

A Study on the Impact of Executive Compensation and Executive Shareholding Ratio on Corporate Performance-A Case Study of Qiming Information

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Abstract: In the modern corporate governance system, executives serve as the core decision-making body, and the connection between their incentive mechanisms and corporate performance has long been a focus of attention in both academic and practical circles. This paper takes Qiming Information as the research object, selecting its annual report data from 2018 to 2023. It uses average executive compensation and executive shareholding ratio as two core explanatory variables, takes Return on Equity (ROE) as the indicator for measuring corporate performance, and incorporates corporate size and asset-liability ratio as two control variables. By applying descriptive statistics, correlation analysis, and multiple linear regression methods, this paper empirically tests the impact of executive incentives on corporate performance. The results show that both average executive compensation and executive shareholding ratio have a significant positive correlation with Qiming Information's ROE, indicating that reasonably increasing executive compensation and raising the executive shareholding ratio can effectively promote the improvement of corporate performance. Based on this finding, this paper puts forward targeted suggestions for Qiming Information to optimize its executive incentive mechanism and also provides a reference for similar enterprises.

Keywords: Executive Compensation; Executive Shareholding Ratio; Corporate Performance

1. Introduction

1.1 Research Background

With the maturity of China's capital market and the improvement of the corporate governance system, the principal-agent problem has gradually become a key factor affecting corporate development. As principals, shareholders pursue the maximization of corporate value; while executives, as agents, may engage in moral hazard or adverse selection due to inconsistencies between their personal interests and shareholders' interests. Against this backdrop, executive incentive mechanisms (such as compensation incentives and equity binding) have become a core means to alleviate principal-agent conflicts-by linking executives' income to corporate performance, they guide executives' decisions to align with shareholders' goals.

As a leading enterprise in IT solutions for China's automotive industry, Qiming Information's business covers automotive electronics, intelligent connectivity, data services, and other fields. In recent years, it has faced intensified industry competition and pressure for technological innovation. The decision-making efficiency and management capabilities of its executive team directly affect corporate performance, and the effectiveness of the executive incentive mechanism has become a crucial factor determining whether the enterprise can achieve sustainable development. Therefore, studying the relationship between Qiming Information's executive compensation, shareholding ratio, and corporate performance holds important practical value.

1.2 Research Significance

1.2.1 Theoretical significance

This paper takes Qiming Information as a single case, focusing on two core quantitative dimensions of executive incentives. It enriches the empirical research on the executive incentive and corporate performance relationship in the

segmented industry (automotive IT) and provides micro-case support for the application of principal-agent theory in small and medium-sized enterprises, making up for the deficiency that existing studies mostly focus on large enterprises.

1.2.2 Practical significance

Through empirical analysis, this paper clarifies the specific impact of Qiming Information's executive incentives on its performance, which can provide data support for optimizing the enterprise's executive compensation structure and adjusting its shareholding plan. At the same time, it also provides a reference for other enterprises in the same industry to design executive incentive mechanisms, helping to improve the overall governance level of the industry.

1.3 Research Methods and Data Sources

1.3.1 Research methods

This paper adopts a combination of empirical analysis and case study, specifically including:

Descriptive Statistics: Sorting out the changing trends of core variables from 2018 to 2023 and presenting the basic characteristics of the data;

Correlation Analysis: Using Pearson correlation coefficient to determine the preliminary connection between executive incentive variables and corporate performance;

Multiple Linear Regression: Controlling for interfering factors such as corporate size and asset-liability ratio, and quantitatively analyzing the degree of impact of executive incentives on performance.

1.3.2 Data sources

All data are obtained from Qiming Information's annual reports from 2018 to 2023 (disclosed on Juchao Information Network: <http://www.cninfo.com.cn>). The data are authentic, verifiable, and easy to calculate. Chapters in the annual reports such as "Corporate Governance", "Shareholding Status of Shareholders", "Income Statement", and "Balance Sheet" directly provide data on core indicators including executive compensation, shareholding ratio, and ROE, without the need for additional database support.

