

# The role of financial analysis in risk management of entrepreneurial small and medium-sized enterprises: A case study of DJI Innovation Technology Co., LTD

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**Abstract.** As an important tool of risk management, financial analysis can help enterprises to identify, evaluate, prevent and monitor financial risks in a timely manner, optimize management processes, and ensure the steady development of enterprises. This paper aims to explore the role of financial analysis in the risk management. Through in-depth analysis of the characteristics of small and medium-sized enterprises, combined with financial analysis methods, this paper puts forward a set of risk management framework suitable for small and medium-sized enterprises. The results show that effective financial analysis can significantly improve the risk management level of enterprises and provide guarantee for the steady development of enterprises.

**Keywords:** Financial analysis; Entrepreneurial small and medium-sized enterprises; Risk management; DJI.

## 1. Introduction

Under the background of global economic integration and increasingly fierce market competition, small and medium-sized enterprises face many challenges and risks. How to effectively identify, evaluate and control risks has become the key to the sustainable development of enterprises. As an important tool of enterprise management, financial analysis plays an increasingly prominent role in risk management. However, due to the small scale, relatively weak financial strength, management system is not sound enough and other factors, these enterprises often face greater financial risks in the face of changes in the external environment and market competition. Financial analysis plays a crucial role in the risk management of small and medium-sized enterprises, especially in fast-growing technology companies such as DJI Innovation Technology Co., LTD. (hereinafter referred to as "DJI Innovation"). The following will discuss in detail the role of financial analysis in the risk management of small and medium-sized enterprises, and take DJI Innovation as an example to illustrate.

## 2. The concept and type of financial risk

### 2.1. Definition of Concepts

Financial risk refers to the uncertainty of the financial status of the enterprise in the course of various financial activities due to various factors that are difficult to predict or control, so that the enterprise has the possibility of suffering losses. There are various types of financial risks, which can be divided into different categories according to different classification standards. Common categories include: financing risk, investment risk, fund recovery risk and income distribution risk. Financing risk refers to the income uncertainty caused by financing activities of enterprises, mainly reflected in the supply of capital, capital cost, capital structure changes and so on. Investment risk refers to the uncertainty of investment return caused by the change of market environment and the error of investment decision. Fund recovery risk refers to the risk that the funds cannot be recovered in time or cannot be fully recovered after the enterprise sells goods or provides services. Income distribution risk refers to the adverse impact that the distribution of after-tax profits may bring to the subsequent operation and management of an enterprise. The impact of financial risk on enterprises is multifaceted, mainly including reducing the profitability of enterprises and damaging the reputation of enterprises, such as

the failure of enterprises to repay debts on time, will damage the reputation and market image of enterprises.

## 2.2. Types of financial risks

### (1) Financing risk

Financing risk is the possibility of insolvency and the variability of corporate profits (shareholders' returns) caused by borrowed funds. Financing risks mainly include interest rate risk, refinancing risk, financial leverage effect, exchange rate risk, purchasing power risk and so on. Among them, interest rate risk and refinancing risk are the core of financing risk.

### (2) Investment risk

Investment risk refers to the risk that the final return will deviate from the expected return due to the change of market demand after the enterprise has invested a certain amount of capital. There are two forms of foreign investment: direct investment and securities investment. Among them, the risk of direct investment mainly includes the uncertainty of the economic benefit of the invested enterprise, the risk brought by the investment project management process, the risk brought by the investment environment and the enterprise's own ability. The risks of securities investment mainly include default risk (the risk that the debtor cannot repay the principal and interest on time and fulfill the responsibility), market return risk (the risk caused by the change of the overall price level in the market), purchasing power risk (the risk caused by inflation) and so on.

### (3) Fund recovery risk

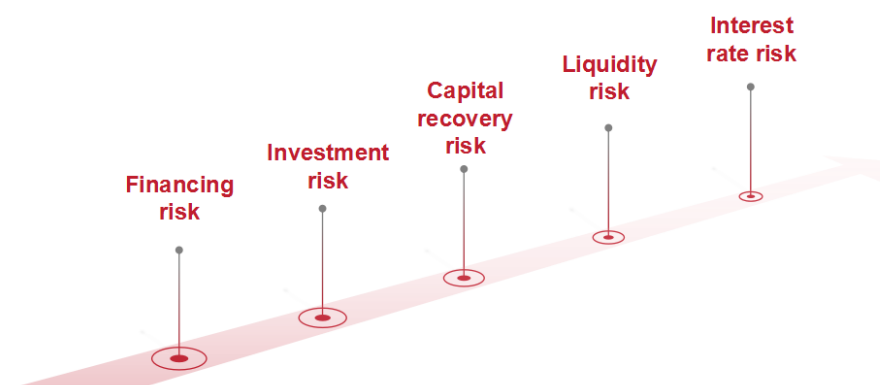
The capital recovery risk mainly refers to the uncertainty of collection time and amount due to different sales realization principles in the case of good earnings. The existence of capital recovery risk is related to the credit sale policy of enterprises. In the process of credit sale, some enterprises lack of effective credit management system, blindly sell to enterprises with bad credit, resulting in a large number of receivables can not be recovered for a long time until it becomes bad debt. Assets are occupied by debtors for a long time without compensation, which seriously affects the liquidity and security of enterprise assets, resulting in financial risks.

