

Financial Analysis of Tal Education group Based on Harvard Analytical Framework

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Abstract. With the rapid development of China's economy and the continuous improvement of residents' living standards, people pay more and more attention to youth education. Among them, educational institutions represented by New Oriental and TAL have become well-known enterprises in the field of education and training in China. The huge market potential and rich market profits have attracted the participation of many educational institutions, which also makes the rapid development of China's education and training market in a short period of time, and intensifies the pressure of market competition for independent enterprises. In this paper, Tal Education Group as the research object, first of all, the business situation of Tal Education Group is analyzed, and then based on the Harvard analysis framework from the strategic analysis, accounting analysis, financial analysis, prospect analysis and other aspects of the application of TAL Education Group is analyzed. Finally, this paper expounds the problems of TAL Education Group financial management mainly including insufficient investment in the field of online education, insufficient accounting policy and accounting estimate, unreasonable accurate capital structure and cash flow management, poor brand building and marketing effect, and puts forward some optimization suggestions for TAL Education Group financial management from four aspects: strategic suggestions, accounting suggestions, financial suggestions and prospect suggestions.

Keywords: Harvard analytical framework; Tal education group; financial analysis

1. Introduction

Education is the foundation of national development and the future of mankind. In emerging economies, the education sector is continuing to grow rapidly, presenting huge investment opportunities in the market. Founded in 2003, TAL Education Group is one of the leading education technology companies in China. However, with the intensification of industry competition and stricter policy regulation, TAL Education Group is facing great challenges and pressure. The reasons for choosing the future as the research object are as follows: Industry position: Tal Education Group is a leading education technology enterprise in China, with several well-known education brands under its umbrella. In the Chinese education and training market, the market share and brand awareness of TAL Education are high, so the study of its financial situation is representative.

Strategic transformation: Tal Education Group has actively carried out strategic transformation in recent years, transforming from a traditional education and training enterprise to an education and technology enterprise, and constantly carrying out technological innovation and R&D investment.

The advantage of the Harvard analytical framework is its comprehensiveness and systematicity: it can help investors to have a comprehensive understanding of the company's financial position and operating performance, so as to better evaluate the company's value and risk [1]. In addition, the Harvard analytical framework can also help companies better understand their own operations, so as to make corresponding strategies and decisions to improve the competitiveness and financial position of the company [2]. Present, future-oriented analysis: The Harvard analytical framework has a multi-angle structure [2]. Among them, strategic analysis focuses on the analysis of the macro environment in which enterprises are located, including cultural, economic, political, technological and other factors. Accounting analysis focuses on the approval of financial data to ensure the completeness and accuracy of the data [3]. Financial analysis uses various financial indicators to evaluate a company's current and past performance. Prospect analysis focuses on predicting the future of the company,

pointing out the direction for the development of the enterprise, and providing decision support for strategic decision makers [4].

2. Tal Education Group Business Conditions

2.1. Tal Education Group Profile

TAL Education Group was founded in 2003, Is a leading education technology enterprise in China, committed to providing diversified learning services and solutions for students aged 3-18. Tal Education Group's business covers a variety of fields, its own Xueresi, parents Bang and other well-known education brands. Judging from the development from 2015 to 2022, the overall performance of TAL Education Group shows a trend of rapid growth. Among them, the revenue increased from RMB2.326 billion in 2015 to RMB23.345 billion in 2022, and the net profit also increased from RMB108 million in 2015 to RMB-13.035 billion in 2022. TAL Education Group continues to expand its business scope, involving in online education, international education and other fields. And actively promote technological innovation, invest a lot of resources in the research and development of education and technology products. In addition, TAL Education Group also actively layout overseas markets, expand international business.