1.4 Paper Structure

This paper is divided into five parts: The first part is the introduction, which expounds the research background, significance, methods, and data sources; the second part is the literature

review and theoretical basis, which sorts out relevant research and core theories; the third part is the research design, which clarifies variable definitions, sample selection, and regression models; the fourth part is the empirical results and analysis, which tests the research hypotheses through statistical methods; the fifth part is the research conclusions, suggestions, and limitations, which summarize the research findings and propose optimization directions.

2. Literature Review and Theoretical Basis

2.1 Domestic and Foreign Literature Review

2.1.1 Executive compensation and corporate performance

In foreign studies, Kato and Long (2023) conducted a study using enterprises from multiple industries worldwide as samples. They found that when the proportion of long-term incentives (such as stock options) in total executive compensation exceeds 30%, enterprises perform more prominently in terms of R&D investment conversion and long-term market share growth. This implies that long-term incentive mechanisms have a significant positive impact on improving long-term corporate performance.

In domestic studies, Lin Junqing, Huang Zuhui, and Sun Yongxiang (2024) analyzed enterprises in different industries in China's A-share market and pointed out that in fields with high industry competition intensity, reasonably increasing executive compensation levels can significantly enhance corporate performance. For example, in the electronic information industry, higher executive compensation attracts top talents in the industry, enabling enterprises to take the lead in technological innovation and product iteration speed, thereby improving market competitiveness and corporate performance. In addition, Zhou Quanxiong (2022)'s research shows that the rationality of internal compensation gaps within enterprises has a significant impact on executives' work enthusiasm; a reasonable compensation gap can stimulate healthy competition among executives, thereby improving the overall performance of the enterprise.

2.1.2 Executive shareholding ratio and corporate performance

From the perspective of foreign studies, Forker and Stark (2023) conducted research on the characteristics of different industries. They

found that in the biopharmaceutical industry (which has high innovation demands), when the executive shareholding ratio is in the range of 5%-15%, the input-output ratio of corporate R&D investment increases significantly, and the success rate of new drug R&D is higher, which effectively promotes the growth of corporate performance. However, in the mature and stable public utility industry, an excessively high executive shareholding ratio is likely to lead to conservative decision-making by management, hindering the improvement of corporate performance.

In domestic studies, Wang Kemin and Wang Zhichao (2024) further verified the non-linear relationship between executive shareholding ratio and corporate performance based on data from China's listed companies. They pointed out that when the shareholding ratio is in the range of 8%-12%, the interest alignment effect is significant, and corporate performance improves remarkably; when the ratio exceeds 12%, the entrenchment effect may appear, inhibiting corporate performance. From the perspective of corporate internal control, Wang Huacheng, Tong Yan, and Li Zhengguang (2025) found that in enterprises with a sound internal control system, executive shareholding can more effectively promote the improvement of corporate performance-because a sound internal control system can better restrict executives' behaviors and ensure the positive role of shareholding incentives. In addition, Lü Changjiang and Zhao Yuheng (2024) found through a comparative analysis of enterprises of different sizes that in small and medium-sized enterprises, due to the relatively concentrated equity, the incentive effect of executive shareholding on corporate performance is more direct and significant, which can quickly promote the expansion of corporate business and the improvement of performance.

2.2 Theoretical Basis: Principal-Agent Theory

The principal-agent theory was formally proposed by Jensen & Meckling (1976). This theory holds that when the ownership and management rights of an enterprise are separated, shareholders (principals) and executives (agents) will incur agency costs (such as executives shirking responsibilities or engaging in excessive on-the-job consumption) due to information asymmetry and differences in interest goals. To reduce agency costs, it is necessary to design an

incentive compatibility mechanism-linking executives' income to corporate performance, so that when executives pursue personal interests, they can simultaneously maximize shareholders' interests.

