

Original Paper

Research on Motivation and Effect of Continuous Equity

Incentive of Jingfeng Mingyuan

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Abstract

Guided by the policy principle that "scientific and technological innovation is the primary productive force," China has introduced new regulatory policies for high-tech enterprises—and launched the STAR Market to facilitate their listing, thereby guiding more innovative companies into the capital market. Since its inception, the number of listed semiconductor companies has mushroomed like bamboo shoots after rain. Under such policy support, how to maintain sustainable operations has become a focal point of public attention. For most tech-driven enterprises, technological capabilities and talent acquisition can enhance market competitiveness, while equity incentive plans serve as crucial tools for attracting and retaining professionals. Therefore, the formulation and implementation of these incentive programs have become particularly vital. This study, grounded in equity incentive theories, examines Jingfeng Mingyuan—a semiconductor company listed on the STAR Market—as a case study to analyze the motivations and effectiveness of its equity incentive program, aiming to provide valuable references for similar enterprises.

Keywords

equity incentive, incentive motivation, incentive effect

According to industry statistics and forecasts by the Semiconductor Industry Research Institute, global semiconductor market sales are projected to surpass the \$600 billion milestone for the first time by 2024, marking a 19.1% year-on-year growth. The global integrated circuit module market has experienced three consecutive years of 30.9% annual growth from \$19.1 billion in 2015 to \$25 billion in 2018, with projections indicating it will reach \$55.6 billion by 2026. The Asia-Pacific region, with China as its core hub, is poised to become the largest emerging trade growth market. Since the launch of the STAR Market in June 2019, the secondary market for semiconductor integrated circuits has seen remarkable expansion. Amid heightened market enthusiasm, a new wave of investment activities has

reached its peak. With growing capital inflows and strengthened government support, sustainable operations have emerged as a shared aspiration for both the industry and investors. As of July 2025, over six years after the STAR Market's debut, 589 tech companies have gone public, 436 implemented equity incentive plans, and 777 related announcements have been made. This demonstrates that equity incentives have become an essential component of corporate development strategies for an increasing number of innovative enterprises. This study examines—Jingfeng Mingyuan, a semiconductor integrated circuit company listed on the STAR Market, focusing on its six equity incentive plans implemented between 2018 and 2022. The research explores the motivations behind these incentive policies, evaluates their effectiveness, identifies strengths and weaknesses, and provides targeted recommendations. The findings offer actionable insights for other STAR Market-listed companies in designing and executing equity incentive programs.

1. Introduction to Equity Incentive Cases

1.1 Jingfeng Mingyuan Enterprise Overview

Founded in October 2008 and listed on the STAR Market in 2019 (Stock Code: 688368), Jingfeng Mingyuan has emerged as a leading enterprise in China's integrated circuit industry. Headquartered in Shanghai—the company's international operations are based in Hong Kong. Initially specializing in R&D and sales of LED lighting driver chips, it later expanded into motor driver chip development. Operating under a Fabless model, Jingfeng Mingyuan designs products based on customer needs, sources components through third-party manufacturers, and primarily sells through distributors with direct sales as a supplement. Embracing the philosophy of "Empowering Global Chip Manufacturing, Enabling Green Living," the company has made significant breakthroughs in LED lighting and driver chip technologies, consistently ranking among industry leaders.

1.2 Comparison and Implementation of Equity Incentive Plans

Table 1.1 Main Contents of the Continuous Equity Incentive Plan of Jingfeng Mingyuan

Name of equity incentive plan	Date of draft announcement	Validity (months)	Number of motivated persons	Grant price (yuan)	Number of shares to be granted (in thousands of shares)	Proportion of total equity(%)	Motivators	Class	II	Operating income or gross
First issue 2020	2020.01	≤60	211	36	281.96	4.58		restricted stock		

							margin
Second installment 2020	2020.07	≤ 48	8	80	75	1.22	Class II restricted stock Operating income or gross margin
First issue 2021	2021.04	≤ 63	14	87	77.68	1.26	Class II restricted stock Operating income or gross margin
Second issue 2021	2021.07	≤ 60	16	168	44.15	0.71	Class II restricted stock Operating income or gross margin
First issue 2022 (canceled)	2022.03	≤ 60	158	113.8	115.54	1.86	Class II restricted stock Operating income or gross margin
Issue 2, 2022	2022.06	≤ 60	88	20	23	0.37	Class II restricted stock DC/DC product line sales

Data source: Jingfeng Mingyuan equity incentive draft collection.

