# Empirical Analysis of the Impact of Macro Factors on Stock Prices

**Ma Hui**

Jilin Agricultural Science and Technology College, Jilin, Jilin, China

**Keywords:** Stock Price, Macro Factors, Influence

**Abstract:** Normal Stock Price Fluctuations Have a Positive Effect on an Active Market Economy, But Excessive Stock Price Fluctuations Will Affect the Securities Trading Market and Are Not Conducive to the Allocation of Market Resources. Therefore, We Must Conduct in-Depth Analysis in Conjunction with Factors Affecting Stock Prices Take Appropriate Measures to Stabilize Stock Prices. Based on This, This Article Starts with the Development of China's Securities Market. It First Analyses the Macro Factors That Affect Stock Prices, and Then Explores Measures to Stabilize Stock Prices. It is Hoped That This Can Provide a Certain Reference for Related Research on Stock Price Influencing Factors and Stabilization Measures.

## 1. Introduction

Stock price fluctuations are a normal feature. Appropriate price fluctuations help to activate the stock market, but the transitional fluctuations in stock prices will cause the function of market resource allocation to be greatly weakened. In the stock market, various factors will affect the price of stocks, such as macro factors such as the policy environment. Therefore, it is necessary to reasonably determine the influencing factors of the stock price in order to correctly judge the price fluctuations of the stock market.

## 2. Development History of China's Securities Market

China's securities market was established in the early 1990's. With the establishment of the Shanghai and Shenzhen Stock Exchanges, domestic stock trading has taken shape. There were only 30 kinds of securities available for trading at that time, and the overall market was still in the exploration stage. Since then, the laws and regulations of the state on the securities market have continued to improve, so the size of the market has also expanded. However, the expansion of the securities market is accompanied by corresponding problems. Speculation is very serious, and there are also problems of fraud in listed companies.

The standardized development of China's securities market began in 1999. In order to regulate the securities market, the State has successively introduced the “Securities Law of the People's Republic of China” and “Accounting Law of the People's Republic of China” to protect the legitimate rights and interests of investors. To make the operation of the securities market more stable and to effectively control risks. In addition, regulators have also begun to play a role in strictly reviewing the governance structure of listed companies, which has also strengthened investor confidence from the side [1]. Subsequently, China's securities market began various reforms, standardized the information disclosure system, and adopted stricter risk control mechanisms. As a result, China's securities market is becoming increasingly prosperous and currently ranks second in the world.

## 3. Macro Factors Affecting Stock Prices

### 3.1 Economic Growth

The price fluctuations of stocks are closely related to economic growth. When the economic growth rate is fast, companies want to expand the market size and increase investment, so the stock price will be affected. In addition, when the economy grows, consumers' income levels will increase

  DOI: 10.25236/iwass.2019.108

significantly, so there is a need for consumption and investment. Under the influence of market supply and demand, stock prices will rise significantly, so economic growth and stock prices are closely related.

From a macro perspective, economic growth will eventually be reflected in the gross national product. When the economy continues to grow steadily, the gross national product will also reflect the same situation, so the overall development prospects of society are better, so Residents 'investment desires and corporate production expansion desires will rise significantly, the economic benefits of enterprises will continue to increase, and residents' investment desires will also increase accordingly. The supply-demand relationship has changed significantly, which has led to rising stock prices phenomenon. The opposite is also true. When the economic growth is slow, the growth rate of GDP will also decrease, so the desire of enterprises to invest is reduced, and the desire of residents to buy stocks is reduced, resulting in the phenomenon of falling stock prices [2].

### 3.2 Currency Supply and Demand

The supply and demand of money also affects the price of stocks. Essentially, the supply and demand of money is affected by speculation and trading motivation. At the same time, speculation also affects the price of stocks. In general, when the demand for money decreases, the stock price there will be an increase, and an increase in demand for money will cause the stock price to fall. For example, the central bank often controls the supply and demand of money by buying and selling securities. When buying securities, the supply of money increases. At this time, the demand for securities increases and the demand for money decreases, which causes the stock price to rise.