2.2. TAL Education Group Business Scope

Tal has a comprehensive layout of the education industry, with five business groups: smart education, education cloud, content and future education, K12 and international and lifelong education. Its main businesses include small-class training, personalized services and online courses. The specific business scope is shown in Figure 1 below. At present, TAL Education Group is driven by business and investment. The Future Star project launched has created a platform for entrepreneurs in the Internet education industry, providing three services of incubation, training and investment (see Fig. 1).

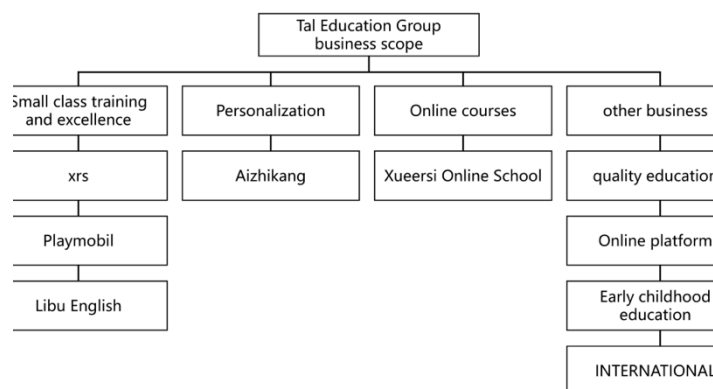


Fig. 1 Business scope of TAL Education Group

3. Analysis of the Application of Harvard Analytical Framework in the TAL Education Group

3.1. TAL Education Group Strategy Analysis - PEST Analysis

3.1.1. Political environment

"Double reduction" is undoubtedly a huge blow to the TAL Education Group of focusing on discipline training, and the government's support for private and higher vocational industries can also see the hope of industry development [5]. Since 2022, China has maintained its support for higher vocational education, and in April of that year, it passed the Vocational Education Law of the People's

Republic of China, which established the important position of higher vocational education and promoted the combination of higher vocational education and universal education.

3.1.2. The economic environment

At the beginning of 2022, as the country completely relaxed the control of the epidemic, more measures were taken to ensure the steady development of the economy [6]. In 2022, the tertiary industry, which belongs to education and training institutions, achieved a value-added value of 63,869.8 billion yuan, up 2.3 percent. The total amount of education funds in China has reached 4.1 trillion yuan, about 15.5% of the national budget. The market value of China's education and training industry peaked at 2,365.1 billion yuan in 2019. In 2021, with the implementation of "double reduction", the market value of the education industry dropped significantly, reaching 161.4 billion yuan. By the end of 2022, the total market value of the education industry was 1.66 billion yuan, up slightly from 2021.

3.1.3. The social environment

Domestic education is deeply influenced by traditional culture, and family investment in education is gradually increasing. Under the current Chinese system, some parents still believe that going to college is the only way out [7]. At present, teaching in our country is still measured by achievement. The transformation of the education industry should still be carried out in accordance with the national policy, recognizing the actual situation, rather than pinning hopes on academic training.

3.1.4. The technology environment

With the wide application of network technology and artificial intelligence technology, the traditional teaching method is changing quietly. Projection, educational TV or computer have entered the classroom, which greatly improves children's interest in learning. In addition, the frequent availability of various e-learning materials and resources allows students and parents to freely access, which greatly reduces the dependence of students on off-campus training institutions. Many training companies have turned their attention to books and teaching AIDS, allowing students to answer their own questions by watching teaching videos recorded by teachers, which is a manifestation of intelligent teaching.

3.2. TAL Education Group Accounting Analysis

3.2.1. Accounting policies and estimates

The accounting policies and accounting estimates of TAL Education Group are formulated based on its own operating conditions and business characteristics in compliance with accounting standards [8]. (1) Revenue recognition Policy: TAL Education Group recognizes revenue when the course has been completed and the client has paid in full in accordance with the revenue recognition criteria. (2) Expense control policies: TAL Education Group has formulated a series of expense control policies to strictly control the expenses of various departments in order to reduce operating costs and improve operating efficiency. (3) Depreciation policy: TAL Education Group will deduct the corresponding depreciation expense based on the actual use and historical use cost of fixed assets to reflect the use and value consumption of assets.

