Financial Analysis and Risk Study of Global Film Companies: A Case Study of Warner Bros. Entertainment, Inc

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Abstract. The income of the film industry mainly depends on the box office, but the COVID-19 epidemic in the past three years has led to the suspension of cinemas in many regions, the postponement of films under production, and the postponement of the release of films, which has the most direct impact on the film industry. Therefore, this paper takes Warner Bros. Entertainment as an example, this paper introduces the reasons why the film industry is chosen and why Warner Bros. Entertainment is chosen. At the same time, through the introduction of Warner Bros. and the trend of its financial data in the past five years, we can analyze the possible crises and opportunities that the company may encounter. At the same time, we also conducted an industry analysis of the global film industry through this company and gave the specific crisis and the formation of opportunities.

Keywords: Movies, Financial analysis, risk prediction.

1. Introduction

1.1. Background

The prosperity of culture is an important embodiment of national prosperity, and the film industry is the most important way to export culture. For both private and public investors, the rapid growth of the global film industry has put a spotlight on the industry. It has grossed tens of billions of dollars worldwide, including home entertainment revenue. Moreover, investment income in the film industry has always been stable compared with other industries. Demand for movies has remained steady even during the economic downturn. As a result, film has consistently outperformed other industries during many turbulent times. Warner Bros. Entertainment, as one of the "Big Five" film studios in the United States and one of the world's largest film production and total box office, has performed relatively well in the market compared to other industries, even during the pandemic. However, the amount of money needed to make a film and the risks involved are often enormous, which is why the investors in film investment are usually institutions. Therefore, before making a decision, it is necessary to compare and analyze the important financial indicators of the industry. Perhaps, after some serious thought, we can also make a relatively decent income from this good and robust industry.

1.2. Related research

1.2.1 Current situation and development of the global film industry

Pinn notes that more attention is needed behind the scenes than at global studios, where ticket sales and ticket prices have soared. By understanding how producers and distributors want to demonstrate the integrity of a film at the lowest cost, the study found that industry standardization processes have led to order in an otherwise complex film supply chain, making the film industry a less risky presence in many industries [1]. Choi and Min explored the impact of trade barriers and cultural distance on the film industry's domestic market share. The panel data were analyzed by the two-stage least square method and instrumental variable method. The empirical results of this paper show that cultural distance and market size are important factors affecting domestic market share. Trade barriers are also an important factor, but their impact on domestic market share is much smaller than that of market size [2]. By analyzing the differences in many important economic indicators and environmental factors of the global film industry under the epidemic, Yaqoub Muhammad concluded:

that the arrival of the epidemic made the global film industry enter a low period, but China's control of the epidemic made its film industry still flourish [3].

1.2.2 The events of Warner Bros. Entertainment

Pokorny and Sedgwick focused on the more tightly controlled studio system at Warner Bros. during the interwar period and an industry characterized by a high degree of vertical integration. Through this paper, in addition to its systematic defense, Warner Bros. draws people's attention to the variability and structure of production budgets by applying portfolio theory. This strategy is very successful in responding to changes in the economic environment [4]. Pokorny and John Sedgwick, after examining the performance of Warner Bros. in the 1930s, concluded that deploying famous stars in high-budget productions does not seem to be a successful strategy in terms of assessing the success of the strategy of investing in stars. In contrast, using previously successful actors in medium/low-budget productions yields clear returns [5]. By paying attention to the Russian court's handling of the film piracy case of Warner Brothers, Blagov concluded that Warner Brothers had a strong ability to deal with the crisis of the company in this case. At the same time, this paper also pointed out that Warner Brothers had a strong ability to resist risks in the industry and to withstand pressure from public opinion [6]. Stahl reviews the famous DeHavilland v. Warner Bros. Motion Picture Corporation (1944) appeals court decision, as well as the lesser-known approach of lower court precedents to explore the "different assumptions related to employment, employers and employees" of these decisions. In this study, Warner Bros. realized the importance and risk of stars promoting movies through this incident [7].