### 3.3 Interest Rate

The relationship between interest rates and stock prices is reversed. When interest rates rise, the price of stocks decreases, and interest rates fall, and the price of stocks rises. This phenomenon can be explained from two aspects. First, when the interest rate rises, investors are more inclined to use funds for savings, so there will be a significant decline in stock purchases. This is because the supply-demand relationship changes, so the price of stocks will change reduce. Secondly, when the interest rate rises, the bank borrowing cost of the company will rise. At this time, not only will the production scale shrink, but also the problem of lower profits will occur, so the stock price of the enterprise will fall. For these two reasons, the price of stocks will fall because of rising interest rates, and when interest rates fall, the price of stocks will rise [3].

### 3.4 Fiscal Policy

On the whole, fiscal policy can be divided into two types: austerity and expansion. This is a targeted strategy adopted by the country according to the needs of market regulation. When adopting an expansionary fiscal policy, the tax rate will be lowered to encourage production. Under the influence of such policies, enterprises will continue to expand their production scale, and their profitability will also increase significantly. Therefore, corporate stock prices will rise due to expansionary fiscal policies. Correspondingly, when the government adopts austerity fiscal policies, the tax rate will rise, and the profitability and market influence of enterprises will decrease, so the stock price will decline. Fiscal policy belongs to the state's macro-control of the market. Usually, austerity and expansion policies will be gradually implemented. This can avoid large stock price fluctuations. However, when fiscal policy changes, it will inevitably affect stock prices.

### 3.5 Empirical Analysis of the Impact of Macro Factors on Stock Prices

The Brownian motion model is very common in modern finance and is often used to analyse changes in stock prices over time. Therefore, in order to explore the impact of the above four factors on stock prices, this paper uses a geometric Brownian motion model to analyze the macro-influencing factors of stock price changes. According to the Brownian motion model, economic growth, money supply and demand, interest rates, and fiscal policies all affect stock prices, and changes in stock prices are the result of a combination of factors. From the results of the Brownian motion model, it is basically consistent with the actual market phenomenon, and changes in various macro factors will cause stock price fluctuations. Of course, the different factors have different degrees of influence, that is, the stock price fluctuations caused by factor changes are different. [4].

Combining with the grey correlation model analysis, we can see that economic growth and interest rates have the greatest impact on the impact of stock price fluctuations, while the degree of influence of monetary supply and demand and fiscal policy is relatively small. However, in the actual stock market, the fluctuations in stock prices are mostly the result of the combined action of multiple factors, so it is difficult to perform quantitative analysis, and most of them are qualitative judgments. Through the geometric Brownian motion model and grey correlation theory, the macro factors that affect stock prices can be initially determined. The judgment results are highly referenced. Although it cannot fully simulate the process of stock price changes in the market, it almost reflects the determined factors.

## 4. Measures to Stabilize Stock Prices

Excessive fluctuations in stock prices will affect the stability of the securities market. Therefore, it is necessary to formulate corresponding measures in combination with factors affecting stock prices to prevent large stock fluctuations and reduce security risks. Based on the above analysis, we can start from the following aspects to stabilize the stock price.

### 4.1 Improve the Social Security System

A sound social security system can effectively enhance residents' consumer confidence and stabilize the stock price. When the security system is relatively perfect, residents' desire to buy stocks can be effectively increased through appropriate stimulation. People no longer have to worry about stock investment, so that the market wealth effect of stocks can be better exerted. From the specific situation in China, most of the residents are affected by traditional factors. They are more inclined to save funds when investing. Of course, this is also directly related to the incompleteness of the social security system. Therefore, in order to stabilize the price of the stock market, a comprehensive social security system must be established to enhance consumer confidence, so that the stock market can be more stable and excessive price fluctuations can be avoided.

