

# A Comparative Analysis of the Development Status of China-U.S. Stock Markets from the Perspective of Neo-Realism

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**Abstract:** The relationship between China and the United States has undergone great changes, from cooperation to competition or even confrontation. It is of great significance to analyze the relationship between them from the perspective of neo-realism. With the deepening of global financial integration and the gradual opening up, the volatility transmission among stock markets in various countries has become more and more obvious. The stock market has become an important part of China's financial system, which is of great significance to improve the efficiency of capital operation and reduce the financing cost of enterprises. And the United States and China have formulated their stock market policies based on neo-realism. The United States needs to face up to China's economic strength and safeguard its interests through global financial hegemony. China needs to face up to the reality and enhance the global financial influence in order to safeguard its stock market.

**Keywords:** Neo-realism, Comparative analysis, China stock market, U.S. stock market, Correlation analysis.

## 1. Introduction

### 1.1. Purpose and Background

The international relations between China and the United States are becoming increasingly complicated. China and the United States have changed from cooperation to confrontation. This article attempts to the development status of China-U.S. stock markets from the perspective of neo-realism. China and the United States have become the two largest economies in the world, and the stock market is of great significance to the economic development of both countries. Since the United States experienced the financial crisis in 2008, the stock market has fluctuated greatly.

Since the 19th century, with the development of global trade, transnational capital has accelerated its flow to serve transnational trade. In this context, the global stock market is also developing rapidly. In the 20th century, especially after the establishment of the Bretton Woods system, the World Bank and the International Monetary Fund have played an increasingly important role in the global financial field, and financial globalization has become the leading trend of international financial institutions. With the process of economic integration, transnational capital flows are more convenient, and various financial innovation tools emerge in endlessly, which not only accelerates the allocation of capital resources, but also increases the risk of financial crisis. [1] At the same time, due to the deepening of trade among countries, the domestic stock market has been opened to varying degrees, and the transmission of stock market fluctuations in various countries is more complicated.

### 1.2. Scope and Methodology

As the two largest economies in the world, China and the United States each have relatively perfect stock markets. Both countries have investment and cooperation in different stock markets. When judging the volatility transmission of the stock

markets of the two countries, it is necessary to study the respective development characteristics of the stock markets of the two countries. This article mainly focuses on theoretical and development aspects to study the stock markets in China and the United States.

The economic cooperation between China and the United States is getting closer and closer, and the fluctuation transmission trend of the stock markets of the two countries is consistent, mainly because of the rising stock market indexes of their respective countries. The fluctuation of the stock markets of the two countries makes the expectation of economic prosperity conduct in their respective stock markets. In this article, theoretical and emotional analysis is adopted according to experience; combined analysis and comparative analysis method.

### 1.3. Research Questions and Hypotheses

Nowadays, the international capital circulation is becoming more and more frequent, and the degree of liberalization of stock markets in various countries is getting higher and higher. The stock markets of China and the United States are more closely linked than ever before. The research questions of this article can be expressed as follows.

(1) What is the current situation of China -U.S. stocks market transactions from the perspective of neo-realism? (2) What is the development of China -U.S. stocks market? (3) What is the connection between the current stock markets of China -U.S.?

According to the research questions, three hypotheses are proposed in this article.

(1) The impact of China- U.S. conflict stock market from the perspective of neo-realism. (2) The stock market of China-U.S. is influenced by international relations from the perspective of neo-realism. (3) The China -U.S. stock market is a completely competitive market.

## 1.4. Structure

The third part is analysis of the current situation of China-U.S. Stock market transactions. This subchapter analyses China-U.S. stock market transactions from the perspective of neo-realism and background of economic prosperity. This subchapter analyses China-U.S. stock market transactions under the background of financial crisis. [2] The fourth part is the research on the development status of China stock market. This subchapter introduces the China-U.S. stock market and analyses China's stock market. This subchapter analyses the volatility of the U.S. stock market. The fifth part is correlation analysis of stock markets of China -U.S [3]. This subchapter analyses China - U.S economic relations and trade fluctuations relations. Then this subchapter analyses volatility Link between China -U.S. stock market.

