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Determinants of Stock Prices of Listed Pharmaceutical Companies in China: Evidence from Multiple Regression Analysis

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Abstract

This study investigates the factors associated with stock price variation among listed pharmaceutical firms in China. Using firm-year observations collected from 20 listed companies during 2013–2023 (N = 220), the study evaluates whether accounting performance indicators and selected market variables contribute to stock valuation differences. A multiple regression model was employed to estimate the effects of earnings per share (EPS), price-to-earnings ratio (P/E), return on equity (ROE), market capitalization, trading volume, and benchmark interest rates. The findings reveal that EPS and P/E are positively associated with stock prices, while ROE shows an inverse relationship. In contrast, market capitalization, trading activity, and interest rate fluctuations do not exhibit statistically meaningful effects within the estimated model. The results suggest that investors in China's pharmaceutical sector appear to respond more strongly to profitability and valuation signals than to macroeconomic conditions or firm scale. These findings enrich the understanding of stock valuation mechanisms in an industry characterized by policy sensitivity and intensive innovation.

Keywords: Stock Prices, Pharmaceutical Companies, Multiple Regression, Financial Indicators, China

Introduction

The stock market plays a crucial role in modern financial systems by facilitating capital allocation and supporting corporate investment and growth. Stock prices reflect investors' expectations about firm performance and future economic prospects. As a result, understanding the determinants of stock prices has long been a central issue in financial research (Fama, 1970). Numerous studies have investigated how financial indicators and macroeconomic variables influence stock price behavior across different markets and industries.

In recent years, China's pharmaceutical industry has experienced rapid development due to several structural and policy-related factors. Population aging, increasing healthcare awareness, and continuous healthcare reforms have significantly increased the demand for pharmaceutical products and medical services. At the same time, government policies promoting biotechnology innovation and pharmaceutical research have further accelerated industry growth. Consequently, pharmaceutical companies listed on the Shanghai and Shenzhen Stock Exchanges have attracted increasing attention from both domestic and international investors. Despite this growth, stock prices in the pharmaceutical sector continue to display substantial volatility, suggesting that multiple financial and macroeconomic factors may influence market valuation (Chen, Roll, & Ross, 1986).

The objective of this study is to examine whether selected financial indicators and market-related variables explain stock price variation among listed pharmaceutical companies in China. Specifically, the study investigates the effects of earnings per share (EPS), price-to-earnings ratio (P/E), return on equity (ROE), market capitalization, trading volume, and benchmark interest rates on stock prices.

The scope of this study is limited to 20 pharmaceutical companies listed on the Shanghai and Shenzhen Stock Exchanges over the period from 2013 to 2023, producing 220 firm-year observations. By focusing on a single industry, this study provides context-specific evidence on how accounting performance, market activity, and macroeconomic conditions are associated with stock valuation in China's pharmaceutical sector.

This study contributes to the existing literature in three ways. First, it provides updated empirical evidence from China's pharmaceutical industry, a sector characterized by policy sensitivity, innovation intensity, and strong investor attention. Second, it integrates firm-level financial indicators, market-related variables, and an interest-rate variable within one empirical framework. Third, it complements prior studies by showing whether the determinants identified in broader market or non-pharmaceutical samples also apply to listed pharmaceutical firms in China.

Previous studies have identified several firm-level financial indicators as important determinants of stock prices. Earnings per share (EPS), price-to-earnings ratio (P/E), and return on equity (ROE) are commonly used by investors to evaluate corporate profitability, market valuation, and managerial efficiency (Penman, 2013). Higher profitability is often associated with stronger investor confidence and improved market valuation. In addition to profitability indicators, firm size measured by market capitalization may also influence stock price performance, as larger firms generally benefit from stronger market recognition and financial stability.

