The Research on the Influencing Factors of Dividend Distribution Policy: Based on Empirical Data of Chinese Listed Companies in 2013-2016

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Abstract: As an important content of corporate financial management, dividend distribution policy is not only the distribution of shareholders' investment income, but also related to the company's investment, financing and other aspects. As a new product of the capital market at home and abroad, growth enterprise market has relatively relaxed listing conditions, which makes the dividend distribution policy distinctive. Based on the data of China's listed companies from 2013 to 2016 on growth enterprise market, this paper uses the R programming language for modeling, and uses multiple linear regression to study the influencing factors of cash dividend payment level, so as to provide reference for enterprises to formulate dividend distribution policies.

1 INTRODUCTION

Since the development of China's stock market, random and blind have become two fatal problems in dividend policy formulation of listed companies in China. The problem is that enterprises cannot properly consider dividend distribution according to their own situation. Therefore, the research on the influencing factors of dividend distribution policy of listed companies has become a hot topic. Growth enterprise market (GEM) was established in China in 1998, and because of its more relaxed entry conditions compared with the main board market, it provides a broad platform for many small and medium-sized enterprises with development potential in China. Gem has the characteristics of high growth and high risk, and the listed companies on it have different business nature. At the same time, the enterprise is subject to the China Securities Regulatory Commission's (CSRC's) strict requirements of dividend supervision, which makes the formulation of dividend distribution policy full of pressure.

By reviewing the literature and related theories (Farrar 2007, Linzenberger 1982) and combining with the research theme, this paper sorted out the factors affecting dividend distribution from the inside and outside of enterprises, providing ideas and theoretical basis for the study of this paper. Based on the subdivision of the influencing factors of dividend distribution policy, this paper systematically solves the problem of "how much to divide" and focuses on the main problem of what factors affect the level of cash dividend payment.

Based on the empirical data of gem listed companies, this paper uses empirical methods to test the factors that affect the level of corporate cash dividend distribution. This paper has the following positive significance: Firstly, for enterprises, this study provides reference value for enterprises to formulate cash dividend distribution policies, help enterprises improve financial management, establish a good image, and enhance investor confidence. Secondly, the research helps shareholders to protect their own rights and interests, balance their own interests, reduce investment risks, and make them rational investment. At the same time, it can strengthen the supervision of the public and relevant regulatory departments on the behavior of corporate dividend payment, further improve the governance system, so as to achieve efficient and reasonable allocation of social resources, and achieve economic growth and reduce resource waste.

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2 MATERIALS AND METHODS

2.1 Sample

In this paper, A-share GEM enterprises listed in Shanghai Stock Exchange from 2013 to 2016 are selected as research data, mainly from the CSMAR database, and samples are screened according to the following rules: First, companies that carry out annual dividend distribution are selected as research objects. Second, the data focuses on listed companies that have distributed cash dividends. Third, ST and PT enterprises will be excluded from the sample, for these enterprises have been in a deficit state for years, and the dividend policy is abnormal. Fourth, exclude the listed companies that issue B shares, H shares and N shares at the same time, as well as financial listed companies such as bank securities. Finally, eliminate companies with missing key financial data and extreme values.

2.2 Dependent Variable

To solve the problem of "how much to divide", the dependent variable is the distribution level of cash dividends, that is, cash dividends per share, expressed by CDPS. The CDPS was measured as follows: total cash dividends divided by number of common shares. The selection of this index mainly refers to the research of Li et al (2018) (Li, et al, 2018).

2.3 Independent Variable

The shareholding concentration is mainly based on the research of Zhang (2017) (Zhang 2017), using the shareholding ratio of the largest shareholder for measurement (SH1).

The index selection of enterprise scale, liabilities, development capacity and business capacity mainly refer to the research results of Crutchiey and Hansen (2017), Ma and Ye (2016), Yang et al (2018) (Crutchely 2017, Ma, Ye 2016, Yang, et al, 2018). We choose total assets (natural logarithm), asset-liability ratio, main business income (natural logarithm), accounts receivable turnover and inventory turnover to measure respectively, expressed by LN(A), DEBT, MBRG, ARTrat, ITO.

Profitability mainly refers to the research of Sheng (2004)[8], and chooses earnings per share (EPS), and net asset value per share(NAPS) as measurement factors.

The measurement of corporate cash flow capacity mainly refers to the research results of Li et al (2018) (Li et al. 2018), adopting indicators such as net cash flow from operating activities per share (OpeCFPS) and return on cash from asset operations (OpeCass).

