# Analysis on the linkage between socialist countries and capitalist stock market

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**Abstract:** Global economic integration is gradually gaining traction, and the correlation between stock markets in capitalist countries is improving. Modern capitalist countries gave birth to the stock market. Does it apply to countries that are socialist? Is there any correlation between the stock markets of communist and capitalist countries? For the purposes of analysis and research, this paper will choose representative capitalism and socialist countries. China is a good example for socialist countries, while New York, Tokyo, and London are good examples for capitalist countries. The following perspectives will be used to theoretically analyze the linkage characteristics of stock markets in socialist and capitalist countries: stock market development, stock market characteristics in different countries under different polities, and stock market linkage characteristics in different countries under different perspectives. The following are the primary conclusions: To begin with, the stock market of socialist countries and that of capitalist countries are in an independent state, there is no long-term linkage relationship. Second, following the introduction of QDII, the US and UK stock markets have a considerable guiding influence on the Chinese stock market's opening and closing prices, whereas the capitalist stock market has a modest guiding effect on the socialist stock market.

## 1. Introduction

Stock market linkage refers to the movement of asset prices in different stock markets in the same direction. As countries' economic activities become more closely linked, their stock markets are also likely to develop into a whole. Jeon and Von Furstenberg believe that the stock indexes in the international stock market show an increasingly obvious trend of common development [1]. Hilliard studied daily price fluctuations and trading volumes of common shares listed on the New York, Tokyo, and Chinese stock markets at the same time, and found evidence of a positive correlation between prices in each country's stock markets. After analyzing the infectivity of the stock markets of different countries, Kenourgios confirmed that there is a certain linkage between the stock markets of different countries in the world. After foreigners were allowed to invest in China's stock market in 2002, the financial indexes of China's stock market gradually moved in the same direction as those of other capitalist countries. Luo, Brooks, and Silvapulle found that there is no significant correlation between the stock markets of the United States, The United Kingdom, and Japan and the Stock markets of China, but there is tail dependence on their financial indexes.

In the era of very close global trade, the correlation between the stock markets of capitalist countries and socialist countries shows a trend of strengthening. [2]. After China entered into WTO, the opening of China's capital market accelerated, especially the implementation of THE QFII system in December 2002 and the IMPLEMENTATION of the QDII system in April 2006 [3]. The introduction of these two systems, as an important link between the Chinese securities market and the international market, marks the official entry of Chinese stocks into the capitalist market. The stock market is the product of modern capitalist countries. Does it apply to socialist countries? Is there a linkage effect between the stock markets of socialist countries and capitalist countries? Because of this problem, this paper will select representative capitalist countries and socialist countries for analysis and research. Socialist countries take China as an example, while capitalist countries take New York, Tokyo, and London as the main research objects. This paper will theoretically analyze the characteristics of stock market interaction between socialist countries and capitalist countries from the following perspectives: the

development process of stock market, the characteristics of the stock market in different countries under different regimes, "economic basis hypothesis" and "market contagion hypothesis", as well as the development of the stock market in different countries from different perspectives.

Under the circumstance that the global economy and trade are more and more closely connected, it is of great significance to understand the rules of the stock market of various countries in the world for the development of the world economy [4]. Due to different regulatory systems, investor structures, and driving forces of stock index fluctuations, stock markets around the world have different characteristics. The different industrial structure of listed companies in various countries shows that the economic structure and economic development of various countries have different stages [5]. The economic systems of countries with different political regimes are generally independent of each other, and the dynamic changes of stock markets in different countries reflect the degree of the economic interdependence of each country. Therefore, it is of great significance for policymakers and investors to study the co-movement of stock markets under different regimes.

## 2. Stock Market Development Process

In 1602, at the Amstel Bridge, the Dutch bought and sold east India Company shares that were among the first publicly traded shares in the world. The Amstel Bridge was the world's oldest stock exchange. The stock market originated from this, and then rapidly developed into an important mode of modern market enterprise operation. The stock market was born and became an important channel for allocating capital factors. As all the joint stock companies were so successful that many others followed suit, the joint stock company developed rapidly in the Netherlands and England.