### 4.2 Controlling the Growth Rate of the Money Supply

The changes in stock prices in the securities market are closely related to the money supply. China's central bank also often controls the money supply by buying and selling securities. Therefore, in order to effectively control the stock price fluctuations, it can be achieved by regulating the growth rate of the money supply. Of course, this measure requires the participation of government departments, effectively combines the actual situation of the market, and the central bank takes the lead in achieving market regulation. As a socialist country, our government has a clear advantage in intervening in the market economy, and various policies and government actions can play a good role in regulating and controlling. This can avoid large fluctuations in stock prices caused by the rapid growth of the money supply. , Effectively reduce the security risk of the stock market [5].

### 4.3 Control of Gdp

The stock price will be affected by the gross domestic product. When a country's GDP continues to grow, it indicates that the development prospects are good. In this social environment, most companies will increase investment and continue to expand the scale, so as to achieve greater economic returns, which is why the stock price of enterprises will continue to rise. In order to achieve effective regulation, it is necessary to combine the development needs of the country in this aspect, and at the same time effectively analyse the price fluctuation trend of the stock market, and realize the regulation and control of the GDP, so as to avoid the phenomenon of large fluctuations in stock prices.

### 4.4 Adjustment of Interest Rate Levels

As mentioned in the analysis above, the interest rate level has a greater impact on the stock price. When the interest rate is high, due to the increase in operating pressure, the company will reduce its size, which will cause the stock price to fall and the interest rate to fall. It also brings the problem of rising stock prices. Therefore, the government must effectively adjust the interest rate level to avoid large interest rate changes, which can also have the effect of stabilizing stock prices [6].

### 4.5 Adjustment of Monetary Policy

Monetary policy has a large impact on stock prices. Usually it is a national act. It uses tightening or expansionary fiscal policies to achieve market regulation or stimulation. However, excessive changes in fiscal policies may lead to short-term changes. Large fluctuations in stock prices. Therefore, the government should gradually carry out the fiscal policy formulation in order to reduce the impact on the stock price and stabilize the stock market.

## 5. Conclusion

Stock price fluctuations are its basic characteristics, which are inextricably linked to the laws of market development. Appropriate price fluctuations have a positive effect on stimulating economic markets, but large stock price fluctuations will directly affect financial markets. It is likely that bring various financial issues. Judging from the current actual situation, there are many macro factors affecting stock prices, which can be divided into economic growth, currency supply and demand, interest rates, fiscal policies, and other reasons. This paper conducts a detailed analysis on this and proposes a combination of influencing factors. Five measures to stabilize the stock price are to improve the social security system, control the growth rate of the money supply, control the GDP, adjust the interest rate level, and adjust the monetary policy. I hope that through the research in this article, the stock price influencing factors and control will be given. Research on measures provides some direction.

## Acknowledgement

The “13th fiveyear” science and technology project of the Education Department of Jilin Province (No.JJKH20170338KJ).

## References

[1] Jan Si Ya (2019). Empirical Research on the Impact of China's Multi-level Money Supply and Interest Rates on Stock Prices [D]. Jiangxi University of Finance and Economics.

[2] Yang Junqi, Liu Fang (2019). Research on the Influence of Macroeconomic Factors on the Price of Asphalt Futures in China--Empirical Analysis Based on VEC Model [J]. Economic Research Review, no.4, pp.104-106.

[3] Li Zicong (2018). Research on the correlation and influencing factors of China's real estate price and stock market [D]. China University of Geosciences (Beijing).

[4] Wang Li (2018). Analysis of the impact of short-term international capital flows on stock prices [D]. Zhejiang Gongshang University.

[5] Larry Olanrewaju Orimoloye, Ming-Chien Sung, Tiejun Ma, Johnnie E.V. Johnson (2019). Comparing the effectiveness of deep feedforward neural networks and shallow architectures for predicting stock price indices [J]. Expert Systems with Applications, pp.139.

[6] Michael Köhl, Prem Raj Neupane, Philip Mundhenk (2019). REDD + measurement, reporting and verification – A cost trap? Implications for financing REDD + MRV costs by result-based payments [J]. Ecological Economics, pp.168.