## 2. Theoretical Framework and Literature Review

### 2.1. Theoretical Framework

In the study of international relations, neo-realism is a school of thought that international cooperation between countries is feasible and sustainable, and such cooperation can reduce conflicts and competition. [4] Neo-liberalism revised the classical liberalism in international relations. Neo-liberalism and neo-realism are the two most influential academic approaches in contemporary international relations theory. [5] Since 1990s, both sides have been leading the theory of international relations.

Neo-liberalism and neo-realism have many common assumptions (namely, the anarchy of the international system, the state being the main participant, and the state rationally pursuing its own interests), but different conclusions have been drawn from these assumptions. Contrary to neo-realism which is skeptical about the prospect of sustainable cooperation, neo-liberalism believes that cooperation is feasible and sustainable. Liberals emphasize the role of international organizations and institutions in promoting cooperation between countries. The main reason why international organizations promote cooperation is that international organizations provide information, which reduces the problems encountered by collective actions among countries in providing public goods and enforcing them.

Nowadays, when analyzing the relationship between the United States and China from the perspective of neo-realism, most theoretical studies on the fluctuation of the stock markets of the two countries start from the expectation theory, combining with capital asset pricing. [6] Through expounding the expectation and uncertainty theory, overreaction theory and capital asset pricing model theory related to volatility transmission between stock markets. From the perspective of neo-realism, the theory of analyzing the transmission of stock market volatility matches with the transmission of stock volatility.

### 2.2. Literature Review

Yousaf's article examines the return and volatility spillover effects between the world's leading markets (the United States and China) and four emerging Latin American stock markets during the 2008 global financial crisis and the 2015 China stock market crash. This article does not analyze the relationship between China and the United States. [7] Imran

introduced that Latin American stock markets, global financial crisis, China stock market crash. Compared with the global financial crisis, the research results show that when China's stock market crashes, less oil assets are needed to minimize the portfolio risk. These results provide valuable insights for portfolio diversification, asset pricing and risk management. This article does not analyze the respective links between China and the United States. [8]

Zakaria showed that U.S. is now facing challenges from many countries. Under the new economic order era of the rising powers, the U.S. strategy formulation is also very complicated. Consumer confidence drops, because of the uncertainty of the market and the uncertainty of the future economic situation. The book does not analyze the economic ties between China and the United States. [9]

Zhang told that big country economy needs big country finance. Financial confrontation between countries is of new significance. Big country economy needs big country finance. Financial confrontation between countries is of new significance. This book does not use international relations theory to analyze the stock market linkages between China and the United States. [10]

### 2.3. Uniqueness

This article uses the research of others for reference, and uses the new realism theory to analyze the relationship between China and the United States. By analyzing the relationship between the two countries, this article applies the stock market relationship between China and the United States for further research. This article makes a systematic study on the stock markets of China and the United States. Literature review showed that U.S. is now facing challenges from many countries. The U.S. strategy formulation should be made from Neo-Realism. The U.S. stock market and China's stock market are interrelated, and their conflicts can be analyzed from a country-to-country perspective.

## 3. Analysis of The Current Situation of China-U.S. Stock Market Transactions

### 3.1. Analysis of China-U.S. Stock Market Transactions from the Perspective of Neo-Realism

Since the 19th century, with the development of global trade, transnational capital has accelerated its flow to serve transnational trade. In this context, the global stock market is also developing rapidly. In the 20th century, especially after the establishment of the Bretton Woods system, the World Bank and the International Monetary Fund have played a more and more important role in the global financial field, and financial globalization has become the leading trend of international financial institutions. With the process of economic integration, transnational capital flows are more convenient, and various financial innovation tools emerge in endlessly, which not only accelerates the allocation of capital resources, but also increases the risk of financial crisis. At the same time, due to the deepening of trade among countries, the domestic stock market has been opened to varying degrees, and the transmission of stock market fluctuations in various countries is more complicated. Under Neo-Realism, the stock association between China and the United States becomes the interest relationship and conflict between countries.