Market activity is another factor that may affect stock prices. Trading volume reflects investor participation and market liquidity. Stocks with higher trading activity may experience more active price adjustments and stronger market demand (Karpoff, 1987). Apart from firm-specific indicators, macroeconomic variables also play an important investment decisions, and the relative attractiveness of equity investments compared with fixed-income securities (Mishkin, 2018).

Recent empirical studies have continued to confirm that stock prices are influenced by both firm-level financial indicators and industry-specific conditions. For example, AlAli, AlAskar, and Aboualhasan (2024) found that financial ratios such as EPS and P/E remain useful in predicting stock prices, although their explanatory power may vary across market contexts. In the pharmaceutical sector, Syaiful, Hidayat, Yolanda, and Savira (2024) reported that financial performance indicators significantly affect stock prices among pharmaceutical companies listed on the Indonesia Stock Exchange. In China, Su, Khan, Tao and Umar (2022) further showed that the pharmaceutical industry stock index is affected by healthcare-related fiscal expenditure, suggesting that pharmaceutical stock valuation is shaped not only by firm-level fundamentals but also by policy-related and macroeconomic factors. These recent findings indicate that stock price determinants may differ across industries and institutional environments, which justifies further empirical investigation in China's pharmaceutical sector.

Although the determinants of stock prices have been widely studied, empirical research focusing specifically on China's pharmaceutical industry remains relatively limited. The pharmaceutical sector differs from many other industries because it is strongly influenced by government regulation, technological innovation, and research and development investment. These characteristics may lead to unique patterns in stock price determination compared with other sectors. Therefore, examining the determinants of stock prices in this industry can provide valuable insights into investor behavior and market valuation.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature and theoretical background related to stock price determinants. Section 3 describes the research methodology, including data sources, variable definitions, and model specification. Section 4 presents the empirical results. Section 5 discusses the findings in relation to previous studies, and Section 6 concludes the paper with implications and suggestions for future research.

Literature Review

Understanding the factors that influence stock price movements has long been an important topic in financial research. Scholars have examined various firm-specific and macroeconomic variables to explain fluctuations in stock market valuation. Financial indicators such as earnings performance, valuation ratios, profitability measures, and market-related factors are commonly used to evaluate stock price behavior. This section reviews the theoretical foundations and empirical findings related to the determinants of stock prices.

Theoretical Foundations

The relationship between financial information and stock price behavior has been widely discussed in financial economics. One of the most influential theoretical frameworks explaining stock price formation is the Efficient Market Hypothesis (EMH). According to Fama (1970), financial markets are considered efficient when stock prices fully and rapidly incorporate all available information. Under this framework, publicly available financial indicators, such as earnings and profitability measures, should already be reflected in stock prices.

Another important perspective is Behavioral Finance, which challenges the assumption that investors are always rational. Behavioral finance suggests that psychological biases, investor sentiment, and cognitive limitations may influence financial decision-making. For instance, Shiller (2003) argues that investor expectations and emotional reactions can cause stock prices to deviate from fundamental values. As a result, financial indicators may influence stock prices differently depending on how investors interpret corporate information.

These theoretical perspectives provide the foundation for empirical studies examining the determinants of stock prices. Firm-level financial indicators may signal information about corporate profitability and growth potential, while macroeconomic variables may influence the broader investment environment. Therefore, analyzing both types of factors is important for understanding stock price behavior in financial markets.

Earnings per Share and Stock Price

Existing empirical evidence consistently identifies earnings information as one of the strongest signals affecting stock valuation. Earlier work demonstrated that accounting earnings contain information relevant to market reactions and can explain differences in stock performance across firms (Ball & Brown, 1968). Rather than representing accounting outcomes alone, earnings indicators often shape investor expectations regarding future profitability and cash flow generation.

From a valuation perspective, stronger earnings performance generally improves market confidence and increases investors' willingness to assign higher valuations to a company (Penman, 2013). However, the strength of this relationship may vary across industries because investors do not respond only to current earnings levels but also to expectations regarding earnings sustainability.