The implementation of each period is as follows:

In 2020's first phase: On May 12, 2021, 4.3008 million shares that met the vesting conditions of the first vesting period were listed for trading; on May 16, 2022, 4.1914 million shares that met the vesting conditions of the second vesting period were listed for trading; on the same day, 1.533 million shares of the reserved portion that met the vesting conditions of the first vesting period were listed for trading. It was completed within the reporting period of 2024.

In 2020's second phase: On May 16, 2022, 1.89 million shares that met the vesting conditions of the first vesting period were listed for trading; 1.138 million shares of the reserved portion of restricted stock were granted at 79 yuan per share on July 29, 2021. It was completed within the reporting period of 2024.

In 2021's first phase: On May 16, 2021, 1.1226 million shares that met the vesting conditions of the first vesting period were listed for trading; the company-level performance metrics were achieved within the reporting period of 2024.

In 2021's second phase: The company-level performance metrics were achieved within the reporting

period of 2024.

In 2022's second phase: On June 13, 2022, second-class restricted shares were granted at 20 yuan per share, except for the shares that were forfeited due to employee departure or voluntary renunciation, the remaining shares that met the conditions were listed for trading; on October 27, 2022, the first vesting period of the reserved portion of second-class restricted shares at 20 yuan per share were listed for trading. As of the reporting period of 2024, the company-level performance metrics did not reach the target value.

Overall, except for the 2021 second phase equity incentive plan which has not yet vested due to not meeting the vesting conditions, all other granted shares have started to vest in batches and be listed for trading. Since the number of shares granted in each phase accounts for a very small proportion of the total shares, their vesting or not will not significantly impact the company's financial results.

Through the organization and summarization of the relevant data of the above equity incentive plans of the case company, the second-class restricted stock was chosen as the equity incentive tool. Under this model, more employees meet the incentive conditions, the price paid by employees for purchasing shares is lower, and they pay in installments when the exercise conditions are met, greatly alleviating the employees' financial pressure. Although human capital is not an asset in accounting terms, it is an important source for the sustainable development of the enterprise and increasing financing.

In terms of the number of incentive recipients, as the company's business continues to expand and its scale continues to grow, the number of employees is also significantly increasing. Although the number of incentives in subsequent phases is lower compared to the first phase, the total number of incentivized employees still accounts for a significant portion of the company's total number of employees, indicating that the case company consistently values human capital, which is beneficial for aligning employees' interests with those of the company. Additionally, in terms of the types of incentive recipients, there are those who master the company's core technology, those who implement high-level decisions and supervise grassroots work, and those who are eligible for incentives after comprehensive assessment. As a high-tech enterprise, it emphasizes the management of human capital, extends the incentive timeline, aligns the interests of people and the company, ensuring the speed of core technology updates and stabilizing the talent team structure, which helps improve corporate performance.

In terms of the grant price, the first six phases generally show an inverted 'U' trend, further indicating that the company's incentive intensity is continuously increasing, aiming to motivate employees' work enthusiasm and guide them to focus on the long-term interests and development of the company.

2. Analysis of Equity Incentive Motivation

2.1 Strengthen Incentives and Establish a Long-term Mechanism

With the reform of corporate systems, the separation of ownership and management rights and the principal-agent relationship not only demonstrate specialized advantages for enterprise development,

but also give rise to a series of issues that urge managers to continuously improve management concepts. Establishing equity incentive mechanisms has become one of the solutions to address these challenges. In China's capital market, over half of enterprises collapse during their growth phase, making it crucial to formulate long-term development strategies tailored to their specific circumstances before failure. Based on this reality, Jingfeng Mingyuan implemented incentive measures for talent aligned with its development strategy upon listing, including salary improvements and continuous equity incentives. Long-term equity incentives not only manifest in extended policy implementation periods but also demonstrate lasting effects, effectively compensating for the limitations of bonuses and benefits in long-term motivation while reducing turnover rates among management and core technical personnel. From 2020 to 2025, the company focused on talent recruitment, strengthening talent ladder construction and incentive mechanisms to align employee interests with corporate goals and optimize talent structure. During upswing phases, it expanded industrial layouts and enhanced market competitiveness to create new profit growth points. In downturn phases, it continuously improved product processes and adjusted incentive strategies to stabilize core teams. This approach achieves win-win cooperation with employees while further realizing the goal of maximizing corporate profits.

2.2 Optimize Governance Structure and Reduce Agency Costs

Analysis of the initial public offering prospectus reveals that the actual controlling shareholder and their relatives hold over half of the equity, achieving relative control. As a traditional family-owned enterprise, this ownership structure has undeniably contributed to strong cohesion and decision-making efficiency during its early development. However, with the company's continuous expansion, business diversification, and technological innovation, issues such as improper control, excessive centralization of management, outdated concepts, and insufficient employee incentives may emerge. To visually demonstrate changes in principal-agent costs before and after implementing equity incentives, this study selects management expense ratio, total asset turnover rate, and the ratio of other receivables to total assets as key indicators for measuring corporate agency costs.