### **3.2. Analysis of China-U.S. Stock Market Transactions under the Background of Economic Prosperity**

Since the late 1970s, China has implemented the reform and opening-up policy, gradually emphasizing the influence of the market and the government on the whole national economy; Western countries are also influenced by the intervention of Keynesian countries, and implement fiscal and monetary policies that are compatible with market regulation. Therefore, most countries in the world implement quantitative easing monetary policy and active fiscal policy. [11] The global stock market has experienced a surge, and investors in the stock market are generally optimistic about the future. Great changes have also taken place in China's financial market. China's stock market is gradually in line with the global stock market, and the volatility relationship between China's and America's stock markets is gradually strengthened. With the prosperity of the stock market, there are more investors in the stock market in China and the United States, and the supervision of the stock market often continues to weaken. At the same time, most credit rating agencies continue the previous rating rules, and there are loopholes and even insider trading. [12] Many financial institutions actively study the loopholes in the existing financial supervision system and trading rules and make financial innovations in order to obtain high returns, and financial derivatives emerge one after another in the financial market. Therefore, in this context, the virtual economy continues to develop and the price of financial assets continues to rise. When there is too much deviation between the virtual economy and the real economy, the financial bubble comes into being. Because of the above problems in the financial system, once the financial bubble is impacted internally or externally, the financial bubble will burst rapidly, asset prices will plummet, and the whole financial system will be greatly impacted.

Nowadays, the international capital circulation is becoming more and more frequent, and the degree of liberalization of stock markets in various countries is getting higher and higher. [13] The stock markets of China and the United States are more closely linked than ever before. The fluctuation of one country's stock market will quickly affect the stock market of another country. An important manifestation of economic prosperity is that the domestic stock market index keeps rising. During the period of economic prosperity, national stocks mainly fluctuate around their own economies. [14] With the development of global economy and the pace of financial opening, a wide variety of financial products have played an important role in transnational capital flows. While these financial products serve financial transactions and reduce transaction costs, they also contain huge risks. However, the prosperous economy masks many problems in the stock market. The stock market also tends to become a bubble market in the period of economic prosperity. Once major fluctuations occur in the economic fields of China and the United States, it will often lead to the decline or even plunge of domestic stocks, and this abnormal fluctuation will quickly affect the stock market of another country. [15] If the abnormal fluctuation of the stock market is encountered and the government and other competent departments do not handle it properly, it is likely to have an adverse impact on the whole stock market and even become the fuse of the financial crisis.

### **3.3. Analysis of China-U.S. Stock Market Transactions under the Background of Financial Crisis**

The stock markets of China and the United States have their own characteristics, but the main manifestations of the financial crisis are very similar: some extreme financial events occurred in one country first, then quickly spread to the stock market, and then spread to other countries' stock markets. In this process, the transmission time and impact strength of stock market volatility in China and the United States are often uncertain. Since the 19th century, all countries' capital markets, especially stock markets, have repeatedly experienced a long bear market after the bull market plunged, and then the bull market and the bear market alternated with each other. [16]

After the outbreak of the financial crisis, financial indicators deteriorated rapidly, and market investors began to lose confidence in the financial system and reduce their financial assets. Then, financial market investors continued to be bearish on future expectations and continued to sell off financial assets. In 2008, when the financial turmoil on Wall Street occurred in the United States, the American stock market index plummeted, and the prices of financial securities and virtual economy stocks fell the most. Due to a series of measures taken by listed companies and the government, the downward trend has eased in the short term; At this time, the stock markets of China and the United States have taken different measures to rescue the market, and the volatility of the stock markets of the two countries is slightly different. At this time, once the "bailout" measures fail to meet the market expectations, the stock index will continue to fall. The financial crisis can be caused by both internal and external shocks. Both internal and external causes will cause the stock market of China and the United States to continue to fluctuate, and even the stock market will collapse. [17]

During the financial crisis, the stock market often shows a sharp drop in stock prices. Both China and the United States have the ability to take appropriate control measures through financial institutions and government authorities to slow down or even resolve the financial crisis. [18] If the control measures are not operated properly or the financial market is strongly impacted, the stock market of a country will collapse, and then the real economy will be affected, and even develop into an economic crisis.