The measurement of investment value mainly refers to the research results of Yang et al (2018) (Yang, et al, 2018), and adopts price-earnings ratio (PE).

Specific indicators and measurement methods are shown in Table 1.

Table 1: Variable Definitions.

Type	Name	Abbreviation	Measure
dependent variable	Distribution Level of Cash Dividends	CDPS	Total cash dividends divided by number of common shares
independent variable	Shareholding Concentration	SH1	Number of shares held by the largest shareholder divided by total share capital
	Enterprise Scale	LN(A)	Take the natural log of total assets
	Liability Situation	DEBT	Total liabilities divided by total assets
	Development Capacity	MBRG	Take the natural log of main business income
	Business Capacity	ARTrat	Main business income divided by average accounts receivable
		ITO	Main business cost divided by average inventory
	Profitability	EPS	Net profit after tax divided by total equity
		NAPS	Total net assets divided by total equity
	Cash Flow Capacity	OpeCFPS	Net operating cash flow divided by total capital stock
		OpeCass	Net operating cash flow divided by total assets
	Investment Value	PE	Market price divided by earnings per share
	Industry	Ind	If it belongs to this industry, the value is 1; otherwise, the value is 0
	Year	Year	If it belongs to this year, the value is 1; otherwise, the value is 0

2.4 Model

This model is to test the influence of factors on the cash dividend payment level of GEM listed companies in China.

$$\begin{aligned} CDPS_{i,t} = {} & \beta_0 + \beta_1 SH1_{i,t} + \beta_2 LN(A)_{i,t} + \beta_3 DEBT_{i,t} \\ & + \beta_4 MBRG_{i,t} + \beta_5 ARTrat_{i,t} \\ & + \beta_6 ITO_{i,t} + \beta_7 EPS_{i,t} \\ & + \beta_8 NAPS_{i,t} + \beta_9 OpeCFPS_{i,t} \\ & + \beta_{10} OpeCass_{i,t} + \beta_{11} PE_{i,t} \\ & + \sum Year + \sum Ind \\ & + \mu_{i,t} \end{aligned} \quad (1)$$

Among them, $CDPS_{i,t}$ represents the delivery rate, β_0 represents the intercept term, represents the regression coefficient, representing the influence degree of each factor on $CDPS_{i,t}$, $\mu_{i,t}$ represents the random error term.

3 RESULTS AND DISCUSSION

3.1 Basic Statistics

In order to understand the statistical characteristics of variables, descriptive statistics were conducted for them. The specific data are shown in Table 2.

Table 2: Statistics and Correlation of Variables.

	Minimum	Maximum	Mean	Std. Deviation
CDPS	0.002	9.992	2.336	3.334
OpeCass	-0.354	0.488	0.037	0.071
SH1	4.150	89.850	32.111	12.905
LN(A)	18.961	24.448	21.147	0.780
DEBT	0.011	9.935	0.989	2.097
MBRG	15.742	24.807	20.258	0.883
ARTrat	0.204	67.662	4.626	5.821
ITO	0.000	79.190	5.152	7.933
EPS	-9.320	9.790	0.707	1.401
NAPS	0.752	31.544	4.953	2.572
OpeCFPS	-12.773	9.997	0.408	2.598
PE	28.503	281.402	82.383	39.975

3.2 Regression Analysis

Multiple linear regression was performed for all variables, and the results were obtained as shown in Regression 1 in Table 3.

In the equation, the regression coefficient of LN(A) is -0.166, indicating that the enterprise size is negatively correlated with the level of cash dividend payment. The regression coefficient of DEBT is -0.083, indicating that corporate debt is significantly negatively correlated with cash dividend payment level. The regression coefficients of EPS and NAPS are 5.295 and 0.263, indicating that corporate profitability is positively correlated with corporate cash dividend distribution level. The regression coefficients of OpeCFPS and OpeCass were 0.139 and 0.004 respectively, indicating a significant positive correlation between cash flow capacity with explained variables. The regression coefficient of PE is 0.011, indicating that corporate investment value is significantly positively correlated with the level of corporate cash dividend payment.

By comparing the standard coefficient, it can be seen that earnings per share is the largest explanatory variable of the coefficient, and net asset per share is the second explanatory variable of coefficient. In addition, the two indicators of profitability have the highest influence on the explained variables, and their coefficients are both positive, which indicates that corporate profitability has the most important influence on the level of cash dividend payment, and it is positively correlated with it. Enterprises with higher profitability have higher capital abundance, which provides a strong guarantee for cash dividend distribution.

