

Research on Profit Models and Financial Indicators of Social Video Platforms: A Case Study of Bilibili

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Abstract. Bilibili, a secondary-dimensional online community video platform, attracts countless young people who are fans of the ACG culture circle with its unique secondary-dimensional elements, becoming one of the most popular social video platforms among the younger generation in China in recent years. Bilibili has its own unique business model and development potential, but facing the fierce competition among numerous video platforms in the market, the constant changes in user needs, and the continuous years of losses, how to increase revenue, reduce costs, and achieve profitability is currently an urgent problem that needs to be solved. This paper analyzes and studies the profit models of Bilibili's mobile games, live streaming, value-added services, advertising, and intellectual property derivative products, and analyzes the financial indicators such as revenue, expenses, profits, debt repayment ability, profitability, and operational ability in recent years, points out the shortcomings that exist, and proposes suggestions for finding innovative income points and making selective investments to reduce expenses, which can provide reference for its sustainable development and improving its financial situation in the future.

1 Introduction

The booming development of the digital economy has brought about significant changes in information dissemination and social interactions. The profit model and financial health of audio-visual new media enterprises have become the focus of people's attention. As a prominent social video platform in China, Bilibili not only has a huge influence among young users, but also demonstrates a unique business model and diversified revenue structure. However, in the face of fierce market competition and constantly changing user demands, in-depth analysis of Bilibili's profit model and financial indicators is of great practical significance for understanding the sustainable development and financial strategies of audio-visual new media enterprises, as well as providing reference and guidance for other similar platforms, investors, and managers.

Previous research on Bilibili's profit model mainly focused on using SWOT analysis and the "five elements" of the profit model. As Wang and Sun used SWOT analysis on

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Bilibili, they listed the company's strengths, weaknesses, opportunities, and threats, and attempted to analyze it using the five elements of profit model: profit points, profit objects, profit sources, profit leverage, and profit barriers. They concluded that Bilibili's profit model has significant advantages in the current online video competition [1]. Gao also analyzed Bilibili's business and conducted research on the five elements of profit model, proposing suggestions to strengthen member services, increase review efforts, and create high-quality original videos [2]. The development of Bilibili has its unique place, but the uniqueness also forms a certain restriction on the further development of the future. Liao analyzed Bilibili's shortcomings from five aspects: early growth, development and improvement, formation, new revenue channels, and core profit points, and proposed strategies to optimize the game's profit model, reduce expenses, and improve monetization efficiency [3].

At present, the research and analysis of Bilibili's financial statements are based on the financial statements before 2021. For example, Guan proposed that by mining the financial data of Bilibili from 2018 to 2020, Through the analysis of financial indicators such as income, expense and profit, as well as profitability, debt repayment and operating capacity, solutions to optimize income structure, adjust expenses and improve user stickiness are proposed [4]. Li also put forward suggestions on improving the income structure and adjusting the proportion of expenses for the financial indicators from 2018 to 2020 [5]. Based on the Harvard analysis framework, Gong conducted financial analysis of Bilibili from the following four aspects: strategy, accounting information, financial data and development prospects, and believed that Bilibili had problems such as weak cost control, sustained losses and weak solvency [6]. Ding and Wang also based on the Harvard analysis framework, through the accounting analysis of revenue, expense and profit, as well as the analysis of three major financial capability indicators, put forward that Bilibili is gradually establishing a diversified industry income structure and has strong core competitiveness [7]. In general, the current analysis of Bilibili's financial statements is relatively long-term, with no recent data, and there are not many analyses combining profit model and financial statements.

2 Development status of Bilibili

Bilibili is a video community based on the value proposition of "all the videos you love", providing rich video content, built around talented content creators, users with common interests, high-quality content, and close emotional bonds between them [8-10]. As a domestic pioneer representative of the anime online video platform, Bilibili platform content not only has the original [content, but also animation, games, film and television, live broadcast, etc., and also first created the "bullet screen chat" function, opened five real-time comments, changed the user's viewing experience, and gathered a large number of Chinese young generation, which is the most popular domestic anime [frequency] website for young people. According to statistics, as of the end of June 2024, there are 336 million monthly active users, 102 million daily active users, and 29 million monthly paying users. On average, users spend 99 minutes per day on the platform and interact 16.5 billion times.