### (4) Liquidity risk

Liquidity risk refers to the risk that the realization ability and liquidity of enterprise assets have problems, and it can not fulfill the debt repayment responsibility in time. This may be due to unreasonable asset structure, reduced market liquidity, or other external factors.

### (5) Interest rate risk

Interest rate risk refers to the financial risk brought by the uncertainty of market interest rate changes. Interest rate risk mainly includes repricing risk, yield curve risk, benchmark risk and optionality risk. Exchange rate risk refers to the uncertainty of the financial results of enterprises caused by exchange rate changes. In multinational enterprises, exchange rate risk is particularly prominent.



**Figure 1.** Types of financial risk

## 2.3. Methods for identifying financial risks

### (1) Analysis of financial situation

The analysis of financial situation mainly analyzes the financial statements of enterprises (such as balance sheet, income statement, cash flow statement, etc.) to identify potential financial risks. The method includes horizontal analysis (examining the data changes of the same project in different periods) and vertical analysis (reflecting the internal structural relationship and changes of each item in the statement by calculating the proportion or structure of each item in the statement), so as to reveal the risks in terms of the flow of enterprise funds, solvency and profitability.

### (2) Financial ratio analysis

Financial ratio analysis is to calculate a series of financial ratios to assess the financial situation and risk level of an enterprise. Commonly used financial ratios include solvency ratio, profitability ratio, operating capacity ratio, etc. By comparing the financial ratio of different periods or the financial ratio of other enterprises in the same industry, we can find the possible financial risks of enterprises.

### (3) Financial index early warning method

The early warning method of financial indicators is to set a series of early warning thresholds of financial indicators. When the financial indicators of an enterprise reach or exceed these thresholds, an early warning signal is issued, indicating that the enterprise has financial risks. This method requires enterprises to set the alarm threshold reasonably and establish the corresponding alarm mechanism according to their own actual situation and industry characteristics.

### (4) Cash flow forecasting method

Cash flow forecasting method is to identify financial risks by predicting the future cash flow situation of enterprises. Cash flow is the lifeline of enterprise operation. Once the cash flow is insufficient or short, the enterprise may face financial crisis. Therefore, by predicting the future cash flow situation of enterprises, potential financial risks can be found in time and corresponding measures can be taken to prevent them.



Figure 2. Methods of identifying financial risks

## 3. The role of financial analysis in risk management of small and medium-sized enterprises - A case study of DJI Innovation Technology Co., LTD

### 3.1. Company Profile

Dji-innovations Co., LTD. (DJI) was founded in 2006 by Wang Tao et al. (graduates of Hong Kong University of Science and Technology). Headquartered in Nanshan District, Shenzhen, the company's main business is the development and production of unmanned aerial vehicle control systems and

UAV solutions. Since its establishment, DJI Innovation has continuously expanded its business scope and product system through continuous innovation and research and development. It has become the world's leading developer and manufacturer of unmanned aerial vehicle control systems and UAV solutions. By 2022, DJI has more than 14,000 employees and has the world's largest UAV research and development team, accounting for 25% of R&D personnel. Dji Innovation customers in more than 100 countries around the world, for the global UAV industry, industry users and professional aerial photography applications to provide the strongest performance, the best experience of the revolutionary intelligent flight control products and solutions, the company was selected by the famous American business magazine "Fast Company" as the top ten consumer electronics innovative companies in 2015, and ranked third. It is the only Chinese company on the list. In December 2015, DJI launched the intelligent agricultural spraying control drone - DJI MG-1 agricultural plant protection machine, officially entering the field of agricultural drones. In October 2019, DJI released the "Emperor" Mavic Mini aerial photography small aircraft, which was welcomed by the market with its foldable design, 249g fuselage weight, 12 million pixels, and 30 minutes of single battery life. As a leader in the era of spatial intelligence, DJI innovation is people-oriented, driven by science and technology, and provides innovative products and solutions for the society together with the majority of partners.