## **4. Research on the Development Status of China Stock Market**

### **4.1. Introduction of China-U.S. Stock Market**

In the middle of 19th century, Shanghai Foreign Company issued China's first stock. In the 1870s, the Westernization Movement of the Qing government set up many large enterprises. At that time, the government was unable to pay huge financial investment, so it used foreign experience for reference to push enterprises to the stock market for financing. At the end of 19th century, a regional financial crisis broke out in Shanghai, which caused a large number of banks (money houses) to go bankrupt because of the stock market crash. In the early 20th century, China's stock market entered a short period of prosperity. In 1922, Chinese people discovered that stocks could bring huge spread arbitrage and get rich quickly, so there was a large demand for stock trading in society. There were more than 200 exchanges in Nanjing,

Suzhou, Guangzhou and Shanghai alone. Subsequently, the stock suffered a lot of selling by investors, and the stock market ushered in the second crisis, with banks going bankrupt, trust companies closing down, and exchanges closing down. This crisis was called "the wave of trust and exchange".

After the reform and opening up, in order to activate the vitality of Chinese enterprises and learn from the advanced management experience of foreign companies, government departments began to set up joint-stock companies. In 1984, Feile Audio Co., Ltd. became the first domestic company to publicly issue shares for financing. In December, 1990, the Chinese government established Shanghai Stock Exchange and Shenzhen Stock Exchange, and large domestic companies went public to raise funds. Shanghai Stock Exchange mainly serves large companies and is called "Main Board Market". Shenzhen Stock Exchange mainly serves small and medium-sized companies and innovative companies, namely "small and medium-sized board market" and "Growth Enterprise Market". [19] In April, 1994, the competent department compiled the Shenzhen Stock Exchange Composite Index, which reflected the stock price changes of listed companies in Shenzhen Stock Exchange. In July of the same year, the competent department compiled the Shanghai Composite Index according to the changes of the stock prices of listed companies in Shanghai Stock Exchange. As the Shanghai Composite Index can better reflect the price changes of China's stock market, it attracts the attention of investment institutions and government departments.

At the beginning of the establishment of the stock market, the Chinese government took into account that the stock market itself was too small and its system was not perfect, so it strictly controlled the capital account. This kind of protection system, isolated from the outside world to a certain extent, did play a certain role in protecting the domestic financial market in the 1997 Southeast Asian financial crisis. However, with the development of China's economy, this closed financial market is not conducive to the development of China's stock market, and China's capital market has gradually opened to the outside world. In February 2001, China first opened an account for foreign investors to invest in China's stock market-B-share account. The resident who opens this account must be a resident who uses legal foreign exchange for transactions in China. Although the opening degree of B-share trading is limited, it is an important step for China to break through the closed trading of domestic stock market. Since then, there are A shares purchased in RMB and B shares purchased in foreign currency in China's stock market. [20]

In December, 2001, China officially joined the World Trade Organization (WTO). With the gradual opening of trade, China's financial market has also ushered in a golden period of rapid development. In 2003, China's securities market began to implement the Qualified Foreign Institutional Investors (QFII) system, and overseas investment institutions headed by Swiss banks entered China's securities market one after another. [21] These excellent investment institutions have brought advanced investment concepts and financial market management systems while bringing funds into the Chinese market, which has greatly promoted the development of China's securities industry. In June, 2007, China's securities market implemented the qualified domestic institutional investor system (QDII), which enabled domestic qualified institutional investors to invest their domestic capital globally

and realize the international asset portfolio allocation. This measure can not only increase the profitability of investment institutions, but also spread risks. In December, 2011, China began to implement the RMB Qualified Foreign Institutional Investors (RQFII) system, under which qualified foreign institutional investors can invest the foreign exchange within the approved amount in China's securities market. After the introduction of this system, China's stock market is accelerating the pace of integration with the international stock market.