The Industrial Revolution began in England in the 18th century. Because machine production was faster and of higher quality than manual production, the industrial revolution spread to other countries at a rapid rate. Joint-stock companies are also developing rapidly in capitalist countries. In the mid-19th century, some mining companies and banks raised funds by issuing stocks and bonds, with great success. Since then, financial financing has been gradually applied in all walks of life.

In the 1930s, companies in capitalist countries had a strong ability to raise capital and stock markets expanded rapidly. At this time, the stock exchange market is booming, and the volume of stock trading is at its peak. However, the lack of regulatory mechanisms, stock fraud, and market manipulation make investors have negative psychology towards the stock market. Excessive speculation led to the financial crisis. The continued fall in stock markets around the world has caused investors to suffer heavy losses. After the financial crisis, governments issued a series of regulations to standardize the stock market. In 1934, the Securities and Exchange Commission was established in the United States to directly supervise and regulate the stock market. Other capitalist countries have also carried out legal construction on the stock market. The regulatory system in various countries is very effective, so the stock market gradually standardized and healthy development.

In the 1970s, most capitalist countries had reached economic scale and intensification, while socialist countries had just begun to develop. The booming economy of capitalist countries has led socialist countries to follow suit. With the synchronous development of modern communication technology and network technology, the stock market has developed rapidly in all countries of the world.

## 3. Capitalist Economic System and Socialist Economic System

### 3.1 The Capitalist Economic System

The stock market is the product of the modern market economy, and stock first appeared in capitalist countries. Marx holds that stock is the certificate of ownership of the actual capital owned by a joint-stock company and the certificate of claiming the surplus value generated by it every year. Visible, stock is capital essentially; it is the certificate that obtains corresponding surplus-value.

The stock market is an institution for investors to trade stocks in a concentrated manner. Stock trading was first popular in the United States and is still very active today. Industrial reform in capitalist

countries is very successful, so large enterprises constantly pursue large-scale production, and then achieve maximum profit results. It took a lot of money to scale up production, but the manufacturers didn't have enough money to scale up. The joint-stock corporation can solve this problem. The joint-stock company was originally funded by the participants as shareholders. Then expand the scope of investors, according to the size of the investment amount to enjoy the corresponding rights and interests and assume the corresponding responsibilities. Now, investors are all over the world, and shares have been issued to the world. Companies in all countries can absorb and concentrate large amounts of capital. So far, already did not restrict the element that capitalist enterprise manages and develops.

### 3.2 Socialist Economic System

China's economic development is relatively fast among socialist countries, but it has unique characteristics different from the stock market of capitalist countries. The most remarkable feature of China's stock market is that the state's stocks and the stocks of corporate entities are not traded on the market. Financial stock indexes are weighted by total equity, but most stocks are not traded on the stock market. Such rules are likely to result in a situation in which a small amount of money can control a stock.

Before 2003, the socialist stock market was in a relatively closed state, and there was no linkage relationship with the capitalist stock market. After the implementation of the QIFF system in 2003, the socialist stock market index and the capitalist stock index have the same long-term trend and stable relationship. In the short run, at the beginning of China's accession to WTO, there was no obvious short-term interaction between the stock markets of various countries. With the implementation of the QFII mechanism reform, China is more closely connected with the world's capital markets.

Relying on the experience of capitalist economic development, China has constantly improved its financial market and optimized the allocation of resources. Today, China's stock market is the second largest in the world. However, compared with the mature trading management system of capitalist countries, China's stock market still has many problems. For example, the degree of marketization is low, the management mechanism is not perfect, the information disclosure and supervision is not in place, the characteristics of investors and retail investors are prominent, excessive speculation and short-term fluctuations are too large.

### 3.3 Summary

The volatility of the capitalist stock market will have an impact on The Chinese stock market, but the impact effect is small. The volatility of China's indices is largely self-inflicted. The linkage effect of each country's economy has been produced, but it has not formed a complete linkage effect. At present, China's stock market is in a special period of rapid economic growth, because as a socialist country gradually formed its operation mode. With the opening of the Chinese stock market and the opening of the Chinese economy, the linkage of the international stock market will be strengthened. Therefore, the rise or fall of stock markets in capitalist countries will not have much impact on China's stock market.

