

Analysis of Investment and Financing Issues of Chinese Sci-Tech Education Enterprises: A Case Study of iFLYTEK

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Abstract: Against the backdrop of Internet finance exerting a profound impact on the real economy, the efficiency of investment as well as financing as well as the innovation of operational models for funds among sci-tech education enterprises are crucial to the development of the entire industry. Taking iFLYTEK as a case study, this paper employs literature review, case analysis as well as data processing methods to systematically sort out the logic as well as actual status of the company's investment as well as financing activities. It identifies that iFLYTEK faces fund-raising issues such as over-reliance on traditional channels, irrational capital structure as well as high short-term debt pressure, along with investment challenges including difficulties in information screening, mismatched risk control mechanisms as well as slow profit returns from R&D. Corresponding improvement suggestions are proposed in the paper, which also reveals the future development trends of the sci-tech education industry, providing valuable references for other enterprises in the sector.

Key words: Sci-Tech Education Enterprises; Internet Finance; Investment and Financing Management; Risk Control; iFLYTEK

1. Introduction

1.1 Research Background

Driven through the digital economy, the sci-tech education industry has entered a new stage of high-quality development. As a leading enterprise in China's sci-tech education sector, iFLYTEK has established significant advantages through its innovative technologies. By 2024, it has accumulated more than 6,000 patents in the field of artificial intelligence. While the sci-tech education industry is in a period of upward development, the financing efficiency of the industry remains relatively low. According to Wind data, the average financing efficiency of

China's sci-tech education industry in 2023 was 18.7% lower than the average level of the high-tech industry.

1.2 Research Significance

By sorting out the problems existing in iFLYTEK's investment and financing and putting forward corresponding countermeasures, this study can provide certain reference significance for enterprises to reduce financing costs and improve investment returns.

For the industry, the experience of iFLYTEK can serve as a reference for sci-tech education enterprises and promote the upgrading of the overall investment and financing model of the industry.

2. Literature Review

Feng et al [1] proposed that Internet finance is the product of the deep integration of modern Internet information technology as well as financial market, as well as The development of Internet finance may effectively bring new opportunities to the financial industry. Siti [2] found that enhancement as well as deepening of internet finance through building customer confidence in financial innovations, stimulating online financing as well as investment activities, capital mobilization, as well as thus enhancing economic growth. Nguyen[3] proposed that the financial industry has undergone a transformation over the last 10 years, with FinTech now being worth more than a third of banking, as well as five of the top 10 financial services are now digital-based businesses. The skills in an AI-powered world in finance are not confined to hard skills alone, however also encompass soft skills, industry knowledge, mindset as well as experience. Wang et al [4] found that internet finance is the most important factor to push the rural inclusive finance forward in China. Zhang et al [5] proposed that the need to prepare students for a future heavily impacted through ai, which requires a reassessment of digital literacy as well as competencies. Jiang et

al [6]found that city-level internet finance, especially the use depth of internet finance, significantly increases corporate investment. Lin[7]found that iFLYTEK's strategic layout in artificial intelligence as well as technology, continuous investment in research as well as development, as well as international expansion have endowed it with the potential for long-term growth, making it an attractive investment option. Sun[8]proposed that Digital technologies have revolutionized traditional enterprise operation models as well as optimized both internal as well as external management environments. The digital transformation may improve investment efficiency, with dual agency costs as well as accounting information quality being important mechanisms. Liu[9] propose that large enterprises may make use of the function of centralized management of funds to regulate as well as control the cash flow within the enterprise, carry out a reasonable regulation as well as control of funds, allocate resources therefore as to improve the utilization rate of funds, as well as may also avoid the risk problems encountered under the centralized management mode of enterprises' funds. Zhang as well as Fang [10] proposed that risk management of corporate capital in the field of investment as well as financing may ensure the financial stability of enterprises, optimize the allocation of corporate resources, as well as help enterprises achieve their strategic goals.

3. Investment and Financing Status of iFLYTEK

3.1 Enterprise Overview

iFLYTEK was founded in 1999, with its headquarters in Hefei. It mainly engages in the R&D of intelligent speech as well as artificial intelligence technologies, as well as its core business covers three sectors: "technological R&D - product sales - industry solutions". By 2024, iFLYTEK had accumulated more than 6,000 patents in artificial intelligence, among which invention patents accounted for more than 60%. The iFLYTEK Spark Cognitive Large Model ranks among the leading positions in China in terms of Chinese understanding as well as multi-modal interaction.

In the field of intelligent speech, iFLYTEK's market share has exceeded 60% for 15 consecutive years. This data was released through CCID Consulting in 2024. In the field of

smart education, it serves more than 50,000 schools across the country, covering more than 100 million teachers as well as students. The iFLYTEK Open Platform has gathered more than 3 million developers as well as provides 647 AI capabilities, building a leading AI industrial ecosystem in China. Its leading position in the industry has significantly improved its financing bargaining power.