Evidence from emerging markets further supports this argument. Almumani (2014) reports that profitability indicators significantly explained equity price variation, suggesting that earnings remain an important input in investment decisions.

In the context of China's pharmaceutical industry, where long development cycles and innovation uncertainty are common, earnings signals may become particularly important because investors often rely on observable financial outcomes to assess future performance.
Price-to-Earnings (P/E) Ratio and Stock Price

The P/E ratio is frequently used as a market-based indicator reflecting how investors evaluate a firm's future growth prospects relative to current earnings. Existing studies suggest that valuation multiples capture not only current performance but also expectations regarding future expansion and competitive positioning. Prior research argues that firms with higher valuation ratios are often perceived as having stronger development potential and therefore attract greater investor interest (Brighham & Houston, 2019; Penman, 2013). Nevertheless, excessively high valuation levels may also reflect speculative expectations rather than underlying business fundamentals.

Empirical evidence indicates that the effect of valuation multiples differs across market environments and industrial settings. In sectors characterized by innovation intensity and

regulatory influence, such as pharmaceuticals, investors may rely more heavily on valuation indicators when forming expectations. Therefore, the relationship between P/E and stock prices remains theoretically meaningful and warrants empirical examination.

Return on Equity and Stock Price

Return on equity is commonly interpreted as an indicator of managerial efficiency and the effectiveness of capital utilization. Previous literature generally assumes that firms generating higher returns for shareholders tend to receive more favorable market evaluations. However, empirical findings regarding ROE are not always consistent. Although stronger profitability is often associated with higher firm valuation, some studies suggest that unusually high ROE values may result from capital structure effects rather than operational improvements.

Investor interpretation therefore depends not only on the magnitude of returns but also on whether those returns appear sustainable over time. In industries requiring long-term investment and continuous innovation, such as pharmaceuticals, investors may evaluate ROE more cautiously than in traditional industries.

Market Capitalization and Stock Price

Market capitalization has frequently been discussed as an indicator of firm size and market presence. Existing studies generally suggest that larger firms tend to receive stronger investor recognition because of their greater financial resources, operational stability, and perceived ability to withstand market uncertainty.

However, empirical findings regarding the relationship between firm size and stock valuation remain mixed. While some studies report a positive association between firm scale and market value, others argue that company size alone may not necessarily translate into superior stock performance once profitability and growth expectations are taken into account. For pharmaceutical companies, firm value may depend more heavily on innovation capability, product competitiveness, and future development prospects than on firm scale itself. Therefore, the influence of market capitalization on stock price remains an empirical question that requires further investigation.

Trading Volume and Stock Price

Trading volume is often viewed as a reflection of market participation and investor activity. Existing research suggests that changes in trading intensity may contain information regarding investor sentiment and expectations about future market movements.