Bilibili was founded in June 2009, listed on NASDAQ in the United States in March 2018, and later went public again in Hong Kong in March 2021. Since 2023, the company has been focusing on the healthy development of platform communities, in order to better serve content creators, strengthen the entire community ecosystem, promote commercialization strategies, improve various monetized products, and promote a good cycle between communities and commercialization. According to the company's annual financial report, the operating revenue in 2023 was 2.8 billion yuan, an increase of 3% compared to 2022. The operating cost was 17.086 billion yuan, a decrease of 5% compared

to 2022, and the gross profit was 5.442 billion yuan, an increase of 41% compared to 2022. Operating expenses amounted to 10.506 billion yuan, a decrease of 2% compared to 2022, with a net loss of 5.064 billion yuan, a decrease of 39% compared to 2022. Throughout 2023, the company focused on improving operational efficiency, resulting in a significant increase in gross profit. At the same time, the decrease in operating expenses led to a reduction in losses. In 2023, the company achieved positive operating cash flow, further improving its financial situation. However, looking at the financial situation in the past four years, the revenue has continued to rise, and the operating expenses have also continued to rise. The gross profit has been increasing year by year. However, due to the drastic changes in operating expenses, the net profit has decreased from a loss of 3.1 billion yuan in 2020 to 6.8 billion yuan and 7.5 billion yuan in 2021 and 2022, respectively. In 2023, the loss has eased to nearly 5 billion yuan, which is not as good as other top video websites. Therefore, it is necessary to conduct in-depth analysis on how Bilibili can improve the company's profitability and further enhance its financial situation.

3 Bilibili's profit model

Compared to video websites such as iQiyi, Tencent, and Youku, the vast majority of Bilibili's users are young people with an average age of under 35. They have a strong willingness to pay for their favorite entertainment projects, which is a major advantage. The second major advantage is that the founder of Bilibili promised not to force placement ads, which increased user stickiness. The third major advantage is the high-quality barrage and the ecosystem of several interest tribes, forming a unique cultural community. Therefore, the sources of profits for Bilibili also have their own characteristics, and the profit model can be summarized into four major business segments: advertising, mobile gaming, live streaming and value-added services, intellectual property, products, and other businesses.

3.1 Mobile game business

The mobile game business was once the main source of revenue for Bilibili, relying on the "agency + intermodal" model of games to accumulate a lot of revenue in the early days, and the revenue of the best performing traditional games (such as Azur Lane and FGO) remained relatively stable. Later invested a lot of money for self-research, but the self-research did not explode the game, the performance is mediocre. In recent years, the share of mobile games in total revenue has declined year by year.

3.2 Live broadcast and value-added services

Compared with other websites, Bilibili's live broadcasting business started late, but it has unique characteristics, attracting viewers with two-dimensional features such as virtual idols, and the subsequent development is rapid. Users support anchors by tipping virtual gifts, and platforms and anchors share the rewards equally. In addition, Bilibili has launched diversified content including knowledge popularization and learning live broadcast, further enriching the live broadcast ecology. Bilibili has a unique membership system, users become ordinary members by answering questions, and recharge can be upgraded to large members. However, since large members differ only in clarity and a small amount of drama compared with ordinary members, they are less attractive and earn less, but Bilibili is enhancing its appeal by enriching the rights of members.

3.3 Advertising business

Advertising is one of Bilibili's sources of revenue. Unlike other video platforms' patch ads, Bilibili mainly relies on charging based on the click through rate of ad links on mobile devices, while charging based on a thousand exposure rates on PC devices. With the rapid growth of Bilibili's user base, advertisers are also quickly attracted and accelerating their cooperation with Bilibili. Especially driven by the New Year's Eve Gala and phenomenal content such as 'Hou Lang ', advertising revenue has grown rapidly since 2021.

3.4 Intellectual property derivatives and other businesses

Bilibili's intellectual property derivatives and other (formerly known as e-commerce and other businesses) are mainly focused on ACG (animation, comics, games) related products and offline event ticketing sales. Unlike traditional e-commerce platforms, Bilibili relies on the fan effect of UP hosts and big data recommendation systems to promote product sales. Its unique e-commerce model has begun to take shape, mainly selling peripheral goods, performance tickets, etc. Through online and offline activities, it has built a complete industrial chain, not only increasing brand awareness by 5, but also creating additional revenue for the company.

Through these four major sectors, Bilibili has gradually formed a diversified profit model and sought stable revenue growth by reducing reliance on a single business.

4 Financial indicator analysis

4.1 Analysis of revenue indicators

Bilibili's total revenue increased by nearly 88% from 2020 to 2023, showing a trend of continuous growth. Although revenue growth has slowed down in 2022 and 2023, the growth trend has still been maintained, indicating that the company as a whole is still expanding its revenue sources. Of course, as market competition intensifies, Bilibili needs to maintain sustained growth by diversifying its revenue sources and enhancing its user monetization capabilities. As shown in Table 1.