The implementation of QFII system in China can not only improve the investment level of domestic investors, but also realize the integration of China's stock market with the international process. At the same time, QFII invests a large amount in the stock market and holds it for a long time. This investment strategy makes the investment target mostly large-cap blue-chip stocks with good development prospects, large scale and strong liquidity. Once these target enterprises have problems future development prospects, this part of the funds will be quickly withdrawn. [22] At the same time, QDII system makes China's large financial institutions more closely linked with foreign capital markets. There are a large number of overseas assets in its asset portfolio, which on the one hand can improve capital gains and diversify risks; On the other hand, once overseas assets are damaged, the stock of domestic listed parent companies will also cause drastic fluctuations. [23] The implementation of RQFII system, on the one hand, will speed up the internationalization of RMB in China, on the other hand, it will make the connection between China's stock market and the exchange rate market closer, and the fluctuation of the exchange rate market will inevitably lead to the change of RQFII investment, which will also have an impact on China's stock market to some extent. [24]

At the beginning of the founding of the United States, the country did not establish an official domestic stock market. The first stock in the United States was issued by Hamilton, the first treasury secretary of the United States, to pay for war bonds. At the beginning of the founding of the People's Republic of China, the American government needed a lot of financial investment. Drawing lessons from the experience of European securities financing, the U.S. financial department began to encourage domestic residents to conduct stock trading, and through this kind of government guidance, it increased the activity of stock trading. In May, 1992, the first securities trading agreement in American history was signed by early American securities investors. The official stock market in the United States can be traced back to the New York Stock Exchange, where brokers operated according to the Buttonwood Agreement. This move realized the embryonic form of the American stock market guided by the American government and led by private investors, and also marked the legalization and regularization of American stock trading. American government's understanding of the stock market was quite different in the early stage of preparation. On the one hand, American Treasury Secretary Hamilton emphasized the leading role of the market, and the government should create a legal environment and carry out its supervisory duties; On the other hand, Jefferson, the founding father of our country, stressed that we should implement a laissez-faire policy in stock trading, and the government does not need any management and supervision. Considering the size and trading situation of American stock market at that time, many finance ministers after Hamilton followed Jefferson's government's "laissez-faire" policy on

the stock market. On the one hand, this market laissez-faire trading system really plays an important role in stimulating investors' trading vitality and promoting the development of the stock market; On the other hand, due to the lack of market supervision, speculation and insider trading prevail in the stock market. When the market is prosperous, stock trading is active, and investors actively buy stocks and sell them at high prices. The stock market has a large profit margin, and investors make more profits. However, in the financial market which lacks effective government supervision, speculation prevails, which makes the financial market contain huge financial risks. [25] In 1907, due to the failed speculation of Canadian speculator Heinz, the stock plunged, causing a bank run, which plunged the American stock market into a financial panic. At this time, the U.S. government not only had no financial supervision department, but also had no central bank, so it had no strategy to deal with the financial panic. At this time, J.P. Morgan actively intervened in the stock market through its Morgan Bank and its prestige and credit in American financial circles, and played the role of the central bank, thus defusing the financial panic.

The financial authorities of the United States realized that the stock market crisis would have serious consequences. In view of the financial panic in 1907 and the lack of countermeasures, they started a plan to rebuild the American financial market. In 1913, the central bank of the United States adopted the federal reserve system model, which was the first central bank system established in American history. In 1929, the Great Depression occurred in the United States. This economic crisis made everyone realize that the securities industry needs to be thoroughly rectified and supervised. In 1934, the United States set up the Securities and Exchange Commission (SEC) as the institution to supervise the capital market. Since then, it has declared that the American financial market has bid farewell to the past laissez-faire era, and the government supervision force has officially entered the American stock market. [26] In 1987, the American stock market was in crisis. When the stock market was in panic, the Federal Reserve provided funds to banks to increase market liquidity, so as to alleviate or even eliminate the financial panic. In 2007, the subprime mortgage crisis broke out in the United States. Because the government authorities underestimated the harmfulness of the crisis and did not take targeted rescue measures, it escalated into the Wall Street financial turmoil in 2008 and swept the global stock market. At this time, former US President George W. Bush signed a \$300 billion housing assistance plan and a \$700 billion financial assistance plan, and the Federal Reserve also implemented corresponding plans, which brought the financial crisis under certain control. [27]