### **3.2. Status quo of financial risk management of DJI Innovation Technology Co., LTD**

#### **(1) Accounts receivable management**

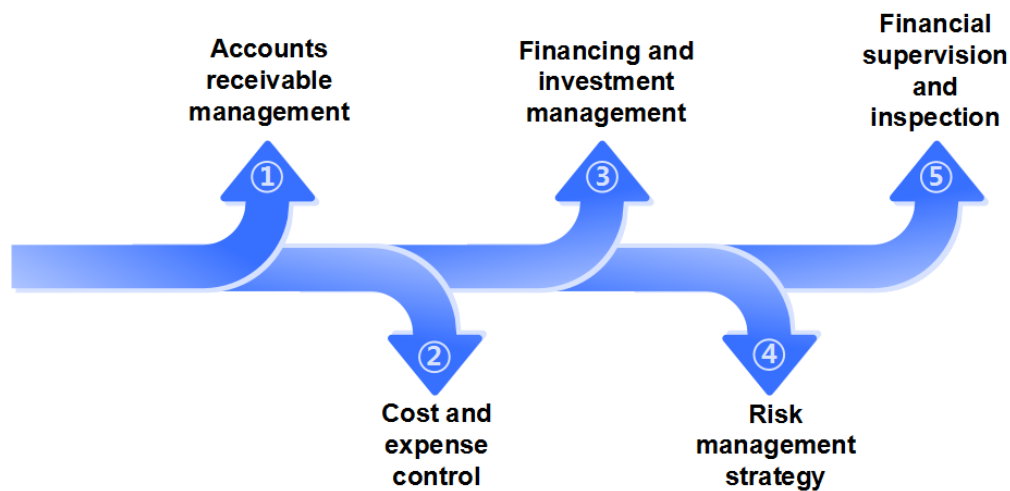
Accounts receivable management is very important for controlling bad debt risk and improving capital turnover efficiency. DJI has adopted a strict credit policy and collection mechanism in the management of accounts receivable to ensure the timely recovery of accounts receivable and the effective use of funds. At the same time, the company also reduces the dependence on a single customer through diversified sales channels and the expansion of customer groups, and further reduces the risk of bad debts.

#### **(2) Cost and expense control**

Cost and expense control is an important means for enterprises to maintain profitability and market competitiveness. DJI has implemented refined cost control measures in all aspects of research and development, production and sales, and effectively reduced cost expenditures by optimizing production processes, improving equipment utilization efficiency, and reducing raw material procurement costs. At the same time, the company also pays attention to the rationality and efficiency of the cost assessment to ensure that the cost expenditure matches the business development.

#### **(3) Financing and investment management**

Financing and investment management is an important part of enterprise financial management. DJI has maintained a sound strategy in financing, and has ensured the satisfaction of the company's capital needs and the optimization of capital costs through diversified financing channels and reasonable financing structure. In terms of investment, the company focuses on project risk and return assessment and long-term value creation, and achieves asset preservation and appreciation through effective portfolio management.



**Figure 3.** Financial risk management status of DJI Innovation Technology Co., LTD

(4) Risk management strategy

DJI has adopted a comprehensive risk management strategy in financial risk management. The company has established a sound risk management system and internal control mechanism, and achieved effective control of financial risks through risk identification, assessment, monitoring and reporting. At the same time, the company also pays attention to the establishment and improvement of risk early warning and emergency response mechanism to ensure that in the event of emergencies, it can respond quickly and reduce losses.

(5) Financial supervision and inspection

Financial supervision and inspection is an important means to ensure the standardization and effectiveness of enterprise financial management. DJI has established an independent financial audit department and internal control supervision body to conduct comprehensive supervision and inspection of the company's financial status and business processes. Ensure the accuracy and compliance of the company's financial reports through regular audit and internal audit, and provide strong support for the company's decision-making.

**4. Suggestions on the application of financial analysis in risk management of small and medium-sized enterprises**

**4.1. Identify financial risks**

In entrepreneurial small and medium-sized enterprises, the identification of financial risk is the primary task of risk management. Through financial analysis, enterprises should comprehensively sort out their financial status and operating results from multiple dimensions such as financial statements and financial indicators, and identify possible financial risks. These risks may include market risk, liquidity risk, credit risk, operational risk, etc. In the process of identifying risks, enterprises should also pay attention to the traceability of risk sources, understand the root causes of risks, and provide a basis for subsequent risk assessment and control.

**4.2. Assessing the risk level**

After identifying financial risks, enterprises need to quantitatively evaluate these risks and determine their level and priority. Financial analysis can be quantitatively assessed by calculating various financial indicators (such as current ratio, quick ratio, asset-liability ratio, net profit margin, etc.), combined with industry standards and historical data. In addition, enterprises can also use risk matrix, risk map and other tools to carry out qualitative assessment of risks, and further clarify the impact degree and possibility of risks. Through risk assessment, enterprises can clearly understand the severity and urgency of various risks, and provide a basis for subsequent risk prevention and control.