3.2.2. Important accounting items

TAL Education Group, as an education technology company, has a slightly different set of important accounting items than companies in other industries [8]. The following are the important accounting items of TAL Education Group: (1) Operating income: TAL Education Group's operating income mainly comes from education and training business, including tuition income, book sales income, online course income, etc. (2) Operating costs: TAL Education Group's operating costs include teachers' remuneration, depreciation of teaching equipment, rent, utilities and other costs directly related to the education business. (3) Sales expenses: TAL Education Group's sales expenses include advertising expenses, marketing expenses, and other expenses related to enrollment and brand

building. (4) Financial expenses: TAL Education Group's financial expenses mainly come from borrowing interest, bank charges, etc. (5) Investment income: The investment income of TAL Education Group mainly includes equity investment management income, financial products investment income, etc.

3.3. Financial Analysis of TAL Education Group

3.3.1. Analysis of Financial Indicators

(1) Ability to pay debts

The solvency data statistics of TAL Education Group from 2016 to 2022 are shown in Table 1 below.

Table 1. Statistics of solvency data

	2016	2017	2018	2019	2020	2021	2022
current ratio	1.35	1.31	1.47	1.47	1.38	4.02	4.42
quick ratio	1.34	1.30	1.46	1.47	1.37	4.00	4.38
Asset-liability ratio (%)	58.48	62.77	46.29	32.25	54.33	59.27	48.4

Taking 2022 as an example, the average liquidity ratio of the education industry is 3.79, the average quick ratio is 1.36, and the average asset-liability ratio is 40.99%. TAL Education Group's liquidity ratio (4.42) is higher than the average of the education industry (3.79), indicating that the company is in a relatively sound financial position and highly liquid. In terms of quick ratio, TAL Education Group's quick ratio (4.38) is also much higher than the industry average (1.36), indicating that TAL Education Group has a strong solvency in the short term. From the perspective of asset-liability ratio, the asset-liability ratio of TAL Education Group (48.4%) is slightly higher than the average level of the industry (40.99%).

It can be seen from the data in Table 1 that the current ratio and quick ratio of TAL Education Group show an overall upward trend, indicating that its ability to repay debts in the short term is constantly improving [9]. In particular, the current ratio and quick ratio in 2021 have increased significantly compared with before, indicating that its short-term solvency has been significantly improved. On the other hand, the asset-liability ratio of TAL Education Group fluctuated greatly from 2016 to 2022, among which the asset-liability ratio was relatively high in 2016 and 2017, reaching 58.48% and 62.77% respectively, indicating that the company had a high debt level at that time. However, in the subsequent years, the asset-liability ratio gradually declined, reaching 46.29%, 32.25% and 54.33% in 2018, 2019 and 2020 respectively, gradually recovering to a more reasonable level [10]. By 2021, the asset-liability ratio rose slightly to 59.27%. However, the asset-liability ratio dropped to 48.4% in 2022, indicating that the company has done a good job in debt management and risk control, and the overall debt level is gradually stabilizing.

(2) Operating capacity

The statistics of TAL Education Group's operating capacity from 2016 to 2022 are shown in Table 2 below.

Table 2. Statistics of operating capacity data

	2016	2017	2018	2019	2020	2021	2022
Turnover of fixed assets (times)	6.76	8.54	9.58	8.93	8.79	11.08	3.58
Total asset turnover (times)	0.57	0.70	0.76	0.59	0.37	0.51	0.21