The development of American stock market into the largest stock market in the world is related to the supervision of American stock market on the one hand, and the direct relationship between American stock market and seizing the opportunity to establish different types of transactions on the other hand. The American stock market first adopted the exchange system. New York Stock Exchange (NYSE) is an important stock exchange in the United States and an important part of the stock exchange market in the United States. It adopts centralized trading bidding. Another sector of the American stock market is the Over-The-Counter market (OTC). Companies listed on American exchanges in the early days needed strict examination and approval. For this reason, many enterprises usually traded outside the exchanges for

financing, also known as over-the-counter trading. In 1971, the American Association of Securities Dealers established the NASDAQ Stock Market in order to make up for the defects of stock exchange trading, reduce the approval conditions for enterprises to go public and improve the financing efficiency of enterprises. Now the NASDAQ stock market has become the largest OTC market in the world. [28] At the same time, NASDAQ Stock Market is also responsible for the American Bulletin Board Market (OTCBB) and Pink Sheets. The establishment of NASDAQ stock market indicates that the American stock market has two different trading modes: on-market trading and off-market trading, thus making the American stock market a stock market with perfect trading modes.

With the development of China's economy, a large number of outstanding domestic companies are listed and financed in the American stock market. On May 7th, 2007, NASDAQ announced the NASDAQ China Index composed of Chinese companies. In 2007, China listed 41 companies on the NASDAQ stock market, with a market value of \$30 billion. [29] [30] On the one hand, NASDAQ reflects the recognition of global investors for the development potential of Chinese listed companies in the United States; On the other hand, the introduction of this index is also conducive to the international investment market's macro understanding of the development of China's market, and it is convenient for foreign investors to get a preliminary understanding of the development of China's investment market through this index. At the same time, listed companies included in the index can enhance their popularity on the one hand; On the other hand, the company will also become a reference standard for other companies in the industry, which is convenient for investors to appraise and invest in it.

China NASDAQ Index determines that it is closely related to the fluctuation of China's market economy. Taking the period from the listing of the index in 2007 to the financial crisis in 2009 as an example, by observing the fluctuation of the NASDAQ China Index, it can be found that the fluctuation of Shanghai Composite Index and NASDAQ China Index during the financial crisis is very consistent. [31] For Chinese and American investors, it is of great guiding significance to invest by observing the fluctuations of the two market indexes. [32]

## **4.2. Analysis of China's Stock Market Fluctuation**

It has been 26 years since the establishment of Shanghai Stock Exchange in December 1990. This period is also a period of rapid development and positive transformation of China's economy. China's stock market has achieved a process from scratch, from closed to open, from vague system to gradually sound system. Foreign financial markets have developed for hundreds of years. Although China's stock market is different from that of foreign developed countries, China's stock market has experienced 11 bull markets and 11 bear markets in these 26 years. Because China's stock market was relatively closed in the early stage, the bull market and bear market in the international stock market at that time had little to do with the domestic market. In 2007, with the introduction of QDII system in China, China's stock market has more and more frequent contact with the international stock market, and the contact is closer.

The Shanghai Composite Index of China's stock market rose from 998 points on June 6, 2005 to 6124 points on

October 16, 2007, which lasted for two and a half years, with a growth rate of 513%. Then the Shanghai Composite Index

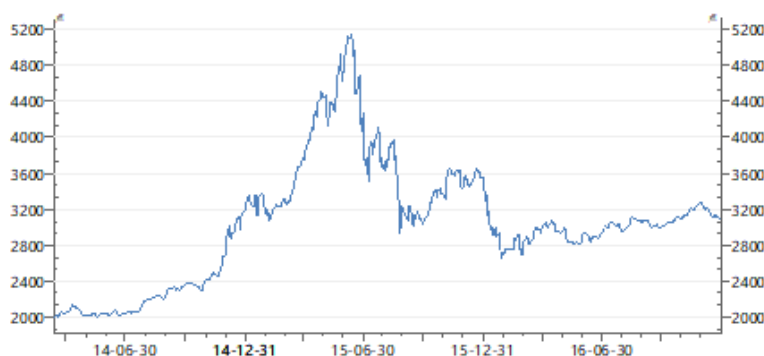
began to fall sharply, from 6,124 points to 1,664 points in one and a half years, with a drop of 73%. [33]