Because of the different supervision systems and investor structure, the characteristics of stock market operation in capitalist and socialist countries are also different. Socialist stock market turnover rate is high, speculative strong, large volatility, cattle short bear long. The capitalist stock market is relatively stable and the bull is long and the bear is short. As the world's largest economy, the stock market of capitalist countries has developed over the years and formed a relatively perfect management system and operation mechanism.

## 4. Introduction of Stock Market Characteristics of Various Countries

By 2022, stock markets were healthy in more than 50 countries. Trading stocks has also been made easier by the widespread use of computer technology and communication equipment. The total value of stock transactions by country increased from $2.54 trillion in 1980 to $5.82 trillion in 1986. Most of the trading took place in New York, Tokyo, and London.

### 4.1 The United States

In 1792, 24 brokers formed the Union of Brokers, which became the New York Stock Exchange. To be eligible to trade on the New York Stock Exchange, a company must net at least $1 million a year, have at least 1,500 shares, and have at least $8 million in common stock, in addition to all expenses and taxes. The NYSE serves only large corporations, of which there are more than 1,000. The New York Stock Exchange is the largest in the world. It grew in size and by early 1981 its total equity capital had grown to $1.24 trillion.

### 4.2 Britain

In 1773, Britain had its first stock exchange, which became the London Stock Exchange. In 1981, the London Stock Exchange's capitalization reached $190 billion. In 1988, the UK stock market was more capitalized than most capitalist countries, with 41 per cent of its capital traded annually. With the continuous expansion of capital scale, the trading volume of UK stock market ranks the third in the world.

### 4.3 Japan

Japan followed suit with the Tokyo Stock Exchange in 1878. In 1977, only $206 billion was invested in Japanese stocks, and annual turnover was not a good proportion. After several years of effort, the total amount of Japanese stock investment has not reached half that of New York. By 1987, Japan's low prime interest rates had attracted a flood of foreign capital, so its stock market capitalization and annual trading volume surpassed That of New York. Since then, Japan has surpassed the U.S. by a wide margin, and the Tokyo Stock Market has risen from second to first place. Today, The Japanese economy is growing fast and the foreign exchange market is stable, so the stock market is developing rapidly. Japan's stock market has long been the world's second-largest.

### 4.4 China

In 1914, China began to establish stock markets, following the example of the capitalist countries of the time and had China's first securities exchange law. The Beijing Stock Exchange was born in 1917 when the Chinese government discovered that the stock market could boost economic development. In 2011, the Chinese economy boomed, but the Chinese stock market went in the opposite direction. The Chinese stock index has been falling and even approached the index when the stock market was founded. After joining the WTO, China began to learn from the experience of the stock market of capitalism. The Chinese stock market began to connect with the capital market.

The Chinese stock market is characterized by T+1 delivery, T+1 delivery. In other words, the two parties only agree on the day of the transaction and can complete the whole transaction the next day. And China's stock market has limits on how much it can rise or fall. The Chinese government sets a daily limit on stock price declines to prevent excessive speculation. If a stock exceeds this limit, it cannot be traded on that day. Such regulations can prevent the market from falling too much, but also limit the chances of the stock market rising sharply.

## 5. Economic Foundation Hypothesis and Market Contagion Hypothesis

Under the background of economic globalization, the economies of various countries are interwoven and influenced by each other. Factors of production are freely flowing and optimally allocated around the world, integrating into a global unified market. At the same time, the application of technology has spread widely and rapidly, increasing the interdependence of economies around the world. The strengthening of the international economic coordination mechanism also speeds up the speed of financial globalization. Next, we will use the economic foundation hypothesis and market contagion hypothesis to analyze the co-movement of stock markets in different countries.