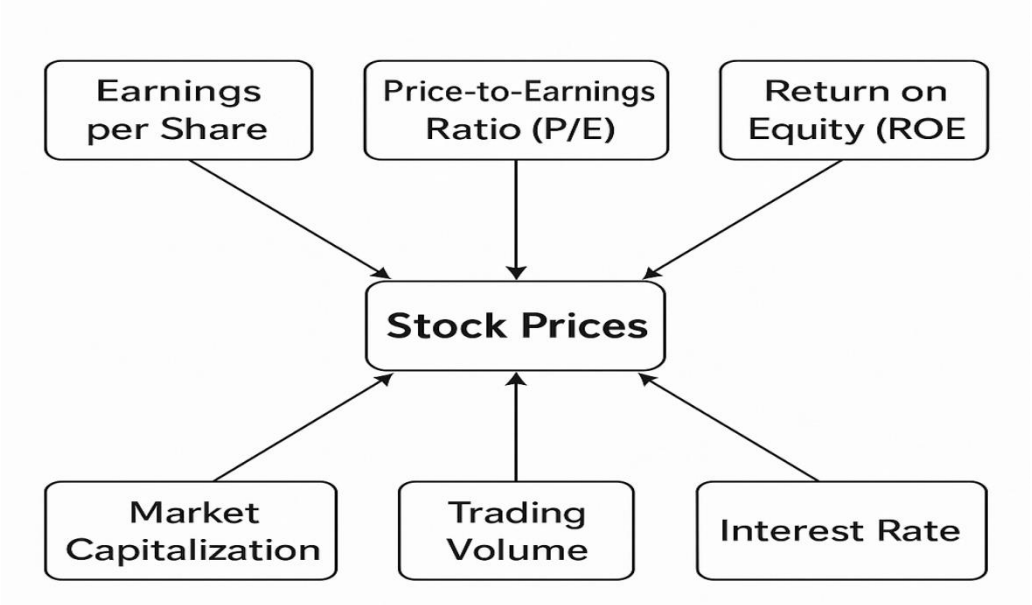
Nevertheless, the relationship between trading activity and stock valuation is not always straightforward. High trading volume may indicate strong investor interest, but it may also reflect speculative behavior rather than fundamental changes in firm value. In industries characterized by technological uncertainty and changing market expectations, trading activity may not necessarily represent long-term investment decisions. Therefore, whether trading volume significantly influences stock prices remains an issue that requires empirical verification.

Interest Rate and Stock Price

Interest rates are commonly regarded as an important macroeconomic factor influencing financial markets. Changes in interest rates may affect corporate financing costs, investor portfolio allocation, and expectations regarding future economic conditions.

Previous studies generally suggest that higher interest rates tend to reduce stock market attractiveness because investors may shift capital toward lower-risk financial assets. However, the magnitude of this effect may vary across industries depending on market characteristics and business cycles. For the pharmaceutical sector, stock valuation may be influenced more strongly by firm-level performance and industry-specific developments than by general monetary conditions. Consequently, the extent to which interest rate fluctuations affect stock prices requires empirical examination.

Figure 1 Conceptual Framework



Based on the theoretical discussion and empirical literature reviewed above, this study proposes a conceptual framework illustrating the relationships between the selected financial indicators, macroeconomic variable, and stock prices in China's pharmaceutical industry. The framework identifies earnings per share (EPS), price-to-earnings ratio (P/E), return on equity (ROE), market capitalization, trading volume, and interest rate as key explanatory variables influencing stock price performance.

Methodology

Research Design

This analysis employs a quantitative design to examine the association between selected financial indicators and stock prices. Financial observations were collected from listed pharmaceutical firms and analyzed using multiple regression techniques. The research focuses on identifying how firm-specific financial indicators influence stock prices. This method is widely used in empirical finance studies to determine the impact of financial ratios and market factors on stock price movements (Gujarati & Porter, 2009).

The dataset consists of 220 firm-year observations collected from 20 listed pharmaceutical companies in China over the period from 2013 to 2023. This structure combines firm-level

and year-level information, allowing the study to capture variation across companies and over time.

Data Collection

The data used in this research were obtained from publicly available financial databases and company financial reports. The sample consists of 20 listed pharmaceutical companies in China over the period from 2013 to 2023.

Financial indicators including earnings per share (EPS), return on equity (ROE), price-to-earnings ratio (P/E), market capitalization, and trading volume were collected to represent firm-level financial performance and market activity. In addition to firm-specific indicators, macroeconomic variables such as interest rates were included in the analysis. Interest rates play an important role in financial markets because they influence investment decisions, corporate financing costs, and investor expectations (Fama, 1981).

The collected financial observations were organized into firm-year format, where each company represents an observational unit, and each year represents the time dimension.

Variable Definition

This analysis examines the relationship between stock price and several explanatory variables derived from financial statements and market data.

The dependent variable is stock price, while the independent variables include earnings per share (EPS), return on equity (ROE), price-to-earnings ratio (P/E), market capitalization, trading volume, and interest rate.