### 4.3. Formulating prevention and control strategies

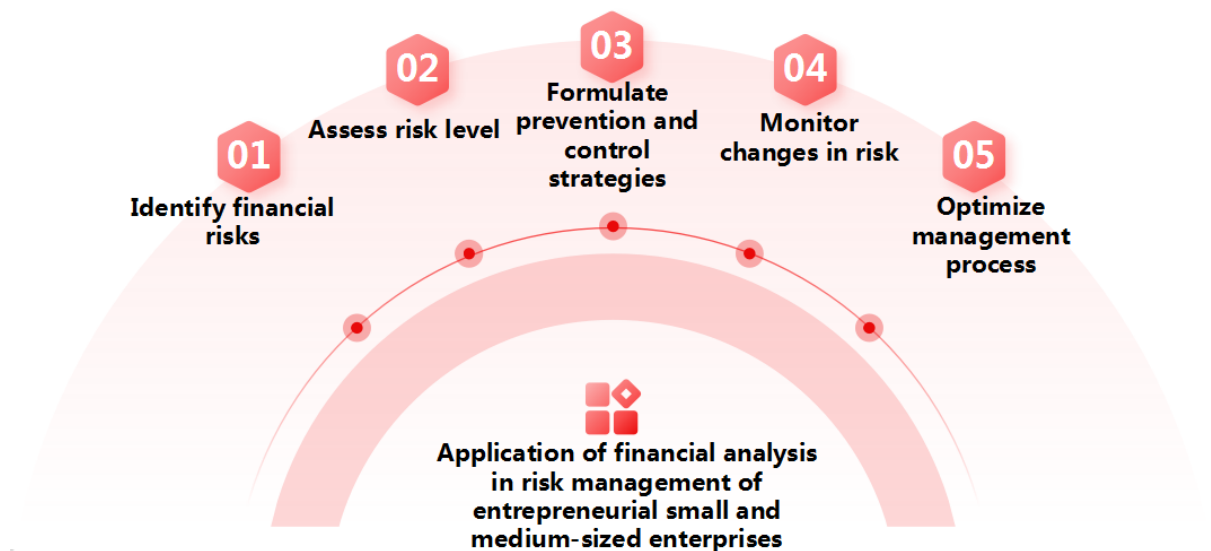
After assessing the risk level, enterprises need to develop corresponding prevention and control strategies. These strategies should be tailored to different risk types, levels and priorities. For example, enterprises can reduce liquidity risk by strengthening cash flow management and optimizing inventory turnover. For credit risks, enterprises can establish a strict credit evaluation system, strengthen accounts receivable management and other ways to prevent and control risks. When formulating a prevention and control strategy, enterprises should also pay attention to the feasibility and effectiveness of the strategy to ensure that the strategy can play a role in actual operation.

### 4.4. Monitoring risk changes

In the process of risk prevention and control, enterprises need to continuously monitor changes in risk. Financial analysis can be through regular or irregular financial statement analysis, financial ratio analysis and other ways to timely understand the financial status and risk status of the enterprise. At the same time, enterprises should also establish a risk early warning mechanism to warn of possible new risks or risk escalation. Through risk monitoring and early warning, enterprises can detect and respond to changes in risk in time to ensure the effectiveness of risk prevention and control strategies.

### 4.5. Optimize the management process

The application of financial analysis in risk management is not limited to identifying, assessing, and preventing risks, but can also help enterprises optimize management processes. Through in-depth analysis of the business process and financial process, enterprises can find the bottlenecks and problems in the process and put forward suggestions for improvement. These improvement suggestions can involve process optimization, process reorganization, process automation, etc., to improve the operational efficiency and management level of the enterprise. By optimizing the management process, enterprises can reduce management costs, improve management quality, and lay a solid foundation for the sustainable development of enterprises.



**Figure 4.** Suggestions for the application of financial analysis in risk management of small and medium-sized enterprises

## 5. Conclusion

To sum up, financial analysis plays an irreplaceable role in the risk management of small and medium-sized enterprises. It can not only help enterprises identify and manage potential risks, but also provide decision support for enterprises and promote the steady development of enterprises. Taking DJI Innovation as an example, by strengthening the application of financial analysis in risk management, the company has successfully realized the optimization of financial structure, cost control and cash flow management, laying a solid foundation for the company's long-term development. Therefore, small and medium-sized enterprises should attach great importance to the role of financial analysis in risk management and constantly improve their risk management capabilities.

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