### 5.1 Economic Foundation Hypothesis

According to the economic foundation hypothesis, if investors are completely rational, asset prices will change with the change of asset fundamentals. Due to the interactivity of economic development

in various countries, the return rate of stock markets in different countries is also correlated to a certain extent. The change of future cash flow and the discount rate of listed companies are rooted in the change of some macroeconomic variables. Using a global asset pricing model, Adler and Dumas show that stock market correlations are rooted in the connections between economic fundamentals [6-8]. Becker's study found that stock markets in all capitalist countries respond uniformly to market information. Thanks to increased trade cooperation among countries, global commodities and financial assets are becoming more and more liquid, and global financial markets are becoming more and more interconnected [9-12].

Although macroeconomic changes in a country only affect that country, a cross-border arbitrage investor may change his portfolio in global capital markets, which may cause stock markets in other countries to react. After China entered into WTO, Sino-US trade has grown rapidly. In 2008, Trade between China and the United States became even closer, with the largest trade volume in the world. Since then, the financial markets of the two countries have become increasingly linked. The stock market is a barometer of a country's economy and is generally in line with long-term macroeconomic trends. If the real economic cycles of China and the US converge, then there will generally be long-term equilibrium in the stock market. As the representative economy of socialist countries, China gradually integrated into the capitalist economic system. Changes in world economic indicators and common external shocks are likely to affect stock markets in the same direction. Its external feature will be the enhancement of short-term correlation.

### 5.2 Market Contagion Hypothesis

The market contagion hypothesis focuses on investor behavior and analyzes the coactivity of stock markets around the world based on the unique behavior characteristics of financial markets in various countries [13]. Macroeconomic policies of various countries can only partially explain the stock market linkage, while other reasons may appear in the behavior of investors. By studying cross-market return rate and volatility spillover information, Connolly found that investors would infer the return rate of other countries' stock markets from the return rate of one country's stock market. Investors analyze this information and adjust their investment decisions. Investors' decisions lead to a certain correlation between stock market returns in different countries. As a result, when one country's stock market wobbles, negative news spreads to other countries' stock markets through investor behavior. In times of financial crisis, this leads to greater interconnectedness.

The channel of market contagion has fund and anticipate. Because of information asymmetry, investors in different countries may be in an incomplete rational state. The sensitivity of financial markets and investor psychology itself will also strengthen the correlation of stock markets. In such a situation, changes in the international stock market will affect the situation in each country's domestic market [14]. Even if financial risks are generated in one country's local markets, they may spread to other countries' stock markets. Because markets are integrated, stock market risks unique to one country can spread to others. With the increasing openness of China's economic development, countries in the world are increasingly closely linked in terms of economic capital. In such a state, the stock market of various countries is easy to produce convergence effect, herd effect and other characteristics. The basic system construction of the stock market promotes investors' ability to obtain information and the efficiency of market operation, so the infectivity of the stock markets of various countries also increases.

### 5.3 Summary

The world's economies are becoming increasingly interconnected financially. Moreover, the basic system construction of stock market promotes the information acquisition ability and market operation efficiency of stock market investors in various countries. Due to investors' panic psychological expectations and irrational behaviors such as herd behavior, the correlation of financial markets of various countries was significantly enhanced during the crisis. When a negative shock hits one country's stock market, it quickly spreads to other markets like a disease. The stronger the extreme shock, the more obvious the linkage will be. Within the confines of financial stocks, there may be some consistency between market contagion theory and economic fundamentals. The main channel of

stock market contagion is the irrational behavior of investors, and the coactivity of stock markets of various countries is stronger under extreme conditions.

## 6. Conclusions

The prosperity of the stock market is an important indicator to measure the economy of a country or region. In the stock market, every stock is changing all the time and no one is sure what the future will look like. Both speculators and investors can gain benefits in the stock market, which is also an important reason for the rapid development of the stock market. If there is a bad phenomenon of short selling and so on, the stock market may also produce all kinds of harm, and even lead to economic recession. This paper selects the stock data of representative countries to study the co-activity of the socialist stock market and the capitalist stock market, and finds that: the difference of economic structure and economic development in various countries will lead to the difference of industry structure of listed companies in various countries. The financing scale and the number of listed companies in the stock market of socialist countries far exceed that of capitalist countries, but the total market value and profitability of listed companies are far lower than that of capitalist countries. Therefore, the growth of stock markets in capitalist and socialist countries is not synchronized.