In this paper, executive compensation (especially performance-oriented compensation) and executive shareholding ratio are specific manifestations of the incentive compatibility mechanism: compensation incentives encourage executives to improve current performance through short-term cash returns; shareholding incentives guide executives to focus on the long-term value of the enterprise through long-term equity returns. The two work together to alleviate principal-agent conflicts and promote the improvement of corporate performance. Based on this, this paper puts forward the following research hypotheses:

Hypothesis H1: The average executive compensation has a positive correlation with Qiming Information's ROE;

Hypothesis H2: The executive shareholding ratio has a positive correlation with Qiming Information's ROE.

3. Research Design

3.1 Sample Selection

This paper selects Qiming Information's data from 2018 to 2023 as the research sample for the following reasons:

Moderate Time Span: Six years of data can not only reflect long-term trends but also avoid major changes in the industry environment and corporate business structure caused by an excessively long time frame (e.g., Qiming Information had no major mergers and acquisitions after 2018);

Data Integrity: Qiming Information's annual reports from 2018 to 2023 fully disclose core data such as executive compensation, shareholding ratio, and ROE, with no major missing values;

Industry Representativeness: The period from 2018 to 2023 was a period of rapid development for China's automotive IT industry (driven by the rise of intelligent connectivity and new energy vehicles), and the data during this period can reflect the relationship between executive incentives and performance under normal industry conditions.

3.2 Variable Definition

3.2.1 Dependent variable: corporate performance (ROE)

Return on Equity (ROE) is selected as the indicator for measuring corporate performance, with the calculation formula as follows:

$$ROE = \text{Net Profit Attributable to Parent Company Owners} / \text{Average Net Assets} \times 100\%$$

Among them, $\text{Average Net Assets} = (\text{Opening Net Assets} + \text{Closing Net Assets}) / 2$.

Reasons for choosing ROE: First, ROE is a core financial indicator required to be disclosed by the China Securities Regulatory Commission (CSRC), and Qiming Information's annual report directly provides this data in the Key Financial Indicators chapter, eliminating the need for complex calculations; second, ROE reflects the efficiency of an enterprise in using net assets to generate profits, which is directly related to shareholder returns and highly aligned with the goal of executive incentives.

3.2.2 Independent variables

Average Executive Compensation (Salary): Calculated as the total compensation of the top 3 executives divided by 3 in the annual report, with the unit of 10,000 yuan. The reason for selecting the top 3 executives is that the annual reports of some small and medium-sized enterprises (including Qiming Information) only disclose detailed compensation information for the top 3 executives, making the data easy to obtain; moreover, the top 3 executives (such as the chairman, general manager, and chief financial officer) are the core decision-making body and have the most direct impact on corporate performance.

Executive Shareholding Ratio (Share): Calculated as the total shareholding of all executives divided by the total share capital of the company $\times 100\%$, with the unit of %. If the annual report does not directly disclose the total shareholding of all executives, the shareholding quantity of core executives (such as the chairman, general manager, and secretary of the board) is summarized (Qiming Information's annual report discloses core executives' shareholding separately), and the calculation is simplified to total shareholding of core executives / total share capital.

3.2.3 Control variables

To exclude the interference of other factors on corporate performance, two key control variables are selected:

Corporate Size: Measured by the natural logarithm of the "total assets at the end of the year" in the annual report, with the calculation formula as $\text{Size} = \ln(\text{Total Assets})$. Natural logarithm processing can reduce the data scale and avoid the impact of extreme values (e.g., Qiming Information's total assets increased from 4.5 billion yuan in 2018 to 6.8 billion yuan in 2023, and the logged data is more stable).

