

A Study on the Effectiveness of Management Incentive and Internal Control

- Based on the Data Analysis of Shanghai and Shenzhen Stock

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Abstract. Enterprise management as the implementation of internal control and corporate governance structure in the core role, is the enterprise can implement the key to effective internal control. This paper examines whether the incentive system of the management is conducive to the improvement of the effectiveness of internal control by the equity incentive and salary incentive data of the listed companies in 2012-2014. The results show that the positive effect of salary incentive has a significant effect on the effectiveness of internal control. The effect of equity incentive and internal control is positive but not significant. On the basis of this conclusion, this paper puts forward some suggestions on the construction of internal control and management incentive system of listed companies in China, and adds the theoretical basis for the establishment of scientific incentive system for listed companies in China.

Introduction

China's Ministry of Finance, the Securities and Futures Commission, the Audit Commission, the CBRC and the CIRC jointly issued the Basic Standard for Enterprise Internal Control (hereinafter referred to as the "Basic Specification") in 2008 and issued the Guidelines on Internal Control of Enterprises in the follow- The promulgation of the two sets of internal control laws and regulations marked the basic formation of the internal control system to adapt to the situation of enterprises in China [1]. "Basic norms" provides that: "enterprises should establish the implementation of internal control incentive and restraint mechanism." And incentive incentive system, represented by salary incentive, has been paid attention to and applied by listed companies in China after a series of policies have been introduced. But the management of a single pay structure, unreasonable distribution of equity and other real problems exist, leading to internal control can not be effectively implemented, the occurrence of damage to shareholders' equity, the company's assets security behavior. Therefore, how to improve the effectiveness of internal control through incentive system has become the focus of internal governance of listed companies in China.

Literature Review and Research Hypothesis

In the mid-1970s, the influence of Western countries on the effectiveness of internal control began with the theory of principal-agent, focusing on the positive impact of the management incentive system on internal control. Most of the conclusions are consistent, that is, there is a significant positive correlation between incentive mechanism and firm performance. Steven Balsam, Wei Jiang and Bo Lu (2014) found that management can increase the motivation of internal control under the incentive of equity, thus enhancing the effectiveness of internal control [2]. Jensen and Murphy (1990) argue that effective management pay contracts can mobilize the enthusiasm of management

and improve the performance of the company [3]. Theresa. F.H enry, John j. hon, Renee E.W eiss pay part of the (2011) argue that can explain and internal control effectiveness were positively correlated relationship [4].

China's internal control research started late. Zhang Xianzhi (2010) in the empirical analysis found that the proportion of executives holding a positive impact on internal control [5]. Liu Yawei (2010) said that the appropriate equity incentive measures to promote the interests of executives and corporate interests consistent, reduce the risk of internal control, play a preventive role in the prevention of moral hazard [6]. Chen Saiyan (2014) argues that the scientific equity allocation and the proportion of incentives can enable management to have the dual identities of the owners and managers in the listed company and improve the efficiency of the company's internal control [7]. But weygand (2000), Li Zengquan (2000), YuHongLin guang-sheng liu (2006) and Ma Yue (2013) through the empirical study of different annual reports of listed companies to disclose the data, found management ownership, there is no significant influence on corporate performance is related to.

Management has the identity of the owner of the listed company by owning the company's stock, whose identity is no longer a simple agent, but has the identity of the owner of the listed company. This allows managers to take the remaining claims at the same time take a certain risk, to promote management for their own interests for the interests of shareholders and operating companies. In summary, the first hypothesis of this study is proposed:

Hypothesis 1: Under other conditions, the equity incentive to management is positively affected by the effectiveness of internal control.

In the internal control activities, the management as an important role in the principal-agent relationship, the incentive incentive to encourage the management of the objective function to the owner of the convergence, to achieve incentive compatibility. The shareholders of the company have chosen to sign a monetary remuneration contract with the management of the company as the principal, which is linked to the performance of the listed company. Li Yuhong (2011) said that in the state-controlled listed companies, the incentive incentive to promote executives to improve the level of business and improve the strategic objectives to achieve the level of assurance. Fu Zengui (2012) found that executive pay has a significant positive impact on the effectiveness of internal control. Fan Li Min, Liu Long (2013) through the empirical analysis of financial data found that the scale of executive pay and the effectiveness of internal control there is a positive correlation, but this positive correlation increases with the increase in pay. In order to obtain incentives, management efforts to improve performance, achieve business objectives, reduce the negative impact of agency problems, which is conducive to the effective implementation of internal control. Accordingly, the second hypothesis of this study is proposed.