1.2.3 Financial analysis of the film industry

Bi and Giles used extreme value theory to model U.S. film box office receipts for the period January 1982 to September 2006, and in this way to provide references for actual or potential investors in the film industry. In addition, this paper also shows how to use extreme value theory to simulate the tail of the distribution of weekend movie box office revenue in the United States [8]. Watson and Glyn analyze the film or film industry supply chain and the power system within it and find the problems that arise when there is an asymmetry of power between buyers and suppliers, which is further complicated by risks and uncertainties. It further leads to interest entanglements among participants, which makes the investment risk of the industry increase [9]. In a film industry known for its high stakes, sequels, and adaptations stand out, Kim has found. The authors then analyze which types of film adaptations succeed at the global box office based on two main indicators of theatre performance: gross and profit. This paper concludes that sequels based on novels, comic books and toy series are very profitable in terms of global box office profits [10].

1.3. Objective

This article will analyze the operation of Warner Bros. Entertainment Company in recent years by studying several important values in the financial data. At the same time, it will also give the opportunity and risk that the film company may face based on the analysis. The second chapter mainly analyzes five important financial data -- total operating income, net profit, ROA ROE and asset service ratio. The third chapter mainly presents the opportunities and challenges facing the company and the industry as a whole.

2. The Introduction of Warner Bros. Entertainment, Inc

Warner Bros. Entertainment, Inc. (Warner Bros. or Warner), founded in April 1923, is one of the world's largest film and television entertainment production companies. Its business scope is movies, television programs, music recordings, games, and publishing. Among them, the company's major works are "Batman", "The Matrix", "Harry Potter", "Gravity", "Interstellar".

2.1. Total Op Revenue

First of all, from the annual report data provided by the Wind app, it can be seen that Warner Bros. Discovery's total revenue in 2018 was 105.53100 million US dollars, an increase of 53.54%. In 2019, at the beginning of the epidemic, its total film revenue was $111.44100 million, an increase of 5.60%. In 2020, its total operating revenue continued to decline to $106.711 million, down 4.24% year-on-year. However, in 2021, the company's total operating revenue began to rise to $121.911 million. By 2022, its total operating revenue reached a new high of $338.17100 million, a year-on-year growth rate of 177.39%. Therefore, in terms of the changing trend of the company's total operating revenue, the overall realization of the total economic benefits generated by the daily business of Warner Bros. Discovery is excellent. At the same time, this means that the larger the company's enterprise-scale, the better the product sales. However, according to the official forecast of total revenue in 2023, the future performance of the company is not fixed, as shown in Fig. 1.

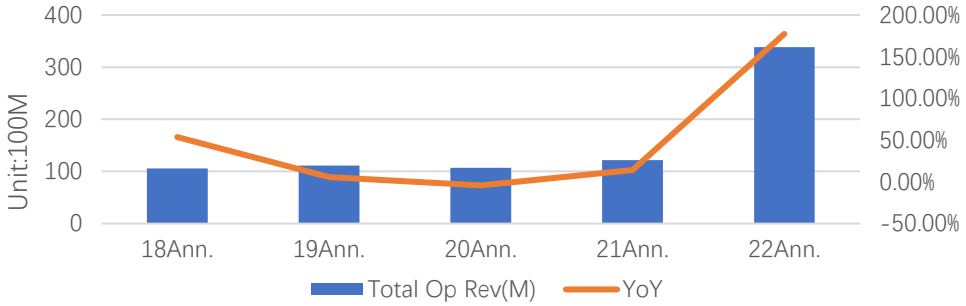


Figure 1. Total Operating Revenue in the last five years of Warner Bros. Entertainment, Inc