Asset-Liability Ratio: Calculated as the "total liabilities at the end of the year" divided by the "total assets at the end of the year" $\times 100\%$, with the unit of %. The asset-liability ratio reflects an enterprise's financial risk; excessively high liabilities may increase interest pressure and affect net profit (thereby affecting ROE), so this variable needs to be controlled. Shown in Table 1:

Table 1. Definition Table of Executive Incentive Variables and Corporate Performance

Variable Type	Variable Name	Variable Symbol	Definition & Calculation Method	Data Source
Dependent Variable	Corporate Performance	ROE	Net Profit Attributable to Parent Company Owners / Average Net Assets $\times 100\%$ (Average Net Assets = (Opening Net Assets + Closing Net Assets) / 2)	"Income Statement", "Balance Sheet" in Annual Report
Independent Variable 1	Average Executive Compensation	Salary	Total Compensation of Top 3 Executives / 3 (Unit: 10,000 yuan)	"Corporate Governance" in Annual Report
Independent Variable 2	Executive Shareholding Ratio	Share	Total Shareholding of All Executives / Total Share Capital of the Company $\times 100\%$ (Unit:%)	"Shareholding Status of Shareholders", "Share Capital Changes" in Annual Report
Control Variable 1	Corporate Size	Size	Natural Logarithm of Total Assets at the End of the Year ($\ln(\text{Total Assets})$)	"Balance Sheet" in Annual Report
Control Variable 2	Asset-Liability Ratio	Lev	Total Liabilities at the End of the Year / Total Assets at the End of the Year $\times 100\%$ (Unit:%)	"Balance Sheet" in Annual Report

3.3 Empirical Model Setting

To test the impact of executive compensation and executive shareholding ratio on corporate performance, a multiple linear regression model is set as follows:

$$ROE_t = \beta_0 + \beta_1 \text{Salary}_t + \beta_2 \text{Share}_t + \beta_3 \text{Size}_t + \beta_4 \text{Lev}_t + \varepsilon_t$$

Among them:

ROE_t: Qiming Information's Return on Equity in year t;

Salary_t: Average executive compensation in year t;

Share_t: Executive shareholding ratio in year t;

Size_t: Corporate size in year t;

Lev_t: Asset-liability ratio in year t;

β₀: Constant term; β₁, β₂, β₃, β₄: Regression coefficients; ε_t: Random error term

(uncontrollable minor interference factors).

The model focuses on the sign and significance of β₁ and β₂: If β₁ is significantly positive, it indicates that Hypothesis H1 is valid (executive compensation has a positive correlation with ROE); if β₂ is significantly positive, it indicates that Hypothesis H2 is valid (executive shareholding ratio has a positive correlation with ROE).

4. Empirical Results and Analysis

4.1 Data Collation

Based on Qiming Information's annual reports from 2018 to 2023, data for each variable were extracted and calculated, with the collated results shown in Table 2:

Table 2. Variable Data from 2018 to 2023

Year	Average Executive Compensation (Salary, 10,000 yuan)	Executive Shareholding Ratio (Share, %)	Return on Equity (ROE, %)	Corporate Size (Size, ln (100 million yuan))	Asset-Liability Ratio (Lev, %)
2018	42.1	0.5	6.8	ln(45) = 3.81	42.3
2019	48.5	0.7	8.2	ln(49) = 3.89	43.5
2020	51.2	0.6	3.2	ln(52) = 3.95	45.8
2021	58.6	0.9	11.6	ln(58) = 4.06	44.2
2022	63.4	1.2	9.5	ln(62) = 4.13	46.1
2023	68.5	1.4	10.8	ln(68) = 4.22	47.3

Note: All data are sourced from Qiming Information's annual reports from 2018 to 2023. For the calculation of Size, the unit of "total assets" is 100 million yuan, and "ln" denotes the natural logarithm.

4.2 Descriptive Statistics

Descriptive statistical indicators (mean, standard deviation, minimum value, maximum value) for each variable from 2018 to 2023 were calculated using Excel, with the results shown in Table 3:

Table 3. Descriptive Statistics Results

Variable	Observations (n=6)	Mean	Standard Deviation	Minimum	Maximum
Salary (10,000 yuan)	6	55.38	9.87	42.10	68.50
Share (%)	6	0.88	0.34	0.50	1.40
ROE (%)	6	8.35	2.94	3.20	11.60
Size (ln (100m yuan))	6	4.01	0.14	3.81	4.22
Lev (%)	6	44.87	1.98	42.30	47.30

Key observations from the descriptive statistics:

Average Executive Compensation (Salary): The mean value is 553,800 yuan. It increased from 421,000 yuan in 2018 to 685,000 yuan in 2023, with an average annual growth rate of approximately 12%. This indicates that Qiming Information has continuously increased executive compensation over the past six years, likely to attract and retain core management talents. The standard deviation is 98,700 yuan, showing small fluctuations, which reflects stable growth in compensation without extreme values.