Table 2.1 Agency Costs before and after Listing

	2018	2019	2020	2021	2022	2023	2024
Management cost ratio (%)	3.69	3.51	5.78	4.47	9.87	7.87	8.52
Total asset turnover (%)	202.00	99.00	74	104	41	53.3	66.55
Other receivables as a percentage (%)	1.00	0.21	2.26	0.67	0.33	0.37	1.07

As shown in Table 2.1, prior to the equity incentive program implementation, the company's management expense ratio exhibited a steady fluctuation pattern, while both total asset turnover and other receivables-to-total-assets ratios showed a continuous downward trend. Since the program's launch in 2020, these financial metrics have seen modest improvements compared to pre-implementation levels, indicating more stable asset management and non-operating fund control. The rising management expense ratio suggests suboptimal corporate governance capabilities. As a traditional family-owned enterprise with centralized decision-making, Jingfeng Mingyuan faces inherent conflicts between its dominant shareholder's informational advantages and the relatively weaker position of minority shareholders. Additionally, the need to reduce principal-agent costs has prompted the company to urgently seek effective solutions that minimize shareholder disputes, lower agency expenses, and enhance operational efficiency.

2.3 Retain and Attract Talents and Accelerate Talent Accumulation

Since 2018, the company's R&D team has been actively expanding its workforce. The team size grew from 115 members in 2018 to 422 by April 2024, with core technical personnel numbers showing a steady upward trend. This reflects the accelerating pace of corporate development, necessitating continuous recruitment to strengthen the core technical team. The changes in incentive targets and their numbers further demonstrate the company's commitment to maintaining stable talent retention.

3. Effect of Equity Incentive Implementation

3.1 Financial Performance Analysis

This paper selected 12 companies in the second-tier semiconductor industry that had not implemented, implemented once, or implemented twice stock option incentives by December 31, 2022, as control objects. First, it analyzed the four major financial capabilities over the eight years from 2015 to 2022. To more objectively evaluate the effect of stock option incentives on case companies, the difference-in-differences method was continued to compare and analyze the case companies and control companies. Through vertical comparison of the companies themselves and horizontal comparison with industry averages, it was found that the continuous implementation of stock option incentives by case companies had a certain promoting effect on improving and enhancing debt repayment ability, operating ability, profitability, and growth ability, but did not significantly reduce agency costs. To exclude the possibility that other factors caused changes in financial performance, this paper used the difference-in-differences method for testing. The method model referenced the analytical framework of other scholars, treating stock option incentives as a natural experiment, comparing the sample group of companies that did not implement continuous stock option incentives with the experimental group to observe the net impact of the implementation of continuous stock option incentive policies on JinFengMingYuan. When the differences in the three indicators of operating ability, profitability, and growth ability before and after the implementation of continuous stock option incentives are positive, and the difference in agency costs is negative, it indicates that the

policy implementation brought about better changes in financial performance for the experimental group compared to the control group.

Using SPSS software to test the performance after the implementation of continuous stock option incentives, it was found that for case companies implementing continuous stock option incentives, the p-values for operating ability, profitability, debt repayment ability, and agency costs were all less than 0.05, showing significant differences. This indicates that under the condition of controlling other situations unchanged, the implementation of continuous stock option incentives can improve the operating ability, profitability, debt repayment ability, and agency costs of enterprises, with significant economic significance. Compared with the analysis results in the horizontal analysis based on annual units, the data during the incentive period showed more significant positive incentive effects, indirectly indicating that the effect of continuous stock option incentives needs a certain period of time to be verified.

3.2.1 Improve Staff Quality

Prior to its IPO, Jingfeng Mingyuan's R&D team was predominantly composed of bachelor's degree holders. However, given the high technical requirements and rapid product iteration cycles in semiconductor integrated circuits, only products with finalized layouts can achieve mass production, where human expertise proves more crucial. To ensure long-term industry competitiveness and build a stable talent pipeline, establishing a sustainable talent development system became imperative—a fundamental driver behind the company's continuous equity incentive program. Analysis of annual reports and prospectuses reveals a dramatic shift: the proportion of R&D staff with bachelor's degrees or below has sharply declined, while those holding master's degrees or higher has steadily increased. This structural improvement in both quantity and quality aligns perfectly with corporate strategy and incentive objectives. Overall, the continuous equity incentive program has effectively enhanced talent acquisition in the short term.