First of all, fixed asset turnover is an indicator that reflects the operation efficiency of fixed assets of an enterprise [10]. In terms of data, the fixed asset turnover rate of TAL Education Group showed an increasing trend year by year from 2016 to 2019, from 6.76 times in 2016 to 8.93 times in 2019, indicating that the company's fixed asset management efficiency is improving year by year [11]. However, in 2020 and 2021, fixed asset turnover decreased. In 2021, fixed asset turnover was 11.08

times, which increased compared with 2019, but in 2022, fixed asset turnover decreased to 3.58 times. This is due to the company's fixed assets increase or operating income decline and other reasons. Secondly, total asset turnover is an indicator that reflects the operational efficiency of a firm's total assets [10]. From the data point of view, the total asset turnover of TAL Education Group showed an overall upward trend between 2016 and 2019, but started to decline sharply in 2020 and only 0.21 times by 2022. This is due to the increase in the company's total assets or the decrease in operating income and other reasons.

(3) Profitability

The profitability data statistics of TAL Education Group from 2016 to 2022 are shown in Table 3 below.

Table 3. Statistics of profitability data

	2016	2017	2018	2019	2020	2021	2022
Gross profit margin on sales	51.02 %	49.93 %	48.55 %	54.57 %	55.14 %	52.7%	53.6%
Net profit margin on sales	16.57 %	10.78 %	11.35 %	14.22 %	-3.9%	- 21.32%	-5.7%
Net interest rate on total assets	11.22 %	8.09%	8.13%	10.83 %	- 2.37%	- 10.43%	- 13.51%

In terms of gross profit margin on sales, TAL Education Group as a whole showed an upward trend between 2016 and 2020, from 51.02% in 2016 to 55.14% in 2020 [11]. However, in 2021 and 2022, gross margin on sales is up slightly, at 52.7 percent and 53.6 percent, respectively. In terms of net profit margin on sales, TAL Education Group decreased from 16.57% in 2016 to 14.22% in 2019. However, net margin on sales turned negative in 2020 at -3.9%. Net margin on sales continued to decline in 2021 and 2022, at -21.32% and -5.7%, respectively. In terms of net interest rate on total assets, the TAL Education Group as a whole showed a slight trend between 2016 and 2019. In 2020, net interest rate on total assets was negative at -2.37%. In 2021 and 2022, net interest rate on total assets continued to decline, at -10.43% and -13.51%, respectively. This is also due to the surge in the company's marketing expenses, the impact of the epidemic and other factors.

3.3.2. DuPont analysis

The statistics of DuPont analysis data of TAL Education Group from 2016 to 2022 are shown in Table 4 below.

Table 4. DuPont analysis

	ROE	Net operating profit margin	Total asset turnover	Equity multiplier
2016	22.2%	13.4%	0.63	10.2
2017	15.2%	8.7%	0.67	10.9
2018	10.0%	9.0%	0.63	10.7
2019	7.5%	10.1%	0.59	9.7
2020	-5.5%	-2.6%	0.45	8.2
2021	-28.0%	-16.8%	0.40	6.7
2022	0.7%	2.1%	0.51	7.1

In terms of ROE, the TAL Education Group showed an overall downward trend between 2016 and 2019, from 22.2% in 2016 to 7.5% in 2019. This may be due to increased competition in the market, rising costs and other reasons [12]. In 2020, ROE was negative, which was related to the company's exposure to the COVID-19 pandemic. In 2022, ROE rebounded, due to business adjustments or improved market conditions.

3.4. TAL Education Group Outlook Analysis

Core competitiveness: TAL Education Group's core competitiveness is mainly reflected in brand influence, teaching quality, technology research and development, management team and other aspects. TAL Education Group will continue to enhance its core competencies to respond to changes and challenges in the market.

Market environment: The market environment in which TAL Education Group operates is full of opportunities and challenges. On the one hand, the growth of the online education market provides great development opportunities for the Group; On the other hand, the market is highly competitive and TAL Education Group needs to continuously improve the quality and effect of its products and services in order to maintain its competitive edge.

Business Portfolio: TAL Education Group's business portfolio includes online and offline tutoring services, learning materials, online education platforms, etc. TAL Education Group will continue to expand its business areas and increase its market share [13].