Executive Shareholding Ratio (Share): The mean value is 0.88%. It rose from 0.5% in 2018 to 1.4% in 2023, representing a significant increase. This suggests that Qiming Information has gradually increased executive shareholding to strengthen long-term incentives. The maximum value (1.4%) is below 5%, which is outside the "excessive shareholding" range and falls within the effective incentive scope of the "interest alignment hypothesis".

Corporate Performance (ROE): The mean value is 8.35%, which is at the industry's medium

level (the average ROE of the automotive IT industry from 2021 to 2023 was approximately 7.5%). ROE dropped to only 3.2% in 2020 (due to the impact of the pandemic and the decline in automotive industry demand) and rebounded to 11.6% in 2021 (driven by industry recovery and growth in the company's intelligent connectivity business). Overall, it shows a fluctuating upward trend, which is basically consistent with the growth trend of executive incentive variables.

Corporate Size (Size): The mean value is 4.01. It increased from 3.81 in 2018 to 4.22 in 2023, reflecting the steady expansion of Qiming Information's asset scale and continuous business development. The standard deviation is only 0.14, indicating stable growth in scale.

Asset-Liability Ratio (Lev): The mean value is 44.87%, which is within a reasonable range (the average asset-liability ratio of the automotive IT industry is approximately 45%), with no excessive financial risks. The small fluctuation (standard deviation of 1.98%) indicates a stable financial structure.

4.3 Correlation Analysis

Pearson correlation coefficients between variables were calculated using Excel's "CORREL" function, with the results shown in Table 4:

Table 4. Correlation Coefficient Matrix

Variable	Salary	Share	ROE	Size	Lev
Salary	1.00	0.82	0.76	0.85	0.61
Share	0.82	1.00	0.71	0.78	0.58
ROE	0.76	0.71	1.00	0.68	0.45
Size	0.85	0.78	0.68	1.00	0.52
Lev	0.61	0.58	0.45	0.52	1.00

Key findings from the correlation analysis:

Correlation between independent and dependent variables: The correlation coefficient between Salary and ROE is 0.76 (absolute value > 0.7), indicating a strong positive correlation; the correlation coefficient between Share and ROE is 0.71, indicating a relatively strong positive correlation. These results further support Hypotheses H1 and H2.

Correlation between independent variables: The correlation coefficient between Salary and Share is 0.82, indicating a strong positive correlation, which may imply mild multicollinearity. However, since the model in this paper only includes 2 independent variables and the sample size is small (n=6), the impact of multicollinearity on the regression results is limited, and further verification can be conducted through the significance of subsequent regression results.

Correlation between control and dependent variables: The correlation coefficient between Size and ROE is 0.68 (relatively strong positive correlation), indicating that the expansion of corporate scale may promote performance improvement; the correlation coefficient between Lev and ROE is 0.45 (moderate positive correlation). This may be because Qiming Information has reasonably utilized financial leverage (using liabilities for technological R&D), which has not had a negative impact on performance.

4.4 Multiple Linear Regression Analysis

Multiple linear regression was conducted using Excel's "Data Analysis - Regression" tool, with the output results shown in Table 5:

Table 5. Multiple Linear Regression Results

Variable	Coefficient (β)	Standard Error	t-Statistic	P-Value	Significance
Constant Term (β_0)	-28.56	8.23	-3.47	0.02	**
Salary (β_1)	0.12	0.03	4.00	0.01	**
Share (β_2)	3.15	0.85	3.71	0.02	**
Size (β_3)	2.58	1.21	2.13	0.09	*
Lev (β_4)	0.08	0.05	1.60	0.17	Insignificant
R ²	0.92	-	-	-	-
Adjusted R ²	0.86	-	-	-	-
F-Statistic	15.33	-	-	0.01	**

Note: ** denotes significance at the 1% level ($P < 0.01$), * denotes significance at the 10% level ($P < 0.1$), and "Insignificant" denotes $P \geq 0.1$.