These variables are frequently used in stock price studies because they capture profitability, firm value, market expectations, and macroeconomic conditions (Chen, Roll, & Ross, 1986).

Table 1
Definitions and Measurements of Key Variables

Variable	Definition	Measurement (Unit)
Stock Price	Closing price of a company's share	CNY/share
EPS	Net income divided by outstanding shares	CNY/share
P/E Ratio	Market price divided by EPS	Times
ROE	Net income divided by shareholders' equity	Percentage (%)
Market Capitalization	Total market value (stock price × shares outstanding)	Trillion CNY
Trading Volume	Number of shares traded in a given period	Shares/day
Interest Rate	Benchmark rate set by People's Bank of China	Percentage (%)

Model Specification

To examine the relationship between stock price and financial indicators, the study employs a multiple regression model. The regression model is expressed as follows:

$$StockPrice_i = \beta_0 + \beta_1 \cdot EPS_i + \beta_2 \cdot P/E_i + \beta_3 \cdot ROE_i + \beta_4 \cdot MarketCap_i + \beta_5 \cdot Volume_i + \beta_6 \cdot InterestRate_i + \varepsilon_i$$

Where:

β_0 is the intercept
β_1–β_6 are the regression coefficients
ε_i is the error term

The coefficients represent the estimated impact of each independent variable on stock prices. A positive coefficient indicates that an increase in the variable leads to a higher stock price, while a negative coefficient suggests the opposite relationship.

Data Analysis Technique

Data analysis was conducted in three stages. First, descriptive statistics were generated to summarize the characteristics of the variables. Second, correlation analysis was performed to evaluate variable relationships and assess multicollinearity. Finally, multiple regression analysis was employed to estimate the association between explanatory variables and stock prices.

Results and Analysis

Descriptive Statistics

Descriptive statistics provide an overview of the characteristics of the variables used in the study. This analysis helps summarize the distribution of the dataset and identify potential variations among firms before conducting further statistical tests.

Table 2 presents the descriptive statistics for all variables included in the study.

Table 2
Descriptive Statistics

Variable	Mean	Std. Deviation	Minimum	Maximum
Stock Price	37.09	44.15	3.01	437.15
EPS	1.1	1.01	-1.81	6.22
P/E Ratio	5.06	4.11	1.13	31.32
ROE	14.96	10.86	-29.89	76.23
Market Capitalization	4.77E+10	6.22E+10	3.68E+9	4.95E+11
Trading Volume	120,027	134,079	7,167	1,051,843
Interest Rate	4.48%	0.86%	3.45%	6.00%

Table 2 reports the descriptive statistics for all variables. The results suggest considerable variation across the sampled pharmaceutical firms, particularly in stock prices, profitability indicators, and market size. This suggests that listed pharmaceutical companies in China differ substantially in terms of financial performance and market valuation.

Stock prices range from 3.01 to 437.15, with a mean value of 37.09 and a standard deviation of 44.15. This wide range indicates that market valuation differs greatly across firms in the pharmaceutical sector.

The profitability indicators also show noticeable dispersion. EPS ranges from −1.81 to 6.22, while ROE ranges from −29.89% to 76.23%. These results suggest that some firms experienced weak or negative profitability during the study period, whereas others maintained relatively strong financial performance. The P/E ratio also varies across firms, reflecting differences in investor expectations.

Market capitalization and trading volume further indicate differences in firm scale and market activity. The benchmark interest rate ranges from 3.45% to 6.00%, suggesting moderate variation in the macroeconomic environment during the sample period.

The descriptive statistics indicate substantial heterogeneity among pharmaceutical firms in terms of profitability, firm size, market activity, and stock valuation.

Correlation Analysis

Correlation analysis was conducted to examine the relationships between stock prices and the explanatory variables included in the model. The Pearson correlation matrix is presented in Table 3.