4. TAL Education Group Financial Management Recommendations Based on Harvard Analytical Framework

4.1. Analysis of Financial Management Problems of TAL Education Group

4.1.1. Insufficient investment is being made in online education

TAL Education Group has relatively low investment in product research and development. According to the user feedback results of Xuersi Online School in TAL Education Group in 2022, the satisfaction of product function and service quality in 2021 is 62.3% and 71.6% respectively. In 2022, the figures for the two indicators will drop to 59.2% and 68.9%. It can be seen that the product functions and service quality of online education platforms cannot meet the needs of users. In addition, TAL Education Group's teaching content is not targeted and innovative, which makes it difficult to attract users and increase user engagement.

4.1.2. Unreasonable capital structure and cash flow management

TAL Education Group has a high level of debt, which increased significantly after the acquisition of an online education company in 2017, with an asset-liability ratio of more than 80%, much higher than other companies in the same industry. This highly indebted capital structure makes TAL Education Group face greater financial risk, once the capital chain problems, the company may face the risk of bankruptcy. TAL Education Group also has shortcomings in cash management and has experienced tight cash flow in the past. This is mainly due to the fact that the company has expanded too fast and investment spending has increased significantly while revenue growth has failed to keep up.

4.1.3. Poor effect of brand building and marketing

The brand building and marketing effect of TAL Education Group is not good, and the brand awareness and reputation need to be improved. In addition, TAL Education Group's investment in marketing is relatively low, which makes it difficult to increase brand awareness and market share.

4.2. Suggestions on Financial Management Optimization of TAL Education Group

4.2.1. Strategic suggestions

TAL Education Group should continue to strengthen its investment in the field of online education and improve the quality and effect of products and services to meet the ever-changing market needs. It should also actively explore overseas markets and expand international business to further improve the company's market share and profitability and expand the company's business scope and market share. TAL Education Group should also pay close attention to policy changes and adjust its strategies in a timely manner to cope with policy risks.

4.2.2. Financial advice

TAL Education Group should continue to optimize the financial strategy to ensure that the Company's capital structure and cash flow management are reasonable and maintain a high level of cash flow. Strengthen investment and mergers and acquisitions, expand business scope and revenue sources, so as to improve the profitability of the Company. Strengthen risk management to cope with market risks and operational risks and ensure the Company's financial stability. TAL Education Group should also strengthen financial analysis to provide strong financial support for the company's decision-making.

4.2.3. Suggestions for prospects

TAL Education Group should continue to strengthen brand building, improve brand awareness and reputation, in order to attract more users and achieve revenue growth. It should also strengthen research and development and innovation, and develop more educational products and services in line with market needs, so as to improve the competitiveness and market position of the company. TAL Education Group should also strengthen market research and data analysis, accurately grasp market trends and user needs, and provide strong support for the company's strategy and business development.

5. Conclusion

With the rapid development of China's economy and the acceleration of urbanization, the education industry has also ushered in unprecedented opportunities and challenges. In this context, as a leading brand in China's Education and training industry, TAL Education Group's financial situation and business strategy have attracted wide attention. After analyzing the development status of TAL Education Group, this paper uses the Harvard analysis framework to analyze the company's financial situation. The research results show that the asset-liability ratio of TAL Education Group will decrease to 48.4% in 2022. It shows that the company has done a good job in debt management and risk control, and the overall debt level has gradually stabilized. From 2016 to 2022, the company's total asset turnover showed an overall trend of rising first and then declining, with only 0.21 times in 2022, which was also caused by the surge of the company's marketing expenses, the impact of the epidemic and other factors. Finally, the problems in the financial management of TAL Education Group mainly include insufficient investment in the field of online education, insufficient accounting policies and accounting estimates, unreasonable management of accurate capital structure and cash flow, poor brand building and marketing effect, etc. And from the strategic advice, financial advice and prospect advice three aspects of TAL Education Group financial management optimization suggestions.

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