**Figure 1.** Chart of Shanghai Composite Index (June 2005-October 2007)  
Source: Wind database [34]

From 2009 to 2014, the Shanghai Composite Index had a short rebound, rising to 3,478 points; Later, the index began to fall, continued to rebound slightly, and then fell. The whole stock market is moving forward in this constant shock. The Shanghai Composite Index rose from 1974 points on March

12th, 2014 to 5166 points on June 12th, 2015, which lasted for one year and three months, with an increase of 162%. [35] After the surge, the stock market fell rapidly, and a long bear market began.



**Figure 2.** Chart of Shanghai Composite Index (March 2014-December 2016)  
Source: Wind database [36]

During the alternation of bull market and bear market in China's stock market, China's securities market has also undergone an internal-external reform. The laws and regulations of the securities market have been constantly improved and their enforcement has been strengthened, and financial institutions and securities departments have also actively carried out top-down reforms. China has implemented the new securities law, set up the daily limit board, restricted the excessive fluctuation of domestic stock prices, and at the same time, implemented the non-tradable shares, and constantly improved the issuance of new shares. The quality and quantity of employees in domestic financial institutions have been continuously improved, and a large number of overseas financial talents have returned to China to engage in the financial industry, which indirectly drives the overall quality of securities practitioners. With the development of China's securities market and the alternation between bull market and bear market, the investment mentality and investment level of stock investors have been greatly improved. Foreign financial institutions continue to invest in China, and these outstanding overseas financial enterprises have also played an important role in the construction of China's securities market and personnel training. Affected by the current domestic and international economic situation, although China's stock market has not yet

reached its previous high point in 2017, China's securities market regulations are becoming more and more perfect, financial institutions' transactions are more standardized, employees' professional quality is rapidly improved and investors have a deeper understanding of the stock market. [37] China's stock market as a whole shows a good development trend.

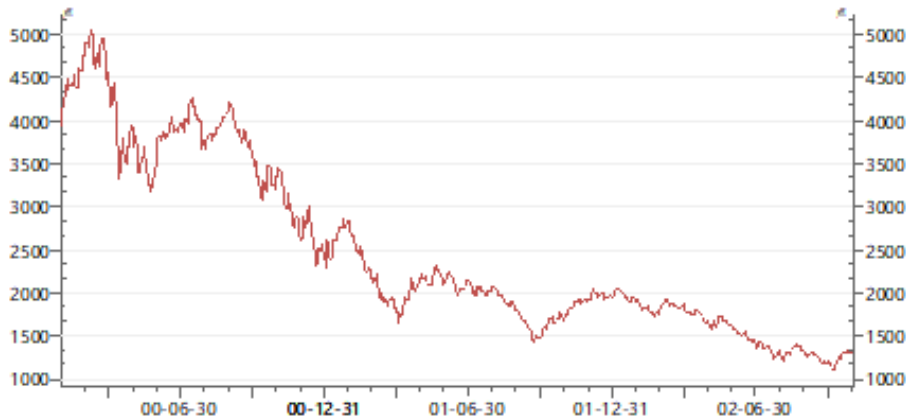
### 4.3. Analysis of the Volatility of the U.S. Stock Market

Because there are many high-quality listed companies in the United States stock market, the fluctuation of its stock market will have an important impact on the global financial market. [38] At the same time, the economic fluctuations of various countries will also be fed back to the listed companies in the United States. International political turmoil, local hotspot conflicts, global events such as new technology, new energy and trade frictions will all be reflected in the form of stock price fluctuations in the US stock market. The fluctuation of the stock market caused by this international event started from the Gulf War in 1990s, and continued to the period when the new economy of the United States developed strongly. Under the macro background of increasing global trade, although the stock market in the United States has fluctuated, the stock price has shown a long-

term growth trend.