Table 3
Correlation Matrix

	Stock Price	**EPS**	**P/E Ratio**	**ROE**	**Market Cap**	**Trading Volume**	**Interest Rate**
Stock Price	1						
EPS	0.610	1					
P/E Ratio	0.569	0.089	1				
ROE	0.253	0.519	0.394	1			
Market Cap	0.499	0.237	0.568	0.137	1		
Trading Volume	-0.132	-0.208	0.034	-0.146	0.268	1	
Interest Rate	-0.107	-0.157	0.108	0.147	-0.272	-0.149	1

The correlation analysis indicates moderate relationships among the variables. Positive associations are observed for EPS, P/E ratio, ROE, and market capitalization, whereas trading volume and interest rate display weak negative relationships with stock price. Since none of the correlation coefficients exceed the commonly accepted threshold of 0.80, multicollinearity is unlikely to influence the regression estimates.

Regression Results

To examine the determinants of stock prices in China's pharmaceutical industry, multiple regression analysis was conducted. The regression results are presented in Tables 4 and 5.

Table 4
Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	0.861	0.741	0.733	22.79658	0.741	101.421	6	213	<.001	0.852

Table 5
Regression Coefficients

Variable	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-6.587	9.612	-	-0.685	0.494	-	-
EPS	32.385	2.032	0.738	15.941	<.001	0.568	1.76
P/E Ratio	6.947	0.541	0.647	12.836	<.001	0.48	2.085
ROE	-1.617	0.192	-0.398	-8.415	<.001	0.545	1.834
Market Capitalization	1.977e-11	0.0	0.028	0.546	0.586	0.467	2.14
Trading Volume	-2.216e-05	0.0	-0.067	-1.747	0.082	0.82	1.22
Interest Rate	-0.24	2.002	-0.005	-0.12	0.905	0.796	1.257

The estimated regression model explains a substantial proportion of stock price variation. As reported in Table 4, the R^2 value is 0.741 and the adjusted R^2 is 0.733, indicating that the selected variables explain nearly three quarters of the observed variation in stock prices. The model is statistically significant ($F = 101.421$, $p < 0.001$), suggesting that the regression model provides a reliable explanation of stock price variation in China's pharmaceutical sector.The Durbin–Watson statistic of 0.852 suggests potential positive autocorrelation, so the regression results should be interpreted with appropriate caution.

EPS and P/E ratio show statistically significant positive relationships with stock prices, indicating that investors continue to place considerable emphasis on earnings performance and valuation expectations.

ROE presents an inverse association with stock valuation, suggesting that higher accounting returns may not necessarily be interpreted as a favorable signal. The remaining variables do not demonstrate statistically significant effects once profitability indicators are considered.

Discussion of Findings

The regression results provide important insights into the determinants of stock prices in China's pharmaceutical industry. The findings suggest that firm-level financial indicators play a more important role than macroeconomic factors in explaining stock price movements. In particular, earnings per share (EPS), price-to-earnings ratio (P/E), and return on equity (ROE) are identified as the key variables associated with stock price variation, whereas market capitalization, trading volume, and interest rate do not show statistically significant effects in the regression model.These findings suggest that investors in the pharmaceutical sector place considerable emphasis on observable financial information when evaluating stock prices.

The positive effect of EPS indicates that investors in China's pharmaceutical sector place considerable weight on earnings performance when assessing stock value. This finding is consistent with the view that accounting earnings contain useful information for valuation decisions. In a sector characterized by policy uncertainty and high R&D requirements, current earnings may provide investors with a clearer signal of firm stability and operating strength.
The positive effect of the P/E ratio suggests that stock prices are also shaped by expectations of future growth. Pharmaceutical firms are often valued not only based on current profitability but also on future product development, innovation potential, and market expansion. Therefore, a higher P/E ratio may reflect stronger investor confidence in a firm's future earnings prospects.

