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The Impact of Cash Dividend Ratio on Stock Pricing: An Empirical Study of A-share Companies with High Dividend Payout

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Abstract: This study selected 45 A-share listed companies that have paid dividends for five consecutive years from 2019 to 2024, with an average dividend yield of at least 3%, as the sample. Using a panel data model, the effect of the cash dividend ratio on stock pricing was analyzed. The empirical results indicated a significant positive relationship between the cash dividend ratio and stock price. Furthermore, stocks with high dividend payouts demonstrated greater resilience during macroeconomic downturns, while notable differences were observed across industries. These findings provide a theoretical foundation for investors in making informed decisions and offer practical guidance for listed companies in formulating effective dividend policies.

Keywords: Cash dividend ratio; Stock pricing; A-share market; Macroeconomics; Industry differences

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1. Introduction

1.1. Research background

Annual A-share dividends have maintained year-on-year growth for many consecutive years. In 2024, the total A-share dividends exceeded 2.3 trillion-yuan, A record high, among which the banking industry is still the main force of dividends, dividends of 631.5-billion-yuan, accounting for 45% of industry profits. This data highlights the importance of cash dividends in the A-share market. Pegged to the refinancing of share out bonus, from 2001 to 2013 differential line of share out bonus, and in 2023 the new "the nine clear" for many years not share out bonus or dividend ratio is low limit major shareholders holdings and implementation of risk warning, deterrent policy significantly enhanced. Recently, the CSRC since 2025 to implement ST regulation, forced dividends disclosure reasons, reversed transmission enterprises increase the rate of dividend. However, there is still a contradiction of "emphasizing financing over return" in the market. Investors' demand for stable cash flow is in sharp contrast to the instability of dividend policy of listed companies. In this background, study the effect of cash

dividend proportion of stock pricing is of important theoretical and realistic significance.

1.2. Research significance

From the theoretical level, this study fills the cross-trade and blank in the research of effect of share out bonus for a long period of time. Most of the existing studies focus on single industry or short-term data, and lack dynamic analysis of macroeconomic variables and industry attributes. At the same time, also can verify the validity of the financial pricing theory, the expansion of the border for the research of the finance, and more.

From the practical level, the results of the study can provide decision-making reference for market participants. To reveal the pricing rules of high-dividend companies, provide quantitative basis for institutional investors, individual investors and long-term investors such as pension funds and insurance funds, and reduce the interference of speculation on stock prices. To guide scientific and rational dividend policy of listed companies, to avoid "excessive bonuses" or "insufficient dividend" the negative impact on the stock price, power regulation policy optimization for regulators optimization. Suggestions, such as strengthen the constraints of "making", perfecting the tax incentives, promote the A-share market from the "dominant" financing to investment and financing balance.

2. Literature review

2.1. Market effect of dividend policy

In foreign studies, Lintner found that companies tended to maintain stable dividends to convey profit signals [1]. Pettit confirmed that dividend announcement caused short-term stock price fluctuations [2]. In domestic research, Chen pointed out that cash dividend is conducive to attracting institutional investors [3]. Wei found that when the dividend yield was more than 3%, the proportion of long-term investors increased [4]. Yang points out that the cash dividends of listed companies' performance passed information about earnings, effect on share price information content have significantly increased [5]. Li *et al.* found that half a mandatory dividend policy for refinancing with refinancing needs or potential demand growth and competitive industry of listed companies has brought certain negative impact [6]. The research provides a basis for understanding the market effect of dividend policy, but the lack of in-depth analysis of industry difference and macroeconomic variables.

2.2. Threshold effect of dividend ratio

Yu has found that when the dividend yield exceeded 3%, the support effect of dividend on stock price was significantly enhanced [7]. Yu and Liu both pointed out that the level of share out bonus of 30% there would be a watershed, broke beyond that was unencouraged in the absence of urgent need [8]. Wang further pointed out that the stability of dividends in the banking industry was better than that in the manufacturing industry [9]. Xie and Li's study showed that proportion of share out bonus policy driven threshold effect [10]. However, the existing study did not reveal industry attribute to adjust the effect of share out bonus, nor dynamic analysis macroeconomic variables affect dividend policy.

2.3. Cash dividend and stock pricing

Frankel and Lee pointed out that stock mispricing can be quantified by calculating the deviation between intrinsic value and market value [11]. Liu and Han found that continuous cash dividends can reduce stock mispricing and investor opinion disagreement [12]. Song *et al.* confirmed that stable cash dividend policy can improve the

correlation between stock return volatility and fundamental information [13]. Yang and Chen pointed out that the larger the company size is, the better the continuity of cash dividend will be [14]. Zou and Feng pointed out that cash dividend of A-share listed banks has A short-term boost effect on stock price, but the long-term impact depends on the capital supplement requirement [15]. However, these studies did not involve the mechanism of cash dividend's impact on stock pricing efficiency, nor did they provide rigorous empirical evidence.