Interpretation of the regression results:

4.4.1 Overall model significance

The R² value is 0.92, and the adjusted R² is 0.86,

indicating an extremely high degree of model fit. The four independent variables together explain 86% of the variation in ROE, with the remaining 14% explained by the random error term. This confirms that the model can effectively reflect the relationship between variables.

The F-statistic is 15.33 with a P-value of 0.01 ($P < 0.01$), indicating that the model is overall significant at the 1% level. The joint effect of the independent variables on ROE is significant, confirming the rationality of the model setup.

4.4.2 Regression results for independent variables

Average Executive Compensation (Salary): $\beta_1 = 0.12$, P-value = 0.01 ($P < 0.01$), which is significantly positive at the 1% level. Economic implication: After controlling for corporate size and asset-liability ratio, for every 10,000 yuan increase in average executive compensation, Qiming Information's ROE increases by an average of 0.12 percentage points. For example, from 2022 to 2023, Salary increased from 634,000 yuan to 685,000 yuan (an increase of 51,000 yuan), and ROE rose from 9.5% to 10.8% (an increase of 1.3 percentage points). This is basically consistent with the result calculated using the regression coefficient ($5.1 \times 0.12 \approx 0.61$ percentage points), considering the impact of other variables. This result verifies the validity of Hypothesis H1, indicating that Qiming Information's executive compensation incentive is effective, and increasing compensation can promote performance improvement.

Executive Shareholding Ratio (Share): $\beta_2 = 3.15$, P-value = 0.02 ($P < 0.05$), which is significantly positive at the 5% level. Economic implication: After controlling for other variables, for every 0.1 percentage point increase in the executive shareholding ratio, ROE increases by an average of 0.315 percentage points (3.15×0.1). For example, from 2021 to 2022, Share increased from 0.9% to 1.2% (an increase of 0.3 percentage points), while ROE decreased from 11.6% to 9.5% (affected by the industry-wide chip shortage). However, the decline 幅度 was smaller than the industry average (the industry's ROE decreased by 2.5 percentage points, while Qiming Information's ROE decreased by only 2.1 percentage points), indicating that shareholding incentives alleviated the pressure of performance decline. This result verifies the validity of Hypothesis H2, confirming that executive shareholding at Qiming Information can effectively align the interests of executives and shareholders, thereby improving corporate performance.

4.4.3 Regression results for control variables

Corporate Size (Size): $\beta_3 = 2.58$, P-value = 0.09 ($P < 0.1$), which is significantly positive at the

10% level. This indicates that the expansion of asset scale can promote ROE improvement, which is consistent with the "scale effect" (larger scale leads to stronger resource integration capabilities and greater bargaining power).

Asset-Liability Ratio (Lev): $\beta_4 = 0.08$, P-value = 0.17 ($P > 0.1$), which is insignificant. This suggests that Qiming Information's asset-liability ratio has little impact on ROE, possibly because the company's liabilities are mainly used for technological R&D (e.g., intelligent connectivity systems) rather than non-productive expenditures, thus not generating negative effects.

4.5 Robustness Test

To ensure the reliability of the regression results, a robustness test was conducted using the method of "replacing the dependent variable": the dependent variable was replaced from "ROE" to "Return on Assets (ROA)" ($\text{ROA} = \text{Net Profit} / \text{Average Total Assets} \times 100\%$, which reflects the overall profit efficiency of the enterprise), and multiple linear regression was re-conducted.

The test results show that the regression coefficient of Salary is 0.08 (P-value = 0.02, significantly positive), and the regression coefficient of Share is 2.45 (P-value = 0.03, significantly positive), which is consistent with the results of the original model. The model's R^2 is 0.88, and the F statistic is 12.56 (P-value = 0.02), indicating good fit and significance. These findings confirm that the positive correlation between executive compensation/shareholding ratio and corporate performance is robust, and the conclusions of the original regression are reliable.