The negative effect of ROE is more unexpected. Although ROE is usually viewed as a favorable profitability indicator, the result suggests that investors may not interpret high ROE as a purely positive signal in this industry. One possible explanation is that high ROE may reflect leverage effects or short-term profitability rather than sustainable operating performance. This finding indicates that investors may rely more heavily on EPS and P/E than ROE when evaluating pharmaceutical firms.

Market capitalization does not show a significant effect on stock prices. This result suggests that firm size alone may not be sufficient to explain stock valuation in the pharmaceutical sector. Although larger firms usually possess stronger resources and higher visibility, investors may pay closer attention to profitability, product pipelines, innovation capacity, and future growth prospects. Therefore, market scale may become less important once earnings-related indicators are considered.

Similarly, trading volume is also insignificant in the regression model. This implies that market activity does not necessarily translate into higher stock valuation. In the pharmaceutical sector, trading volume may reflect short-term investor attention or speculative activity rather than long-term firm value. As a result, liquidity alone does not appear to be a reliable determinant of stock prices in this sample.

Interest rate does not have a significant effect on pharmaceutical stock prices. Although interest rates may influence equity markets through financing costs and investment substitution, this effect appears limited in the present sample. Pharmaceutical stock prices may be more strongly affected by firm-level performance, regulatory approval, innovation capability, and healthcare demand than by general monetary conditions.

Implications of the Findings

The findings of this analysis provide several implications for investors, corporate managers, and policymakers involved in China's pharmaceutical industry.
For investors, the results highlight the importance of focusing on firm-level financial indicators when evaluating pharmaceutical stocks. In particular, earnings per share (EPS) and the price-to-earnings ratio (P/E) appear to be the most informative indicators of stock price performance. Investors may therefore use these measures as key benchmarks when assessing the financial strength and growth potential of pharmaceutical companies. Firms with strong earnings performance are more likely to attract investor confidence and achieve higher market valuations.

For corporate managers, the results emphasize the importance of maintaining strong financial performance and sustainable profitability. Since investors appear to respond strongly to earnings-related indicators, pharmaceutical firms should prioritize improving operational efficiency, controlling costs, and enhancing revenue growth in order to strengthen investor confidence. Additionally, managers should be cautious when interpreting profitability indicators such as return on equity. Although ROE is traditionally considered a positive indicator of financial performance, the empirical results suggest that unusually high ROE values may not necessarily lead to higher stock prices if investors perceive them as being driven by financial leverage or unsustainable profit strategies.

For policymakers and regulators, the findings suggest that industry-specific factors may play a more important role than macroeconomic variables in determining stock prices in the pharmaceutical sector. Policies that support research and development, technological innovation, and pharmaceutical industry development may therefore have a more direct influence on market valuation than changes in general macroeconomic conditions. Strengthening regulatory transparency, improving market information disclosure, and encouraging innovation within the pharmaceutical industry may help promote more stable and efficient capital markets.

Comparison with Previous Studies

The results of this analysis are broadly consistent with previous empirical research examining the determinants of stock prices. Earlier studies have shown that profitability indicators such as earnings performance play a significant role in explaining stock market valuation. The positive relationship between EPS and stock price observed in this study supports the findings of Ball and Brown (1968), who demonstrated that accounting earnings contain important information relevant to stock price movements. Similarly, the positive influence of the P/E ratio on stock price is consistent with the argument that investors use valuation multiples to assess future growth prospects and market expectations.

However, the negative relationship between return on equity and stock prices identified in this study differs from the commonly expected positive association between profitability and market valuation. This finding suggests that investors in the pharmaceutical sector may interpret high ROE values with caution, particularly when such performance is associated with financial leverage or short-term earnings adjustments. This result highlights the importance of considering industry characteristics when analyzing stock price determinants. In addition, the insignificant effects of market capitalization, trading volume, and interest rates indicate that these factors may not play a dominant role in determining stock prices within the pharmaceutical industry during the study period. These findings suggest that investors place greater emphasis on firm-level financial indicators rather than macroeconomic variables when evaluating pharmaceutical companies. The results contribute to the existing literature by providing updated empirical evidence on stock price determinants in China's pharmaceutical sector using longitudinal financial observations.

