

Relationship Between Financial Ratios and Stock Prices: Industry Disparities in Stable Economic Environment in China

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Abstract: After the extensive and thorough cleanup and overhaul of the Chinese stock market in 1995, there followed a period of remarkable and noteworthy development, which was accompanied by an equally steady and stable growth of the Chinese economy. In the current economic climate, characterized by favorable conditions, shareholders' demand for energy conversion stock prices has become increasingly intense, thereby necessitating the intervention and involvement of financial ratios in regulating and modulating stock prices. This academic paper will employ a number of analytical tools and techniques, such as literature analysis and case studies, to examine the correlation between financial ratios and stock prices in China. The focus will be on the financial, pharmaceutical, and real estate industries, with particular attention paid to stable economic environments. The findings and results of this study have established that in a stable economic environment in China, the different financial ratios are highly adaptable and malleable to different industries when analyzing stock prices.

Keywords: financial ratios, stock prices, economic environment

1. Introduction

Economic stability refers to the degree of consistency and predictability in the economic system of a given region or country over a prolonged period of time. Furthermore, it is worth noting that financial ratios are widely employed as an objective means of gauging the financial status of a company, liquidity, profitability and investment value, and as such they are significantly related to the performance of the company, thereby rendering it possible to conduct a rough analysis of stock prices [1]. This paper aims to undertake a comprehensive and rigorous analysis and testing of the association between the stock prices and distinct financial ratios across diverse industries in China at varying levels of significance and within a stable economic context through meticulous data comparison and rigorous data testing procedures. Consequently, the findings of this study can be utilized to not only verify the relationship between financial ratios and stock prices in the Chinese stock market, but also to identify some relatively specific and accurate financial ratios that can be used in stock price analysis in different industries within the context of a stable economic environment in the middle economy. Moreover, the results of this study can serve as a foundation for further quantitative analysis of the

relationship between stock prices and financial ratios in the Chinese industry, thereby providing a relatively specific direction for future research. In addition, it can also be employed as a data reference for some industries.

2. Relationship Between Financial Ratios and Stock Prices

2.1. The Stable Economic Environment

Financial ratios, which are a set of quantifiable metrics that are utilized to analyze a firm's financial performance, are an exceptionally valuable tool for making well-informed investment decisions [2]. For instance, financial ratios such as return on assets (ROA) (1), current ratio (CR) (2), total assets turnover ratio (TATO) (3) and financial leverage ratio (4) have been demonstrated to exert a noteworthy positive influence on stock prices [3]. Moreover, fundamental analysis that is based on financial ratios has been shown to be a highly effective method for analyzing stock prices. When the economic environment is stable, financial ratios are more effective as a tool for predicting stock prices. This is largely due to the fact that during periods of economic prosperity, the profits of a company typically experience an uptick, operating income increases and liabilities may remain relatively stable. These factors, in turn, may render financial ratios more effective as a tool for predicting stock prices since the company's financial performance is in accordance with overall economic conditions.

$$\text{Return on Assets} = (\text{Net profit} / \text{Average assets in accounting}) \times 100 \quad (1)$$

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \quad (2)$$

$$\text{Total Assets Turnover} = \frac{\text{Sales income}}{\text{Average assets}} \quad (3)$$

$$\text{Financial leverage} = \frac{\text{Changing rate of EPS}}{\text{Changing rate of EBIT}} \quad (4)$$

2.2. The Unstable Economic Environment

In situations where the economic landscape is deemed unstable, there tends to be a weakening in the correlation that exists between financial ratios and the prices of stocks. Numerous studies have been conducted on this subject matter, which has concluded that certain financial ratios such as CR, return on equity (ROE) (5), ROA and earnings per share (EPS) (6) have a positive and significant impact on stock prices, regardless of the economic stability [3]. However, there are contradicting studies which suggest that the correlation between financial ratios and stock prices may diminish when the economic environment is unstable. For instance, it has been found that while EPS and debt-to-equity ratios had a significant correlation with stock prices, ROA did not [4]. This indicates that the correlation between financial ratios and stock prices varies from study to study in unstable economic conditions. It is important to note that during times of inflation or austerity, the impact on financial ratios can be significant due to the rise in costs which can affect a company's profit margin. This, in turn, can reduce the accuracy of financial ratios as forecasting tools. Hence, it can be inferred that in an unstable economic environment, the effectiveness of financial ratios as a tool for predicting stock prices is likely to decrease. Therefore, the content discussed in this paper was conducted under stable economic conditions, as it is crucial to acknowledge that the results of any study on financial ratios and stock prices may vary depending on the economic environment.

$$\text{Return on Equity} = (\text{Net profit} / \text{Average equity in accounting}) \times 100 \quad (5)$$

$$\text{Earnings per Share} = \frac{\text{Net earnings}}{\text{Number of shares outstanding}} \quad (6)$$