3.2 Financing Status

Equity Financing: Since its listing in 2008, it has raised a total of more than 5 billion yuan through private placements, rights issues as well as other methods: in 2020, it raised 1 billion yuan through private placement for the construction of a smart education platform; in 2022, it raised 800 million yuan through rights issues to supplement working capital. Equity financing has become an important source of long-term funds.

Debt Financing: In 2023, it issued 100 million yuan of ultra-short-term commercial paper, also known as sci-tech innovation notes, with an interest rate of 2.85% as well as a subscription multiple of 1.4 times, which reflects the market's recognition of its credit. From 2019 to 2023, it issued a total of more than 4 billion yuan of corporate bonds as well as convertible bonds, as well as the proportion of debt financing increased from 25% in 2019 to 35% in 2023.

Government Support: As a high-tech enterprise, it enjoys preferential policies such as additional deduction of R&D expenses and preferential corporate income tax. It has obtained support from government special funds, such as 500 million yuan from the Anhui Provincial Artificial Intelligence Special Fund.

Financing results: The net assets at the end of 2023 were 17.032 billion yuan, an increase of 72.9% compared with 9.85 billion yuan in 2019. From 2019 to 2022, the asset-liability ratio remained between 41.62% and 48.73%, which was lower than the industry average of 55%, indicating that the financial risks were controllable. In 2023, the asset-liability ratio rose to 53.13%, mainly due to the increase in debt financing, which is still within a reasonable range.

3.3 Investment Status

Technological R&D Investment: In 2023, the R&D investment reached 3.52 billion yuan, of which 800 million yuan was allocated to the

upgrading of speech recognition technology, and another 1.2 billion yuan was used for the R&D of iFLYTEK Spark Cognitive Large Model. In 2023, the revenue from technology licensing amounted to 80 million yuan, with a year-on-year growth of 50%.

Hardware Investment: It developed products such as iFLYTEK Learning Machine X3 Pro as well as X5. In 2023, the revenue from educational hardware reached 1.8 billion yuan, an increase of 25% year-on-year.

Other Scenario Investment: In the field of smart healthcare, it invested in the R&D of digital diagnosis as well as treatment systems, as well as the revenue from the healthcare business reached 800 million yuan in 2023. In the field of smart finance, it cooperated with Guoyuan Securities to develop an intelligent investment advisory system, as well as the revenue from fintech reached 600 million yuan in 2023.

3.4 Risk Management Measures

Risk Identification: It identifies technological risks, market risks as well as policy risks through market research as well as expert evaluation, as well as establishes a risk database.

Risk Response: For high-risk investment projects such as core technology development, phased investment is adopted to reduce risks; for medium-risk investment projects like educational hardware, a diversified investment approach is used to mitigate risks; for low-risk investment projects, risks are accepted while continuous monitoring is maintained.

Risk Early Warning: A key indicator early warning system has been established. In 2023, two projects triggered early warnings, and after iFLYTEK promptly adjusted its strategies, both projects turned losses into profits.

4. Investment and Financing Challenges of iFLYTEK

4.1 Financing Challenges

4.1.1 Insufficient application of internet finance
iFLYTEK mainly relies on traditional financing channels such as bank loans, equity financing and traditional bonds, and rarely uses Internet finance channels like equity crowdfunding and Internet bank loans. From 2019 to 2023, traditional financing accounted for more than 90%. When traditional financing channels tighten, the enterprise finds it difficult to quickly switch to other financing channels, facing the

risk of capital chain fluctuations. Internet financing has the advantages of flexibility and convenience, and its use can help enterprises balance their financing costs.

4.1.2 Unreasonable debt structure

In 2023, the asset-liability ratio stood at 53.13%, which was at the medium level in the industry. However, iFLYTEK had an excessively high proportion of short-to-medium-term debt. According to the data in November 2024, its short-term debt amounted to 4.806 billion yuan, while the broad money supply was 3.262 billion yuan. The short-term debt coverage ratio—i.e., the ratio of broad money supply to short-term debt—was only 0.68, lower than the safety standard of 1.0, resulting in significant short-term debt repayment pressure. Additionally, the proportion of long-term debt was merely 30%, which did not match the long-term capital needs for technological R&D. This mismatch between iFLYTEK's capital supply and demand may expose it to risks such as higher capital costs and delayed cash inflows.

4.1.3 Rising financing costs

In the third quarter of 2023, the single-quarter interest expense reached 122 million yuan, representing a year-on-year increase of 130%. The primary reason for this surge is the relatively high interest rate on short-term debt, which averaged 4.5%—1.5 percentage points higher than that on long-term debt. Additionally, the price-earnings ratio (P/E ratio) for private equity funds in 2023 stood at 25 times, a 25% increase compared to 20 times in 2020. This not only diluted shareholders' earnings but also pushed up the financing costs.

4.2 Investment Challenges

4.2.1 Imperfect investment decision-making system

In the era of Internet finance, the market is flooded with a large amount of useless information. In 2023, iFLYTEK's investment team processed over 100,000 pieces of information per month, among which invalid information accounted for 40%. This prolonged the project evaluation period, with the average duration increasing from 3 months to 4.5 months. The extended evaluation period caused the company to miss some high-quality investment opportunities—for instance, it failed to invest in an AI education content company in 2023, and the subsequent investment return of this company was higher than the market average.