Based on the above analysis of the related literature at home and abroad, sort out the problems existed in the research and worthy of reference, this paper proposed A share for five consecutive years in 2019–2024 dividend and the dividend yield of 3% or more 45 listed companies as samples, through panel data model to the analysis of the effect of cash dividend proportion of stock pricing.

3. Theoretical analysis and hypothesis

3.1. Mechanism of action

Based on the analysis of the impact of cash dividend ratio on stock pricing, the mechanism of the impact of cash dividend on stock price is first proposed.

3.1.1. Direct income effect

According to the dividend discount model (DDM), high dividend reduces the rate of return required by investors and pushes up the stock price [16]. For example, if a company pays a stable dividend every year, investors are more optimistic about future cash flow and are willing to pay a higher price to buy shares.

3.1.2. Signal transmission effect

Stable dividend sends a signal of abundant cash flow to the market and reduces information asymmetry [1]. When a company announces an increase in dividend, the market may think that its profitability and cash flow are better, thus raising the stock price.

3.1.3. Valuation restructuring effect

In the low-interest rate environment, the relative attractiveness of stocks with high dividend yield increases, and the valuation is repaired. In the current era of low interest rates, high-dividend assets have become an important choice for investors to seek stable returns.

3.2. Research hypothesis

This paper proposes specific research hypotheses based on the analysis of the impact of cash dividend ratio on stock pricing.

(1) H1: Cash dividend ratio is positively correlated with stock pricing. That is, high cash dividend ratio attracts value investors to increase their holdings by sending signals of financial stability, and improves pricing efficiency under the guidance of policies, thus forming a positive linkage between dividend ratio and stock price.

(2) H2: The support effect of dividend stability on stock price is stronger than the absolute level.

(3) H3: During the economic downturn, the stock price of companies with high dividend is more resilient.

(4) H4: The high dividend policy in mature industries (such as banks) has a more significant effect on boosting stock prices.

4. Research design

4.1. Sample scope

The sample screening criteria for this paper are as follows:

(1) Time range: 2019–2024 (covering the period of COVID-19).

(2) Company screening criteria: (a) Dividends for five consecutive years from 2019 to 2024; (b) Average annual dividend yield ≥ 3%; (c) The revenue and net profit in 2024 shall not be less than 85% of that in 2019; (d) ROE for the past five years shall be ≥ 10%. The final eligible sample included 45 companies, covering 12 industries, including banking, basic chemicals, machinery, and equipment.

(3) Data source: Wind database and CSMAR database to ensure the authority and reliability of the data.

4.2. Definition of variables

To conduct quantitative analysis, this paper collected 19 financial and market indicators, including the logarithm of the annual average closing price, total annual cash dividend, net profit, and the logarithm of total assets. The dependent variable in the model was stock pricing, measured by the logarithm of the annual average closing price (lnPrice). The core explanatory variable is the cash dividend ratio (Dividend Ratio), defined as the ratio of total annual cash dividends to net profit. Several control variables are also included to account for firm-specific and market-related factors. Firm characteristics include Size (the logarithm of total assets), Leverage (asset-liability ratio), and profitability (ROE). Market environment factors include Market Return, represented by the annual return of the CSI 300 Index, and Risk-Free Rate, proxied by the 10-year Treasury yield. Additionally, 11 industry dummy variables (Industry Dum) are introduced based on the industry classification defined by the China Securities Regulatory Commission (CSRC) to control for industry-specific effects.

4.3. Model construction

The empirical analysis of this paper adopted the dynamic panel fixed effect model according to the analysis purpose and data type.

$$Ln\,\mathrm{Pr}\,ice_{it} = \alpha_0 + \alpha_1 DividendRatio_{it} + \sum_{k=2}^{n} \alpha_k Control_{kit} + \gamma_t + \varepsilon_{it}$$

Where denotes company, denotes year, denotes time fixed effect, and denotes random error term. i t γ_t ε_{it} In order to deal with the endogeneity problem, instrumental variables (such as one-period-lagged dividend ratio and one-period-lagged control variables) are introduced, and system GMM estimation is used to estimate the model.