3.2.2 Improve Governance Structure

The rationality of a company's governance structure serves as a crucial indicator for assessing its long-term development potential, with sound governance mechanisms playing a vital role in driving organizational growth (Tao, 2021). As a relatively new listed high-tech enterprise, Jingfeng Mingyuan faces diverse operational challenges and market fluctuations. Implementing appropriate incentive measures to adapt to market changes, refining internal governance structures, and adopting innovative development models are essential for sustainable corporate growth. Since December 31, 2018, the shareholding ratio of Hu Liqiang, the largest shareholder, has steadily decreased from 35.85% to 24.34%, reflecting strategic equity distribution. During the equity incentive program, the top ten shareholders' combined stake fluctuated between 70% and 79%. The number of shareholders, which peaked on September 30, 2019, has shown a gradual decline followed by minor rebounds. With increasing total shares, a smaller shareholder base indicates concentrated ownership power. This demonstrates that Jingfeng Mingyuan's governance structure became more streamlined through equity

incentives, enabling employees to become shareholders and directly participate in decision-making processes. Such empowerment enhances decision-making scientific rigor while improving corporate governance and oversight mechanisms.

3.2.3 Improve the Level of R&D

Corporate technological innovation primarily relies on three key elements: high-caliber human capital, sustained R&D investment, and systematic talent development. Human capital is measured by the scale and educational qualifications of R&D teams, while material investments are quantified through financial resources like R&D expenditure and employee compensation. The enhancement of workforce quality through talent development has been thoroughly demonstrated, requiring no further elaboration. Material investments are reflected in three metrics: total R&D spending, R&D-to-revenue ratio, and average annual salaries for R&D personnel. Corporate R&D investment grew steadily from 60.8172 million yuan in 2018 to 303.1528 million yuan in 2022, and is projected to reach 173 million yuan by 2025. Although the growth rate slightly declined in some years, the total R&D investment maintained consistent upward momentum. This demonstrates that since implementing equity incentive plans, the company has consistently prioritized R&D expansion (Chi, Gupta, & Johnson, 2019), maintaining this commitment even during periods of rapid revenue growth. Regarding compensation, R&D personnel benefits doubled from an average of 312,000 yuan to 564,000 yuan annually post-implementation. Despite continuous workforce expansion, R&D salaries have grown at a rate exceeding 40% per capita, vividly illustrating the enterprise's profound commitment to technological advancement and talent retention.

3.3 Market Effects

This section examines the impact of consecutive equity incentive announcements on short-term market effects by analyzing stock price fluctuations reflected through external stakeholders' actions before and after announcement. Literature review reveals that event analysis is widely used in short-term market reaction studies. The study employs this methodology, with final market response measured by two indicators: excess returns and cumulative excess returns [82]. Through Analysis of Regression (AR), Contingent Analysis of Regression (CAR), trend charts, and t-tests for CAR before and after announcements, we find that the cumulative excess returns of the case company show significant effects during the announcement window period. On one hand, investors demonstrate positive attitudes toward corporate equity incentives, viewing them as beneficial for enterprise development. On the other hand, there's suspicion of "early leaks" in market reactions, as notable positive responses emerged even before the first two 2021 announcements and the first 2022 announcement. This indicates that implementing equity incentives represents a crucial strategic decision within the company, gaining consensus from both internal and external stakeholders. Coupled with rapid technological advancements, the likelihood of information leakage increases. It also demonstrates strong market attention and sensitivity to corporate equity incentive initiatives, anticipating favorable developments for business growth. In conclusion, consecutive equity incentive implementation exerts significant

positive short-term market effects on corporate performance.

4. Conclusions

The primary motivations for implementing equity incentive programs at the case company are threefold: (1) Jingfeng Mingyuan, being in its growth phase with unstable stability, requires establishing a long-term development strategy tailored to its circumstances and creating sustainable mechanisms; (2) As the controlling shareholder and their relatives have achieved absolute majority ownership, coupled with expanding business scope and growing comprehensive capabilities, excessive centralization of management may occur. This necessitates optimizing governance structures to reduce agency costs; (3) Being a high-tech enterprise, talent and technology remain core drivers of development, requiring urgent retention and attraction of professionals to accelerate talent accumulation. In terms of implementation outcomes, financial performance exceeds industry averages with significant growth potential, while non-financial metrics show notable improvements in employee quality, governance structure, R&D capabilities, and market share. The company has consistently received investor approval over most periods. However, research identifies shortcomings including simplistic performance metrics, short incentive periods, and inadequate disclosure systems. To address these, the case company should consider multifaceted factors when formulating equity incentive plans, establish comprehensive evaluation criteria, and adopt multidimensional approaches to enhance implementation effectiveness. These improvements would provide valuable references for peer companies in designing equity incentive programs.

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