3. The Influence of Different Financial Ratios in Analyzing Chinese Stock Prices

3.1. Financial Industry

In the financial industry, it is widely acknowledged that the TATO factor has a remarkable impact on stock prices, especially in the case of companies such as banks, insurance and other financial institutions. This can be attributed to the four distinct characteristics and operating models of the financial industry, which make TATO an immensely influential factor in the stock prices of the financial industry. These four critical factors are capital efficiency, returns, risk management and leverage, respectively. When analyzed from the perspective of capital efficiency, it is evident that the core business of financial institutions pertains to capital flow, credit issuance and investment operations. A high TATO may suggest that financial institutions can effectively circulate capital, thereby achieving efficient use of capital and improving profitability. In terms of income, it is well known in the financial industry that revenue is usually derived from loan interest, investment income, processing fees and service fees. A high TATO ratio may indicate a financial institution's rapid revenue cycle, which helps to increase the company's overall earnings. When it comes to risk management, financial institutions are required to manage various types of risks, including credit risk, market risk and liquidity risk. A high TATO ratio may indicate that these institutions can achieve efficient business operations based on risk management. Lastly, with regard to leverage, financial institutions typically utilize borrowed capital to conduct business activities. This may lead to a more significant impact on asset turnover, as borrowed capital may have a greater impact in a continuous cycle. Under these four crucial factors, effective utilization of assets as measured by TATO plays a vital role in portfolio decisions and may significantly influence stock returns [5]. As an indicator to measure the operating efficiency of financial institutions, the impact of TATO on stock prices may be more prominent in the specific context of the financial industry. The aforementioned factors exemplify the importance of TATO in the financial industry, emphasizing its critical role in decision-making processes.

3.2. Pharmaceutical Industry

In the realm of the pharmaceutical industry, it is widely understood that stock prices exhibit a significant correlation with various key performance indicators, such as revenue, net profit and EPS. This correlation can be attributed to the fact that the primary driver of pharmaceutical companies' performance is their operating income. In particular, positive revenue growth is often indicative of high demand for the company's products, as well as the successful implementation of its research and development and marketing initiatives. It follows that such potential for growth can serve as a potent impetus for driving stock prices upwards. Moreover, net profit serves as a critical metric in assessing a company's financial well-being, as it represents the amount that remains after all expenses have been deducted from the company's total revenue. Notably, higher net profit is generally indicative of superior operational efficiency and profitability. As a result, investors tend to associate higher levels of profitability with greater financial health, which can, in turn, lead to a corresponding increase in stock prices.

The pharmaceutical industry is characterized by a multifaceted process involving arduous research, intricate development and meticulous regulatory approval of novel drugs, which is then coupled with the pressing market demand for medical products. A rigorous investigation conducted by Rusky Aviandy concluded that a myriad of financial factors such as return on investment, book value per share, debt-to-equity ratio and even return on investment, had an inconsequential influence on stock

prices, and only the payout ratio exhibited a significant impact [6]. Similarly, another comprehensive study by Rosemarie Sutjiati aimed to scrutinize the impact of several financial parameters including net profit margin (NPM), operating margin (OPM), economic value added (EVA) and EPS on the stock prices of Indonesian-listed pharmaceutical companies. The findings of this research indicated that NPM and OPM had a positive impact on earnings per share and earnings per share, in turn, demonstrated a positive impact on the stock prices [7]. Consequently, for the pharmaceutical industry, the practical application of specific financial ratios as an analytical tool for comprehending stock prices is undeniably intricate and multifarious.

3.3. Real Estate Industry

The impact of trading volume on stock prices in the real estate industry is a matter of utmost significance, especially in relation to those companies operating within the domain of real estate development, real estate sales and real estate investment. Trading volume, being one of the most important indicators for measuring market activity, holds the potential to shed light on the market's overall activity level in the real estate industry. High transaction volume, in particular, can be indicative of the market's heightened activity levels in regard to real estate transactions. This, in turn, may be attributed to the market's confidence level, investor interest and the relationship between the supply and demand conditions in the market. It is noteworthy that high trading volume may attract market attention, and, subsequently, impact stock prices. Trading volume, furthermore, serves as a reflection of the market participants' expectations. If trading volume rises, investors may deem it indicative of positive market trends, such as an increase in demand or higher prices. This, in turn, may result in investors being more willing to buy related stocks, thereby driving up stock prices. In the real estate industry, transaction volume may reflect the overall trend in the real estate market. Increased trading volume may indicate an improvement in industry activity and health, which may affect the stock prices of related companies. It is important to note that in the spot market, trading volume has a negative and significant impact on price diversification [8]. On the other hand, in the pre-sale market, trading volume has a positive and significant impact on price dispersion.

Nonetheless, it is worth noting that there exist three pivotal economic factors that bear a considerable impact on the prices of stocks in the real estate market. These factors, namely the inflation rate (7), the GDP growth rate (8) and the exchange rate (9), play a crucial role in determining the trend of the aforementioned stocks. Therefore, it would be erroneous to assume that trading volume is the solitary factor that affects the price movements of real estate stocks.

$$\text{Inflation Rate} = \frac{\text{Consumer Price Index in the current period} - \text{Consumer Price Index in the previous period}}{\text{Consumer Price Index in the previous period}} \times 100\% \quad (7)$$

$$\text{The GDP growth rate} = \frac{\text{GDP in the current period} - \text{GDP in the previous period}}{\text{GDP in the previous period}} \times 100 \quad (8)$$

$$\text{Exchange Rate} = \frac{\text{Value of Currency A}}{\text{Value of Currency B}} \quad (9)$$

4. Conclusion

This paper delves into the examination of the feasibility and efficacy of financial ratios as a means to forecast stock prices in select industries within China. Furthermore, it elucidates that distinct financial ratios are employed to scrutinize stock prices in the financial, pharmaceutical, and real estate sectors. The ultimate determination was that in the presence of a stable economic milieu in China, the utilization of financial ratios is a productive approach to anticipating stock prices. Nevertheless, when evaluating various industries, the most appropriate financial ratio differs. It is imperative to note,

however, that this analysis is solely conducted under the premise of a stable economic environment, and there exists numerous factors of economic instability, including inflation, macroeconomic policy modifications, and the repercussions on the global economy. In the future, continued exploration of the unstable economic environment and meticulous analysis of it during the specific stage of policy alterations and inflation over a designated period of time can be carried out.

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