4.4. Empirical method

4.4.1. Grouped regression

This paper tested by industry (banking / non-banking) and business cycle (GDP growth ≥ 6% / < 6%). The adopted model was as followed.

$$Ln\,\mathrm{Pr}\,ice_{it} = \alpha_0 + \alpha_1 DividendRatio_{it} + \sum_{k=2}^{n} \alpha_k Control_{kit} + \gamma_t + \varepsilon_{it}$$

4.4.2. Interaction term analysis.

The interaction term of dividend ratio × GDP growth rate was to introduced to analyze the moderating effect of macro economy on dividend effect. The adopted model was as followed.

$$Ln\,\mathrm{Pr}\,ice_{it} = \alpha_0 + \alpha_1 DividendRatio_{it} * GDP + \sum_{k=2}^{n} \alpha_k Control_{kit} + \gamma_t + \varepsilon_{it}$$

4.4.3. Robustness test

To replace explained variables such as the log lnPrice of stock price after replaced by P/E ratio, the model was as followed. Excluding the year of COVID-19 impacted. The instrumental method was used.

$$P/E_{it} = \alpha_0 + \alpha_1 DividendRatio_{it} + \sum_{k=2}^{n} \alpha_k Control_{kit} + \gamma_t + \varepsilon_{it}$$

5. Empirical results and analysis

5.1. Descriptive statistics

The descriptive statistics of the sample companies showed that the average dividend ratio was 32.7%, the median dividend yield was 4.1%. In terms of industry distribution, 12 banks (26.7%), 8 basic chemicals (17.8%) and 6 public utilities (13.3%) were favorable for the analysis of industry differences. In terms of profitability, the mean value of ROE was 12.8% and the standard deviation was 2.4%, indicated that the sample companies had high profitability stability.

5.2. Main regression analysis

Use Eviews13.0 regression analysis software, the core, according to the results of the core variable Dividend Ratio coefficient was 0.12 ($p < 0.01$), indicating that under 1% significance level, the regression analysis results support H1: cash dividend ratio and stock price are related. Control variable, the ROE coefficient was 0.21 ($p < 0.01$), Market Return coefficient was 0.35 ($p < 0.01$), both are significant positive correlation; The Leverage coefficient was -0.05 ($p < 0.1$), which was significantly negative correlation. In terms of economic significance test, it can be found that for every 1% increase in dividend ratio, the logarithm value of stock price increases by 0.12% on average, which is equivalent to 12.7% increase in stock price.

5.3. Grouping test

In view of Hypothesis 3 and Hypothesis 4 proposed in the previous section, the group regression method is adopted here, and the dynamic panel fixed effect model is still used to conduct regression on different groups respectively.

5.3.1. Industry differences

By grouping regression methods for different industry grouping test, the following conclusions: banking Dividend Ratio coefficient was 0.18 ($p < 0.01$), significantly higher than that of manufacturing Dividend Ratio coefficient was 0.09 ($p < 0.05$), support for H4: High dividend policy in mature industries (such as banks) has a more significant effect on stock price. Case study: Industrial and Commercial Bank of China paid out 109.773 billion yuan in dividends, with a stock price increase of 12.1%, while the average increase of manufacturing companies in the same period was only 8.3%.

5.3.2. Economic cycle differences

Group regression method is used for grouping different economic cycle test, the following conclusions: economic downward legs (GDP growth rate < 6%), dividend ratio coefficient is 0.15 ($p < 0.01$), higher than that of the date on dividend ratio coefficient of 0.08 ($p < 0.1$), support H3: In the economic downturns, the stock price of companies with high dividend payout is more resilient.

Case: With a GDP growth rate of 5.2% in 2024, China Merchants Bank accumulated a dividend of RMB20.6

billion from 2019 to 2024, with an average annual dividend ratio of 33.2% and a stock price increase of 18.6%, significantly higher than the average level of the banking industry (12.3%).

5.4. Robustness test

In order to ensure the reliability of the above regression results, the paper needs to conduct a robustness test. The instrumental variable method is adopted for different explained variables, failed sample periods or the introduction of instrumental variables to observe whether the conclusions change.

5.4.1. Replaced of explained variables

P/E ratio (P/E) = price/earnings per share, reflect market expectations of future earnings to the company. Share prices logarithmic mainly reflects the absolute level of change, and the p/e ratio will share price and profit together, can be more comprehensive to reflect the market valuation of the company. For example, the two companies share price is the same, but high earnings, a low p/e ratio, market perceive their valuations are relatively low, the future may have more potential; The other company has low earnings and a high P/E ratio, which may indicate that the market has a high expectation of its future earnings growth. Therefore, from the economic meaning, P/E ratio can be used as an alternative indicator to study the market valuation related issues. Replace shares logarithm based on p/e ratio (PE), regression results showed dividend ratio coefficient is significantly positive (0.07, $p < 0.05$).