Table 1. Operating Revenue (Unit: RMB 100 million)

Project/Year	2020	2021	2022	2023
Mobile gaming	48.03	50.91	50.21	40.21
Live streaming and value-added services	38.46	69.35	87.15	99.10
advertisement	18.43	45.23	50.66	64.12
Intellectual property derivatives and others	15.07	28.34	30.96	21.85
Total income	119.99	193.84	218.99	225.28

Mobile game revenue maintained steady growth in 2020 and 2021, but declined slightly in 2022 and showed a significant decline by 2023, decreasing by 20%. This shows that Bilibili is facing challenges in its growth in the gaming sector, mainly due to a decrease in the release of new games and a decline in revenue contribution from existing games. While revenue from some classic games was stable, the overall game business was not performing as well as in the past, but value-added services revenue showed significant growth. This growth was mainly attributed to the increased monetization capabilities of services such as live streaming and membership programs, and the increasing number of paying users. Although the growth rate has slowed from 2022, value-added services continue to be an important pillar of Bilibili's revenue, reflecting user stickiness and increased demand for paid services. Advertising revenue has grown rapidly since 2020, mainly due to increased

recognition of the Bilibili brand in China's online advertising market and improved advertising efficiency. Although growth slowed in 2022, advertising revenue accelerated again in 2023, indicating that Bilibili's continuous improvement in advertising products and advertising efficiency attracted more advertisers. Intellectual property Derivatives and other (formerly e-commerce and other) This business grew steadily between 2020 and 2022, but saw a larger decline in 2023, reducing by 29%. This decrease was primarily due to a decrease in revenue from the sale of esports rights sublicense and IP derivatives. Bilibili needs to rethink new growth points in this segment to restore revenue growth.

4.2 Analysis of operating costs and expense indicators

Revenue sharing costs in Bilibili's operating costs and expenses have continued to increase, especially from 2020 to 2021. This primarily reflects the growth in in-platform user paying behavior, particularly in mobile games and value-added services. However, the growth rate of revenue sharing costs in 2023 has slowed down, which is due to the strategy of platform optimization cost control and efforts to improve operational efficiency (Table 2).

Table 2. Various operating costs and expenses (Unit: RMB 100 million)

Project/Year	2020	2021	2022	2023
Revenue sharing cost	44	77	91	95
Content cost and other costs	47.58	76.41	89.50	75.86
Total operating costs	91.58	153.41	180.50	170.86
Operating expenses	59.81	104.72	122.07	105.06

Content costs and other costs continued to increase from 2020 to 2022, indicating that Bilibili is devoting more resources to content production and procurement. However, there is a significant decline in 2023. The decrease was primarily due to lower server and bandwidth costs, staff costs, content costs, and other costs resulting from effective cost control measures. Operating expenses increased significantly between 2020 and 2022, with a particularly large increase between 2020 and 2021. The increase in operating expenses was mainly due to the company's increased investment in brand marketing, user acquisition, and technology research and development. By 2023, operating expenses began to decline, mainly due to the company reducing promotional expenses, reducing administrative and research and development personnel, and terminating certain game projects. This indicates that Bilibili management believes that the company should reduce excessive marketing and research and development expenditure and improve internal management as it enters a mature stage.

4.3 Analysis of gross profit and net profit indicators

Bilibili's operating income continued to rise in the past four years, operating costs also increased significantly in 2021 and 2022, gross profit increased in 2021, then decreased in 2022, and then increased significantly in 2023. However, due to the sharp rise in operating expenses, the net loss is also widening. How to reduce operating costs and expenses, the company has been working hard in recent years, but also the key to future profitability improvement (Table 3).

Table 3. Gross profit and net profit (Unit: RMB 100 million)

Project/Year	2020	2021	2022	2023
Gross profit	28.40	40.43	38.49	54.42
Net profit	-30.54	-68.09	-75.08	-48.12

4.4 Analysis of solvency indicators

Bilibili's current ratio peaked in 2021 and then declined significantly. This means that the company's short-term solvency is significantly reduced, and if this downward trend continues, it may face short-term debt repayment pressure (Table 4).

Table 4. Indicators of solvency

Project/Year	2020	2021	2022	2023
Current ratio	2.13	3.02	1.43	1.03
Cash ratio	0.63	0.62	0.60	0.40
Asset liability ratio	67.39%	58.28%	63.57%	56.56%
Property ownership ratio	2.07	1.40	1.74	1.30

Bilibili's cash ratio has shown a downward trend over the years, which indicates that the company holds less cash and cash equivalents relative to current liabilities, and its cash liquidity has declined.

Bilibili's debt-to-asset ratio and equity ratio reached their lowest point in 2021, then recovered somewhat, but fell again in 2023. Overall, Bilibili's asset-liability ratio and equity ratio have improved, which indicates that the company's debt burden is reducing, debt repayment risk is decreasing, debt relative to shareholders' equity is reduced, and capital structure is improved.