Hypothesis 2: The implementation of salary incentives for management under positive conditions significantly affects the effectiveness of internal controls.

Research Design

Sample Selection

This article selected samples is deep, Shanghai main board listed companies between 2012 and 2014, excluding the financial sector, excluding ST, PT, the a-share companies, lack of the data is not complete, finally after A total of 931 listed companies, 2793 sample data. All empirical data were obtained from Guotai's CSMAR database and Juchao information network.

Variable Definition

Interpreted Variables

Effectiveness of internal control(IC): This study uses the internal control index (published by Dibo) as the proxy variable for internal control effectiveness.

Explanatory Variables

Management Incentive Compensation(MI): High pay is the remuneration of the management performance, but also the management of personal business ability and level of affirmation. Using the executive compensation total logarithm as the proxy incentive for salary incentive.

Management equity incentive(ME): This study will take the majority of domestic scholars (such as Zhang Xianzhi 2010; Lu Dong, 2014, etc.) research methods, the use of executives holding the proportion of the total share capital as a proxy incentive agent.

Control Variables

Because the effectiveness of internal control in addition to the impact of incentives, the company characteristics or corporate governance structure and other factors may also affect its effectiveness. Combined with the internal control documents, it appears more control variables, the proportion of company size (SI), asset-liability ratio (LE), ownership concentration (H5), independent directors (ID), sales growth rate (GR). On this basis, the control of the year and industry factors.

Model Construction

In this study, a multiple regression model was used to analyze the relationship between the incentive system of listed companies and the effectiveness of internal control. The analysis software was SPSS19.0. In order to prove the effect of management incentive system on the effectiveness of internal control, this paper establishes the multiple linear regression model to validate the incentive incentive model and the incentive incentive model as follows:

Model 1:

$$IC_{it}=\beta_0+\beta_1*MI_{it}+\beta_3*SI_{it}+\beta_4*LE_{it}+\beta_5*ID_{it}+\beta_6*H5_{it}+\beta_7*GR_{it}+\beta_8*IND_{it}+\beta_9*Y_{it}+\varepsilon$$

Model 2:

$$IC_{it}=\beta_0+\beta_2*ME_{it}+\beta_3*SI_{it}+\beta_4*LE_{it}+\beta_5*ID_{it}+\beta_6*H5_{it}+\beta_7*GR_{it}+\beta_8*IND_{it}+\beta_9*Y_{it}+\varepsilon$$

In the model, β_0 represents the constant term, β_1 - β_9 represents the regression coefficient, and ε represents the random error term. If the coefficients β_1 and β_2 are larger than 0 in the model, it means that the sample firm's equity incentive is positively correlated with the effectiveness of the internal control of the company, confirming the relevant hypothesis; If negative, the correlation hypothesis does not hold.

Empirical Analysis

Descriptive Statistical Analysis

The maximum value of internal control (IC) is 985.60, the minimum is 8.97, the mean is 666.6920, which indicates that the internal control index of listed companies in China is large; The mean and median MI is 15.19 and the standard deviation is 0.876, which indicates that there is little difference in the overall salary level of the sample management; The management share ratio (ME) is 0.7193, the standard deviation is 3.5274, the maximum value is 37.4392, the minimum value is 0, indicating that the sample enterprise equity incentive management shareholding large gap; The company's total assets at the end of (SI) 22.5650 mean, standard deviation of 1.4135, the mean and median or less, indicating that the relative concentration of the sample asset size enterprises; Average asset-liability ratio is 0.5248, the proportion of debt than fifty percent, indicating a higher proportion of the company's liabilities in the sample, the larger the financial pressure; The ratio of independent directors (ID) is 37.0623 and the standard deviation is 5.6958, indicating that the proportion of independent directors in the sample companies is more than one-third of the board of directors, which is conducive to the independence of independent directors; (H5) is 0.1379, the maximum value is 0.7586, which indicates that the sample concentration of listed companies is relatively high. The highest growth rate of revenue is 67303.5764, the minimum is -6.1553, the mean is 25.4691, and the median is 0.1027, which indicates that the growth rate of some companies

is very fast, while the negative growth of some enterprises exists between different enterprises Larger gap.