2.2. Net Profit

Secondly, according to the annual report data of several years, the net profit of Warner Bros. Discovery in 2018 was very good, reaching 5.94100 million US dollars, an increase of 276.26%. In 2019, its net profit peaked again, reaching $20.69100 million, an increase of 248.32%. However, in the years of the pandemic, the company's net profit has declined significantly. In 2020, its net profit was $12.19100 million, down 41.08% from the previous year. By 2021, the company's net profit only reached $10.06100 million, down 17.47% year on year. In 2022, its net profit hit a record low of -73.711 million US dollars, down 832.70% year-on-year. This means that the company has a huge funding problem, and the expenses greatly exceed the revenue. Therefore, from the data of the last five years, the performance of Warner Bros. Discovery is not optimistic. However, according to the data forecast for 2023, the company's net profit seems to be expected to return to positive numbers, and an increase of 118.11%. So Warner Bros. Discovery seems to have found a way to turn around cash, and its future seems unpredictable, as shown in Fig. 2.

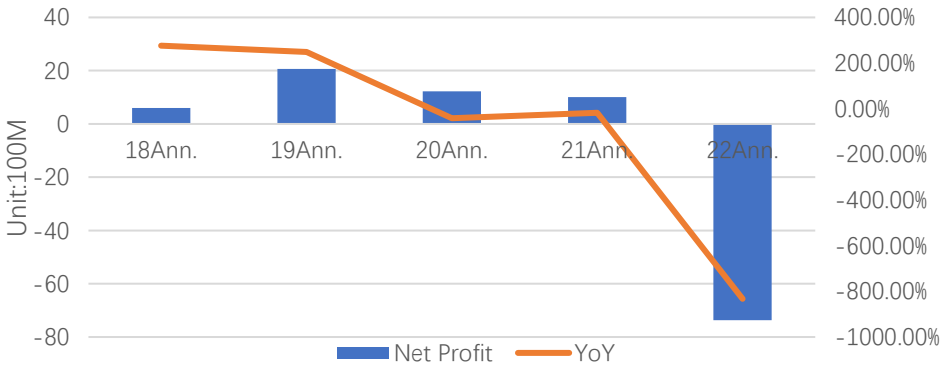


Figure 2. Net Profit in the last five years of Warner Bros. Entertainment, Inc

2.3. ROA

Thirdly, according to the ROA data of Warner Bros. Discovery given in the figure above. In 2018 and 2019, the company's return on capital was good, which was 2.16% and 6.24% respectively. However, with the rapid spread of the epidemic, the delay of film release and the large-scale closure of cinemas, its ROA value has been declining from 2020 to 2022. From the initial 3.59% to the current -8.75%, from year-on-year growth of -42.42% to year-on-year growth of -398.06%, the profitability of total assets reflected by it has been negative. This means that the profitability of the total assets of the company was not good in the epidemic years, as shown in Fig. 3.

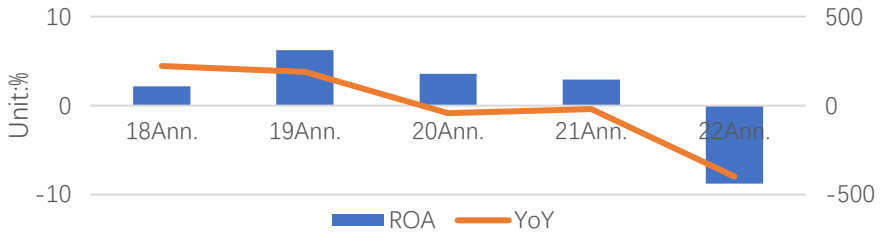


Figure 3. ROA in the last five years of Warner Bros. Entertainment, Inc

Fourth, as the chart above shows, Warner Bros. Discovery's ROE numbers have also fallen almost straight. From the return on equity of 7.08% in 2018, an increase of 196.90%, the return on equity of 20.92% in 2019, an increase of 195.32%, to the ROE of 11.65% in 2020, a decrease of 44.31%, and the ROE of 8.67% in 2021, a decrease of 25.55%. The ROE for 2022 is -15.65%, down 280.46% year-on-year. The downward trend in ROE seems unstoppable. This means that in the three years of the epidemic, the profitability of the company and its shareholders was very poor, that is, the company and shareholders were almost unprofitable and in debt for three years, as shown in Fig. 4.