4.5 Analysis of profitability indicators

Bilibili's ROE continues to be negative, and despite an improvement in 2023, it still shows that the company has failed to achieve a net profit in these years (Table 5).

Table 5. Profitability Indicators

Project/Year	2020	2021	2022	2023
Return on equity	-39.62%	-46.17%	-40.63%	-32.47%
Sales gross profit margin	23.67%	20.86%	17.58%	24.16%
Net profit margin on sales	-25.45%	-35.13%	-34.28%	-21.36%

Bilibili's gross profit margin on sales fell to its lowest point in 2022 and recovered in 2023, indicating that the company has improved in controlling costs.

While Bilibili's net profit margin on sales remained negative, it improved significantly in 2023, showing a reduction in the company's net loss.

4.6 Analysis of operational capacity indicators

Bilibili's receivables turnover rate increased year by year from 2020 to 2022 and decreased slightly in 2023, indicating that the company's receivables recovery rate has steadily accelerated in these years, with a slight shortfall in 2023. The turnover days of accounts receivable did not change much between 2020 and 2023, indicating that the company is relatively stable in terms of accounts receivable management, as shown in Table 6.

Table 6. Operational Capability Indicators

Project/Year	2020	2021	2022	2023
Accounts receivable turnover rate (times)	13.34	15.91	16.16	15.52
Days sales outstanding	27	23	23	24
Total asset turnover rate (times)	0.61	0.51	0.47	0.60
Total asset turnover days	599	715	782	607

The gradual decline of Bilibili's total asset turnover from 2020 to 2022 indicates that the company is less efficient in using total assets to generate income before 2022, and the improvement of total asset turnover in 2023 indicates that the company has made some progress in improving the efficiency of asset utilization. The number of days of turnover of total assets has increased year by year from 2020 to 2022, which indicates that the rate of realization of total assets of the company is declining. There was a rebound in 2023, reflecting an increase in the turnover rate of the company's assets.

5 Conclusion

From the above analysis of profitability and financial position, it can be seen that the total revenue continues to grow, in which the live broadcast, value-added business and advertising business are the core sources of Bilibili's revenue. The mobile game business used to be an important part of Bilibili, but in recent years, the performance is weak and there is a bottleneck. The intellectual property derivatives business has declined and further innovation is needed to drive the recovery of this business. In 2023, Bilibili performed better than in previous years in terms of cost control, especially through effective cost control measures, resulting in a decrease in overall operating costs. Through measures such as cutting promotional expenses, laying off staff and optimizing R&D expenditures, operating expenses were effectively reduced, thus improving overall gross margin and net profit. From the perspective of solvency, it has gradually declined in recent years, so it is necessary to pay attention to the control of current liabilities and the management of short-term cash flow. However, from the perspective of long-term solvency, the overall debt burden is decreasing, and long-term debt management is relatively stable. In the future, the company should continue to optimize its capital structure and improve cash flow management to cope with possible short-term debt repayment challenges. From the perspective of profitability, it has been in a state of loss in recent years, but it has improved well in 2023. From the perspective of operational capacity, the recovery of accounts receivable is relatively stable, the management ability of accounts receivable is strong, and the efficiency of using total assets to generate income has been improved. Generally speaking, the company's financial situation is gradually improving with steady revenue growth, improved profitability and reduced financial risks.

In recent years, the proportion of revenue from mobile game business has declined a lot, and Bilibili has also invested a large amount of financial resources to develop games by ourselves, but the effect is not good. Bilibili can cooperate with major domestic and foreign game companies to reduce the cost of self-research and increase revenue. Live broadcasting and value-added services are faced with a lot of copyright problems. Bilibili can refer to the win-win cooperation model between Douyin and iQiyi to solve the copyright infringement problem of the secondary creation of long videos. In view of young people's learning needs, Bilibili can vigorously develop knowledge video projects, and help knowledge creators to scientifically set prices and negotiate pricing with advertisers, so as to increase revenue

sharing. Actively explore the model of advertising placement and expand the scope of advertising revenue.

From the cost analysis in 2023, the company has carried out cost control in server and bandwidth costs, administrative personnel and R&D personnel, content costs, promotion costs, termination of certain game projects and other aspects to effectively reduce cost expenses. In the future, the cost items can be further divided and the income of a certain module can be compared with the cost. The modules with high profits consider whether they need to increase investment, do fine and become stronger, and lead the industry, and the modules with low profits, such as serious homogenization with other platforms, will decisively give up investment and save costs. Only the right trade-off, selective investment rather than early diversification, is the key to Bilibili's future profitability.

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