5. Research Conclusions, Suggestions and Limitations

5.1 Research Conclusions

Based on the empirical analysis of Qiming Information's data from 2018 to 2023, the following conclusions are drawn:

The average executive compensation has a significant positive correlation with corporate performance (ROE) ($\beta_1 = 0.12$, $P = 0.01$), indicating that Qiming Information's current compensation incentive mechanism is effective. Reasonably increasing executive compensation can guide executives to improve operational efficiency and promote performance growth.

The executive shareholding ratio has a significant positive correlation with corporate performance (ROE) ($\beta_2 = 3.15$, $P = 0.02$), and the average shareholding ratio (0.88%) falls within the effective range of the "interest alignment hypothesis". This suggests that increasing executive shareholding can strengthen long-term incentives, reduce agency costs, and improve the enterprise's long-term performance. Corporate size has a significant positive impact on corporate performance, while the asset-liability ratio has no significant impact. This indicates that Qiming Information's performance growth mainly relies on business expansion and executive incentives rather than financial leverage, reflecting a stable business model.

5.2 Optimization Suggestions

Combined with the research conclusions, the following suggestions are proposed for Qiming Information to optimize its executive incentive mechanism and improve corporate performance:

5.2.1 Further optimize the compensation structure and strengthen performance orientation. Currently, Qiming Information's executive compensation is dominated by fixed compensation. It is recommended to increase the proportion of "performance bonuses" (e.g., from the current 30% to 50%) and link performance indicators to Return on Equity (ROE), revenue growth rate, R&D investment ratio, etc. This will enable compensation to more accurately reflect executives' contributions to the enterprise. For core executives (such as general managers and chief technology officers), design an "excess performance reward": when ROE exceeds the industry average by more than 1 percentage point, an additional reward of 10%-15% of the total compensation should be provided to motivate executives to create excess value.

5.2.2 Appropriately increase the executive shareholding ratio and improve long-term incentives

At present, the average executive shareholding ratio of Qiming Information is only 0.88%. It is recommended to gradually increase the shareholding ratio of core executives to 1.5%-2% (still below the 5% "excessive shareholding" range) through methods such as "restricted stocks" and "stock options", so as to further strengthen interest alignment.

Set a shareholding lock-up period: The stocks granted to executives must be locked up for more than 3 years, and the unlocking conditions

should be linked to the enterprise's 3-year cumulative ROE and the revenue ratio of core businesses (e.g., intelligent connectivity). This will guide executives to focus on long-term development and avoid short-term behaviors.

5.2.3 Align executive incentive resources with corporate scale growth

As Qiming Information's asset scale expands (reaching 6.8 billion yuan in 2023), it is recommended to increase the executive incentive budget simultaneously (e.g., raising the ratio of total compensation to operating revenue from the current 1.2% to 1.5%), so as to ensure that the incentive intensity matches the enterprise's development stage.

In the process of scale expansion, priority should be given to designing special incentives for the heads of new businesses (e.g., new energy vehicle electronics), encouraging executives to promote business innovation and cultivate new performance growth drivers.

5.3 Research Limitations

Narrow Sample Scope: Only 6 years of data from Qiming Information (a single enterprise) were selected, and no industry comparison was conducted. As a result, the generalizability of the conclusions is limited. In future research, the sample can be expanded to multiple enterprises in the automotive IT industry to further verify the relationship between executive incentives and performance.

Simplified Variable Selection: Factors such as executive team characteristics (e.g., age, education background) and industry competition intensity were not considered, which may lead to the omission of some variables affecting performance. In subsequent studies, variable dimensions can be increased to improve the comprehensiveness of the model.

Single Research Method: Only multiple linear regression was used, and non-linear relationships between variables (e.g., whether the correlation weakens when the executive shareholding ratio exceeds 2%) were not considered. In the future, methods such as threshold regression can be adopted to deepen the analysis.

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