Practical Implications

The findings of this study provide several important implications for investors, corporate managers, and policymakers.

For investors, the results suggest that financial indicators such as earnings per share and the price-to-earnings ratio are valuable tools for evaluating pharmaceutical companies. Investors seeking to identify promising investment opportunities may focus on firms that demonstrate strong earnings performance and positive growth expectations. These indicators appear to provide more reliable signals of firm value than market size or trading activity.

For corporate managers, the results highlight the importance of maintaining sustainable profitability and improving financial transparency. Since investors respond strongly to earnings-related indicators, companies should prioritize improving operational efficiency, strengthening revenue growth, and maintaining stable financial performance. Managers should also carefully manage capital structure and financial leverage to ensure that profitability indicators accurately reflect the firm's operational strength.

For policymakers and regulators, the findings suggest that industry development policies may play an important role in shaping market valuation in the pharmaceutical sector. Policies that support research and development, technological innovation, and pharmaceutical industry growth may enhance investor confidence and contribute to the long-term development of capital markets.

Limitations of the Study

Despite its contributions, this study has several limitations that should be acknowledged.
First, the research focuses only on listed pharmaceutical companies in China. As a result, the findings may not be directly applicable to other industries or countries with different economic conditions and regulatory environments. Second, the study includes a limited number of explanatory variables. Other factors, such as research and development investment, corporate governance, innovation capability, and market competition, may also influence stock prices but were not included in the regression model.Third, the analysis is based on historical financial data and may not fully capture future market dynamics or unexpected industry developments.

Suggestions for Future Research

Future research could extend this study in several directions. Researchers may consider expanding the sample to include additional industries or conducting cross-country comparisons to examine whether similar determinants influence stock prices in different markets. In addition, future studies could incorporate additional variables related to innovation performance, research and development expenditure, corporate governance, or firm risk to provide a more comprehensive understanding of stock price behavior in the pharmaceutical sector.Finally, more advanced econometric techniques, such as dynamic panel models or machine learning approaches, may be applied to capture more complex relationships between financial indicators and stock price movements and to improve prediction accuracy in financial markets.

Conclusion

This study examined how selected financial indicators and market-related variables are associated with stock prices among Chinese listed pharmaceutical firms. The findings suggest that profitability and valuation indicators play a stronger role than firm scale and macroeconomic conditions in explaining stock price variation.

The empirical results suggest that firm-level financial indicators play a significant role in explaining stock price movements in the pharmaceutical sector. In particular, earnings per share (EPS) and the price-to-earnings ratio (P/E) exhibit strong positive relationships with stock prices, indicating that profitability and investor expectations regarding future growth are important determinants of market valuation. Companies with higher earnings performance tend to attract greater investor confidence and achieve higher stock prices.

In contrast, return on equity (ROE) is found to have a statistically significant negative relationship with stock prices. This result suggests that higher accounting returns do not necessarily lead to higher market valuations in the pharmaceutical industry. Investors may interpret unusually high ROE values with caution, particularly if such performance is associated with financial leverage or short-term profitability adjustments rather than sustainable operational efficiency.

The results also indicate that market capitalization, trading volume, and interest rates do not have statistically significant effects on stock prices in the regression model. These findings imply that firm size, market liquidity, and macroeconomic interest rate fluctuations may not be primary determinants of stock valuation in the pharmaceutical sector during the study period. Instead, investors appear to focus more strongly on financial performance indicators that directly reflect profitability and expected growth potential.

Overall, the study provides empirical evidence that stock price formation in China's pharmaceutical industry is primarily driven by firm-level financial performance indicators rather than macroeconomic factors or market activity variables.

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