The price of a country's stock market can serve as an indicator of economic development. Investors can decide where to invest based on the signals sent by stock market fluctuations. The government can also predict the future development of the country's economy through changes in the stock index. And fluctuations in a country's economy are reflected in the stock market. When one country's stock market swings wildly, the economies of countries with the same political regime are similarly affected. The combination of the economic fundamentals hypothesis and market contagion hypothesis leads to the increase of short-term correlation between stock markets in various countries. As a socialist country, China's economy is developing very rapidly, even catching up with capitalist countries. Therefore, driven by the economic basis, the short-term co-activity of the stock market in capitalist countries and socialist countries is strong.

Generally speaking, there is no strong correlation between capitalist countries and socialist countries. The industrial structure and consumption structure of various countries in the world are more complementary, and the economic structure of European, American, Japanese, and other capitalist countries is highly similar. And the economic development between socialist countries is not synchronous; the development of the stock market can not completely act as the role of economic "barometer". After China acceded to the WTO, it has been closely linked with the economic development of capitalist countries, but the openness of China's capital market is still not high compared with that of capitalist countries. If the stock markets of capitalist and socialist countries are to maintain a long-term linkage relationship, the economic cycles of each country must be synchronized. The current economic development of various countries does not meet this condition. Therefore, the stock market development of capitalist countries and socialist countries does not have long-term linkage.

## References


[1] Jeon, B.N. &Von Furstenberg, G.M. Growing International co-movement in Stock Price Indexes [J].Quarterly of Economics and Business, 1990.

[2] Bernd Rosenow, Parameswaran Gopikrishnan, Vasiliki Plerou, H.Eugene Stanley. Random Magnets and Correlations of Stock Price fluctuations [J]. Physics a 314, 2002.

[3] David Leblang and Bumba Mukherjee .Government Partisanship, Elections, and the Srock Market: Examining American and British Stock Returns [J].American Journal of Political Science, 2005.

[4] Bekaert G., M. Ehrmann, M. Fratzscher, A. Mehl. Global Crises and Equity Market Contagion [J]. ECB Working Paper, 2011.

[5] Andrew John Patton. Modelling Asymmetric Exchance Rate Dependence [J]. International

Economic Review, 2006 (2): 527-555.

[6] Adler, M., B.Dumas. The International Portfolio Choice and Corporate Finance [J]. Journal of Finance, 1983.

[7] Zongrun Wang, Yanbo Jin, Yanju Zhou. Estimating Portfolio Risk Using GARCH-EVT -Copula Model: An Empirical Study on Exchange Rate Market [J]. Advances in Neural Network Research and Applications, 2010 (67): 65-72.

[8] Cathy Ning.Dependence Structure between the Equity Market and the Foreign Exchange Market- A Copula Approach [J]. Journal of International Money and Finance, 2010 (29): 743-759.

[9] Tae-Hwy Lee, Xiangdong Long. Copula-based Multivariate GARCH Model with Uncorrelated Dependent Errors [J]. Journal of Econometrics, 2009 (150): 207-218.

[10] Elisa Luciano, Marina Marena.Copulae as a New Tool in Financial Modeling [J]. Operational Research. 2002 (2): 139-155.

[11] Kodres, L. E. , Pritsker, M. A rational expectations model offinancial contagion [J] .Journal of Finance, 2002, 57 (2) :769-799.

[12] Engle, R. Dynamic Conditional Correlation: A New Simple Class of Multivariate GARCH Models [J].Journal of Business Economics Statistics, 2002, 20: 339-350..

[13] Kenourgios D. , Samitas A. , Paltalidis N. Financial crises and stock market contagion in a multivariate time-varying asymmetric framework [J].Markets and Money, 2011, 21:92-106..

[14] Kodres, L. E. , Pritsker, M. A rational expectations model of financial contagion [J].Journal of Finance, 2002, 57 (2): 769-799.