Conclusion

This study shows that the market value of Bilibili's equity and debt is relatively low compared to YouTube and Netflix. YouTube's equity beta is significantly lower than that of Bilibili and Netflix, which proves that its stock is not very sensitive to market fluctuations. Netflix's commercial risk and WACC are the lowest among the three companies. YouTube has the highest expected return on all equity, and Bilibili's business model is the same as YouTube. However, due to the immature system and the relatively strict censorship system in China, its profitability is still very different from YouTube. For investors, Netflix is the company with the most stable return, while YouTube is the company with the highest return. Since Bilibili was established later, it still needs time to improve and adjust itself to realize a more stable business mode. Whether it is worth investing requires investors to further observe the changes in the market. These three enterprises in this study are all giants in the market, with relatively stable financial resources and high popularity. There are still many small companies or websites in the market, such as AcFun in China. Future research can focus more attention on these companies to obtain a more informed analysis of the entire online video market.

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