5.4.2. Adjusting the sample period

Considering the impact of COVID-19, the core regression conclusions still do not change substantially after excluding the impact years of the epidemic in 2020.

5.4.3. Instrumental variable method

Considering the core may exist endogenous variables, here directly to the industry average ratio as a tool of share out bonus variables, using instrumental variable method for regression analysis, the regression conclusion still there was no significant difference, and excessive identify constraints test (Sargan statistic = 1.23, $p = 0.27$).

6. Case study: The dividend effect of bank stocks

6.1. Case study of China Merchants' Bank

Using China Merchants Bank as a representative case, the analysis highlights the impact of dividend policy on stock price performance. From 2019 to 2024, the bank distributed a cumulative dividend of RMB 20.6 billion, maintaining an average annual dividend ratio of 33.2% and a stable dividend yield between 4% and 5%, reflecting a consistent and shareholder-friendly dividend policy. In 2024, the stock price of China Merchants Bank increased by 18.6%, significantly outperforming the average growth rate of 12.3% observed in the broader banking industry. To further investigate this relationship, a time series econometric regression model was employed, with the results showing that the coefficient of the cash dividend ratio (Dividend Ratio) is 0.21 and statistically significant at the 1% level ($p < 0.01$). This indicates that the bank's high dividend policy has a strong and positive effect on its stock price performance.

6.2. Industry comparison

A comparison between the banking and manufacturing industries reveals notable differences in dividend policy

and stock price behavior. The banking industry demonstrates a relatively high average dividend ratio of 32.7%, coupled with strong stability as indicated by a low standard deviation of 4.2%. This reflects a consistent payout approach and aligns with the industry's reputation for offering defensive investment characteristics, including notable stock price resilience during market fluctuations. In contrast, the manufacturing industry shows a lower average dividend ratio of 25.3% and significantly higher volatility, with a standard deviation of 8.1%. This suggests a less stable dividend policy, and stock prices in this sector tend to be more sensitive to macroeconomic changes, making them more susceptible to external shocks and economic cycles.

7. Conclusion and suggestion

7.1. Research conclusion

Based on the research hypotheses and empirical analysis, several key conclusions can be drawn. First, there is a significant positive correlation between the cash dividend ratio and stock pricing among A-share listed companies, indicating that firms with higher dividend payouts tend to enjoy more stable stock price performance. Second, grouped regression analysis across different economic cycles reveals that companies with high dividend policies demonstrate greater stock price resilience during periods of macroeconomic downturn, highlighting the defensive characteristics of such firms. Third, industry-level grouped regression tests suggest that industry attributes moderate the effect of dividend policy on stock pricing. Specifically, the positive impact of high dividend policies is more pronounced in mature and stable industries, such as banking, where consistent dividends are valued more highly by investors. These findings collectively support the view that dividend policy plays a critical role in influencing investor perception and stock market performance, particularly under varying economic and industry conditions.

7.2. Practical suggestion

In light of the research findings, several practical recommendations are proposed for key market participants. For investors, the significant positive correlation between the cash dividend ratio and stock pricing, as well as the observed stability in stock price performance among high-dividend firms all suggests a strategic preference for allocating capital to sectors such as banking and public utilities, particularly those with a dividend yield exceeding 3% and a strong record of stable dividend payouts. This approach can help mitigate exposure to the heightened volatility often found in cyclical industries. For listed companies, it is advisable to adopt a sustained and transparent dividend policy, which can not only enhance corporate governance and attract long-term institutional investors, but also contribute to stock price stability in line with regulatory expectations, that potentially resulting in increased policy support. Finally, regulators are encouraged to further strengthen the dividend supervision framework. In particular, requiring or encouraging listed firms to disclose forward-looking dividend plans (for the next three years) would enhance market transparency and help shift investor behavior from short-term speculation toward long-term value investing.

7.3. Research limitation

Despite the contributions of this study, there are several limitations that should be acknowledged. First, regarding the sample scope, the analysis is limited to companies listed on the A-share market, without incorporating data from cross-border markets such as the Hong Kong or US stock markets. As a result, the paper does not provide a comparative perspective on how dividend policies and stock pricing behavior may differ across markets with varying regulatory environments and investor structures. Second, in terms of variable selection, the study does

not take into account ESG (Environmental, Social, and Governance) factors, which are increasingly recognized as important determinants of corporate financial policies, including dividend distribution. Future research could expand upon this by incorporating cross-market samples and exploring the role of ESG performance in shaping dividend policy and its impact on stock valuation.

Disclosure statement

The author declares no conflict of interest.

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