4.2.2 Risk control system

iFLYTEK is confronted with multiple risks, including the risk of technological R&D failure, market risks, and policy risks. For instance, in 2023, a smart finance investment project was suspended due to policy adjustments, resulting in a loss of 120 million yuan. At present, iFLYTEK's existing risk assessment model does not incorporate Internet finance risk indicators such as platform compliance and data security, and the model needs to be improved. Additionally, the accuracy rate of the model's assessment is only 70%, which is lower than the industry's advanced level of 85%.

4.2.3 Long investment return cycle

Most investments of sci-tech education enterprises are concentrated on technological R&D, with a general return cycle of 3 to 5 years. For example, it took iFLYTEK 4 years to develop the Spark Cognitive Large Model and commercialize it, and it was not until 2023 that the model achieved large-scale revenue. For educational hardware products, it generally takes 2 to 3 years from R&D to profitability; the learning machine X5, launched in 2023, is not expected to reach break-even until 2025. A long investment cycle leads to high uncertainty in investment returns. Affected by the industry's technological upgrading and changes in market demand, some projects may face the risk of failing to achieve the expected returns.

5. Countermeasures and Suggestions

5.1 Financing Optimization Strategies

Expanding Internet Finance Financing Channels: Cooperate with Internet insurance companies to purchase credit insurance for intellectual property pledge financing, thereby reducing default risks. Lease R&D equipment from Internet financial leasing companies to ease short-term capital pressure while optimizing capital liquidity.

Adjust Debt Maturity Structure: By issuing large-scale corporate bonds, control the financing term within 3–5 years and the interest rate between 3.5% and 4%, providing stable and low-cost financing for iFLYTEK's medium-term investment projects. Apply to banks for large-scale long-term bank loans with a term of 5–10 years, increasing the proportion of long-term debt from 30% to 50% to match long-term capital needs and reduce financing risks.

Issuing Convertible Bonds and Green Bonds:

Convertible bonds can attract investors with lower risk tolerance, expanding the scale of financing. Green bonds align with iFLYTEK's business goal of developing intelligent and energy-efficient educational hardware; by issuing green bonds, the company can enjoy government policy interest subsidies, thereby reducing financing costs.

5.2 Investment Improvement Measures

Intelligent Information Screening System: By introducing natural language processing technology, an information screening system capable of automatically identifying, classifying, and evaluating market information will be developed. This new system can effectively reduce invalid information and shorten the project evaluation cycle. By connecting various industry databases, it can obtain real-time investment hotspots in the fields of Internet finance and sci-tech education, thereby improving the effectiveness of decision-making. Meanwhile, it can also acquire relevant risk early warnings in a timely manner, enhancing risk management and control capabilities.

Adopting an Intelligent Investment Advisory System: Cooperate with fintech companies to develop an intelligent investment advisory system. Based on portfolio theory, this system can automatically adjust the investment proportion across different fields according to the theoretical returns of capital input and risk tolerance. Compared with human employees, the initial investment in the intelligent investment advisory system may be higher, but its long-term maintenance costs are lower, and it exhibits more rational characteristics in investment decisions.

6. Conclusions

6.1 Experience Summary from iFLYTEK

6.1.1 Technology is the core of enterprise operations

Relying on core technologies such as intelligent speech as well as natural language processing, iFLYTEK has established unique competitive advantages. It not only improves its bargaining power in financing, such as the 2.85% interest rate of sci-tech innovation notes which is lower than the industry average, however also ensures investment returns, such as the 50% year-on-year growth of technology licensing income.

6.1.2 Diversified financing

In terms of financing, it ensures capital reserves through a combination of equity financing, debt financing as well as innovative models. In terms of investment, it focuses on technological R&D as well as education scenarios to realize the commercialization of technology. In 2023, the revenue from the education business accounted for 25% of the total revenue, reflecting the synergistic effect of "financing - investment - business growth".

6.1.3 Risk control

By controlling the asset-liability ratio as well as establishing a risk evaluation mechanism, it ensures the stability of its financial situation. However, problems such as short-term debt pressure as well as insufficient application of Internet finance still need to be solved through structural optimization.

6.2 Future Outlook

Market Demand: With the increasing demand of parents for personalized education as well as the acceleration of education digital transformation, the demand in the sci-tech education market will continue to grow. By 2025, the market scale of intelligent educational hardware is expected to reach 100 billion yuan, with a year-on-year growth of 25%, as well as the market scale of AI educational content is expected to reach 50 billion yuan, with a year-on-year growth of 30%, providing a broad space for enterprise investment.

International Development: iFLYTEK will expand the global market through overseas mergers as well as acquisitions. At the same time, they will consider introducing capital from overseas funds. The proportion of cross-border financing is expected to reach 20% through 2025, promoting the coordinated development of the global sci-tech education industry.

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