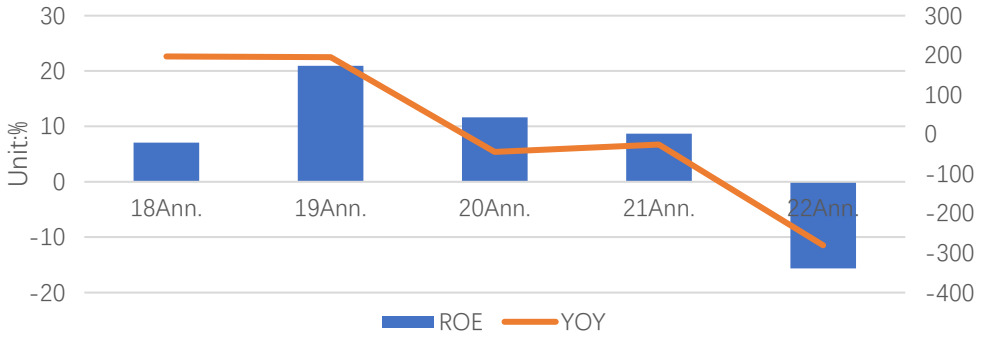


Figure 4. ROE in the last five years of Warner Bros. Entertainment, Inc

Fifth, through the analysis of ROA and ROE data, Warner Bros, as shown in Fig.5. Discovery almost made no profit and carried a lot of debt for three years. Therefore, the solvency of enterprises becomes extremely important. According to the above asset-liability ratio, we know that from 2018 to 2021, the enterprise's asset-liability ratio is 67.69%, 64.53%, 63.67%, and 61.09% respectively. However, compared with the asset-liability ratio of the past four years, its performance is not good, that is, it is negative. This means that the performance of these years is a period of insolvency and weak solvency. However, it is worth noting that although the asset-liability ratio of the last four years is not good, in 2022, its asset-liability ratio reached 63.68%, an increase of 4.24%. Therefore, according to the indicators of net profit, ROE and ROA, although the company's profitability in recent years is not good, the company's ability to repay debt is constantly rising. Hence, as a company belonging to the film industry, the future development of Warner Bros. Discovery is still worthy of expectation and attention.

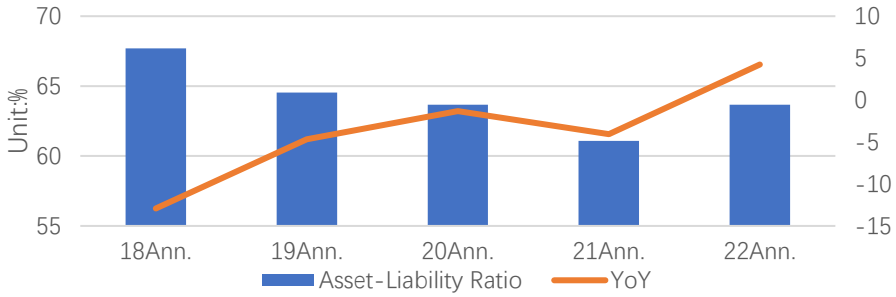


Figure 5. Asset-Liability Ratio in the last five years of Warner Bros. Entertainment, Inc

3. Opportunities and Risks in the Industry of Warner Bros. Entertainment

Since the outbreak of the epidemic, the economy of all walks of life has been more or less hit to a certain extent. After the epidemic, with the recovery of the economy and the increase in consumer demand, the film and television industry has become one of the most affected industries before and after this special period. Therefore, the film industry is facing many opportunities and challenges. This part will explore this content and look forward to exploring the future development of the film industry.