In order to verify the stability of the conclusion, the index was replaced. Logarithm of total assets (LN (A)) was replaced by logarithm of total equity (LN (S)) and the asset-liability ratio (DEBT) was replaced by the current ratio (CR). What's more, we also replace two earnings measures with return on equity (ROE), and price-earnings ratio (PE) with price to book ratio (PB). The indexes replaced above were regressed again, and the results were shown in Regression 2. In addition, we replace the logarithm of main business income (MBRG) with the growth rate of net profit (NPGR) and then make a regression again, obtaining the results in regression 3. The results show that there is no significant correlation between the level of cash dividend payment and the operating capacity of GEM listed companies.

Table 3: Results of Regression Analyses.

Variable	Regression1	Regression2	Regression3
(Constant)	11.821	8.324***	9.307
SH1	-0.005	-0.002	-0.003
LN(A)	-0.166***		-0.102***
DEBT	-0.083**		-0.029***
MBRG	-0.105	-0.351	
ARTrat	0.007	0.005	0.011
ITO	0.006	0.024	0.017
EPS	5.295***		0.168***
NAPS	0.263***		0.013***
OpeCFPS	0.139***	0.017***	0.047***
OpeCass	0.004***	0.052***	0.018***
PE	0.011***		0.037***
CR		0.047**	
LN(S)		-0.017***	
ROE		0.024**	
PB		0.154***	
NPGR			0.259
R^2	0.823	0.842	0.811
F-statistic	116.265***	158.963***	129.452***

3.3 Robustness Checks

In order to ensure the reliability of the research conclusions, we conduct a robustness test by reducing the sample size. Specific robustness test results are shown in Table 4. The test results show that the conclusion is reliable and the model is robust.

Table 4: Robustness Checks.

Dependent Variable: CDPS	
Variable	Unstandardized Coefficients
(Constant)	5.339
SH1	-0.009
Ln(A)	-0.008***
DEBT	-0.035***
MBRG	-0.112
ARTrat	0.011
ITO	0.005
EPS	0.156***
NAPS	0.118***
OpeCFPS	0.036**
OpeCass	3.983***
PE	0.006***

4 CONCLUSIONS

Through empirical analysis, this paper draws the following conclusions: The financial indicators that affect the level of cash dividend payment of GEM listed companies mainly include price-earnings ratio, net asset value per share, net cash flow generated by operating activities per share, total asset logarithm, earnings per share and asset-liability ratio. It shows that the investment value, profitability, cash flow, enterprise size and debt have a significant impact on the cash dividend payment level of GEM listed enterprises in China. Among them, corporate profitability is the most important factor determining the level of corporate cash dividend distribution, and it is positively correlated with the level of cash dividend payment. Enterprise size and liabilities are negatively correlated with corporate cash dividend distribution level, while enterprise investment value and cash flow are positively correlated with corporate cash dividend distribution level. However, the shareholding ratio of the largest shareholder, revenue logarithm of main business, receivables turnover and

inventory turnover have no obvious influence on the dividend payment level of GEM listed enterprises in China.

Based on the above conclusions and analysis, this paper will start from the internal environment of enterprises, put forward some suggestions on some irregularities in the current dividend distribution policy of my country's GEM enterprises, strengthen self-construction, improve self-quality, and carry out continuous optimization and innovation to realize the standardization of policies, healthy.

Corporate profits are the main source of dividend distribution. Since cash dividends are significantly positively correlated with profitability, GEM companies as market players should strengthen their own innovation and construction capabilities and management level for the purpose of improving their own profitability, and establish and improve. The performance evaluation system of listed companies is used to monitor the performance of listed companies during the event, improve the corporate governance structure, invest in research and master core technologies in their respective fields, innovate new products, use it as the core competitiveness of the company itself, and continuously increase efforts to invest in the market development, is committed to building the brand effect of the enterprise, according to its own strategic planning, while paying attention to the quality of profit, pay attention to the effective control of the adequacy of cash flow generated in business activities, so that a large amount of surplus generated by the enterprise can bring real cash flow, thereby reducing the pressure on companies to formulate dividend policies.

According to the above research results, the investment value of the company itself will affect the formulation of the company's dividend distribution policy. Therefore, it is necessary to improve the internal control system, improve the effectiveness of internal control, provide a strong guarantee for the transparency of corporate information disclosure, reduce related problems with no substantive content, formalism, and empty responses, strengthen its transparency, and increase efforts to develop capital market, adjust the enterprise's own management mode, production mode, etc., continuously improve the ability to respond to the market, better understand and grasp the market operation, enhance investors' information about the enterprise, thereby improving the investment value of the enterprise itself.

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