Table 1. Descriptive statistics

Variable	Observation	Minimum value	Maximum	Mean	Standard deviation	Median
IC	2793	8.97	985.60	666.6920	90.4060	674.3500
MI	2793	0	18	15.19	0.876	15.19
ME	691	0.0000	37.4392	0.7139	3.5274	0.0118
SI	2793	17.6043	28.5087	22.5650	1.4135	22.4276
LE	2793	0.0351	1.0373	0.5248	0.1991	0.5356
ID	2793	18.1818	71.4286	37.0623	5.6958	33.3333
H5	2793	0.00001	0.7586	0.1379	0.1260	0.0994
GR	2789	-12.19	2354.55	2.4133	50.12089	0.1119

Correlation Analysis

According to the correlation analysis results in Table 2, the correlation between internal control index and each variable is: The pearson correlation coefficients of the internal control index and total management compensation are 0.260 and 0.202 respectively, and the significance is less than 0.01. Which shows that the logarithm of the total remuneration of management is positively correlated with the effectiveness of internal control at 0.01 level, which is in accordance with the hypothesis 1 and 2.

Table 2. Model one and model two main variables pearson correlation coefficient table

	IC	MI	ME	SI	LE	ID	H5	GR
IC	1							
MI	.260**	1						
ME	.020**	0.031	1					
SI	.380**	.472**	-0.027	1				
LE	0.019	.128**	-0.002	.415**	1			
ID	.047*	0.004	.049**	.084**	0.034	1		
H5	.135**	.087**	-.070**	.330**	.086**	.054**	1	
GR	0.001	-0.024	0.005	-0.033	0.011	0.014	0.001	1

** Significantly correlated at 0.01 level (both sides).

* Significantly correlated at 0.05 level (bilateral).

Multiple Regression Analysis

The regression results in Table 3 show that there is a significant linear relationship between executive compensation and internal control index, ie, the regression model is significant and validates hypothesis 2. And there is a positive correlation between the management period and the internal control index, but not significant, assuming that 1 has not been verified.

Table 3. Regression coefficient table

Variable	Model 1	Model 2
MI	10.438*** (5.308)	
ME		1.139 (2.070)
SI	26.776*** (19.065)	30.248*** (24.179)
LE	-77.902*** (-9.290)	-82.099*** (-9.876)
ID	0.290 (1.091)	0.213 (0.797)
H5	4.783 (0.376)	-0.081 (-0.001)
GR	0.030 (0.840)	0.029 (0.960)
β_0	-37.239 (-1.128)	47.770** (1.752)
IND	control	control
Y	control	control
Adjust R ²	0.230	0.222
F	104.926 (0.000)	100.675 (0.000)
Number of samples	2793	691

Conclusions

Through the empirical analysis of the effect of the equity incentive and salary incentive on the effectiveness of internal control of the 931 listed companies in Shenzhen and Shanghai in 2012 and 2014, the research results are as follows: ①There is a significant positive correlation between the incentive of listed companies and the effectiveness of internal control. ②The listed companies to implement the equity incentive and the effectiveness of internal control was a linear but not significant correlation.

This study gives the following suggestions for the construction of incentive mechanism and internal control of listed companies in China:

(1) Enterprises need to consider the incentive needs of managers, targeted to develop the most scientific and most suitable incentive system. Establish and pay attention to the role of the Remuneration Committee, combined with demand for enterprises to develop a scientific and diversified incentive model.

(2) Strengthen corporate governance, improve the corporate governance structure, and enhance the internal supervision of the management. Thus building a good internal control environment, to avoid the management in order to improve the performance of earnings management or for personal gain and damage to the company's property may not be a form of internal control.

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