3.1. Opportunity: Traffic from digital platforms

The emergence of digital platforms allows people to pay for or watch movies for free online without going to offline cinemas. This viewing method overturned the traditional form and created a new business model. In addition, movie distributors also began to release films on digital platforms to obtain more users and revenue. For example, during the pandemic, NBC Universal announced an unprecedented move to simultaneously release digital versions of some films shown in theaters, including The Magician, which will be released on April 10. Viewers can also watch three films being shown in theaters, The Invisible Man, Emma and The Hunt. This decision undoubtedly helped NBC to reap the traffic dividends brought by digital platforms.

3.2. Challenge

3.2.1 Content innovation in the new era

After the epidemic, people's desire to consume again reached a climax. However, due to the impact of the epidemic on the economy, more and more consumption habits and consumer psychology have become rational. However, in the digital age, the style and content of film and television works have become more and more similar, and many works have been released but have been lost. Therefore, whether it is Hollywood production, or made in China, content innovation has become a big challenge. In other words, how to create a variety of styles of movies with good effects, good content and large quantity has become a difficulty that every producer must break through. On this basis, the innovation of content can not be ignored. For example, *Lost You Forever*, starring Yang Zi, has become a global hit as an ancient puppet TV play. What makes it so successful is not only the exquisite layout of the scene, the careful collocation of the costumes, and the good production team, but the most important thing is that its content is innovative enough and the idea is profound enough. As a result, the TV series has been called a phenomenon (very good) film and television work.

3.2.2 Deep cooperation in all aspects of the industrial chain

The emergence of digital platforms has gradually transformed the film industry into a decentralized industry. To be specific, the release of films on various film and television platforms requires the establishment of connections with major film and television platforms and the exploration of new business models through digital platforms. Therefore, in this context, how to make good use of digital platforms, how to do a good job in the early publicity of the film, the later program push and character

creation are very important. This is the second challenge that the film industry has to face ---- how to complete the deep cooperation of the whole industry chain to reflect the true value of the film.

4. Conclusion

Through the analysis of the current situation of the global film industry and the financial analysis of its representative company Warner Bros. Entertainment, the industry is currently facing many crises. For example, affected by the epidemic, the industry has a box office crisis. In addition, after the epidemic, the industry has also presented the problem of content duplication and lack of innovation. All these problems make the overall trend of the global film industry not good. However, opportunities often come with risks. The epidemic has led to the rapid development of digital platforms, and some film companies have become the discoverers of business opportunities and made money by paying for previews in advance. However, as the digital platforms grow stronger, it may be a very wise choice for films to enter it.

References

[1] Pinn, J.. (2009). Behind the scenes of the global film industry. ISO Focus (4), 6.

[2] Choi, Y. J., Min, C. K., & Park, C.. (2020). Effects of trade barriers and cultural distance on the domestic market share in the film industry. World Trade Review, 19.

[3] Muhammad, Y.. (2021). Post-pandemic impacts of covid-19 on film industry worldwide and in china. Global Media Journal, XIII (2), 28-44.

[4] Sedgwick, M. P.. (2001). Stardom and the profitability of film making: warner bros. in the 1930s. Journal of Cultural Economics, 25 (3), 157-184.

[5] Sedgwick, J., & Pokorny, M.. (1998). The risk environment of film making: warner bros in the inter-war years. Explorations in Economic History, 35 (2), 196-220.

[6] Blagov, S.. (2015). Russian court upholds ruling for warner bros, in movie piracy case. World intellectual property report, 29 (9), 16-16.

[7] Stahl, M.. (2014). Employee in a cage? olivia de havilland, warner bros. pictures, and the 'limit case' of star employment. Entertainment and Sports Law Journal, 12, 1.

[8] Bi, G., & Giles, D. E.. (2009). Modelling the financial risk associated with u.s. movie box office earnings. Mathematics & Computers in Simulation, 79 (9), 2759-2766.

[9] Watson, & Glyn. (2004). Uncertainty and contractual hazard in the film industry: managing adversarial collaboration with dominant suppliers. Supply Chain Management, 9 (5), 402-409.

[10] Kim, D. H.. (2019). Brand extension strategies in the film industry: factors behind financial performance of adaptations and sequels. The International Journal on Media Management, 21 (3), 1-16.