In 2000, "the Internet bubble burst" in the United States, and the NASDAQ stock market started to fall from the highest point of 5,132. By October 9, 2002, it had dropped to 1108

points, with a short two-year decline of 78.4%. At the same time, the New York Stock Exchange's share price also continued to fall.



**Figure 3.** Chart of NASDAQ Composite Index (January 2000-October 2002)  
Source: Wind database [39]

After the 9.11, Enron's bankruptcy and WorldCom's financial scandal, the American stock market was hit hard. At that time, in view of the U.S. stock market crash, the U.S. Securities and Exchange Commission issued timely policies to stabilize the confidence of market investors. Measures include the introduction of Sarbanes Act and the injection of large amount of cash into the market by the Federal Reserve to increase liquidity. [40] At the same time, in order to increase their profitability and evade financial supervision, major financial institutions have developed a large number of financial derivatives. After 2002, the stock price index of American stock market continued to rise, investors' confidence in American stock market recovered, and market transactions rose rapidly. However, these measures didn't really solve the problems of the American stock market itself, but covered one bubble with another. In the end, the subprime mortgage crisis in the United States caused by the proliferation of financial derivatives in the United States evolved into a serious financial crisis. [41] Before 2007, most domestic and foreign investors overestimated the regulations, supervision and market transparency of the American market. So before the crisis broke out, a large number of international financial institutions bought American financial products, which caused huge losses.

In 2007, the American stock market began to fluctuate greatly. In 2008, the U.S. stock market began to plummet, and this volatility quickly spread to other countries' stock markets, which triggered the global stock market turmoil.

The listed companies selected by the NASDAQ stock market in the United States are representative companies of various industries listed in China in the United States, and these companies publish information according to the listing rules and financial disclosure rules of the NASDAQ stock market in the United States. China NASDAQ index is closely related to NASDAQ composite index.

From the fluctuation graphs of NASDAQ Composite Index and NASDAQ China Index, the fluctuations of the two indexes are relatively consistent. From this point of view, although the main business of the listed companies selected in the NASDAQ stock market is in China, under the background of the financial crisis, more American investors and even global investors have incorporated their volatility

into an investment product under the rules of the American securities market. [42] On the other hand, it also shows that the volatility of the U.S. stock market has an important impact on the stock prices of Chinese companies listed in the U.S. This investment relationship in the capital market makes the stock markets of China and the United States more closely linked.

## 5. Correlation Analysis of Stock Markets of China -U.S.

### 5.1. China -U.S Economic Relations

From 1990 to 2016, the bilateral investment between China and the United States increased significantly, and the industries and regions also changed. As shown in the figure, from 2007 to 2015, U.S. foreign direct investment in China was in the range of 2-3 billion dollars, and China's direct investment in the United States continued to increase, especially after 2011. [43] In 2016, China and the Global Think Tank (CCG) and the National Committee on U.S.-China Relations released a joint report, which pointed out that the U.S. investment in China was mainly concentrated in communication technology, chemicals and metals, energy and other aspects, reaching its peak in 2008, but showing a downward trend since 2012; China's investment in the United States is mainly concentrated in energy, real estate, hotels, communication technology, etc., which has increased sharply since 2010 and surpassed the US direct investment in China in 2015. [44]

The trade and investment between China and the United States are mostly led by listed companies. Due to the close connection between the real economy and the virtual economy, the trade and investment between the two countries are increasing, and the stock markets of China and the United States are more closely linked. According to the needs of economic development at that time, the Chinese government launched the Chinese stock market. This also determines that the government has a strong leading role in China's stock market. Most of them are large state-owned enterprises, and large-cap blue-chip stocks have a large market value and a large weight in the stock index. However, there are many differences between the development history and

management philosophy of American stock market and Chinese stock market. Hamilton, the first treasury secretary of the United States, founded the concept of "market-led, government-regulated" American stock market, which became the theoretical basis for the development of American stock market. The American stock market has a history of more than 200 years, and its development has not been smooth sailing. Stock investors have also experienced too many market fluctuations. The U.S. securities market has finally reached the position of the largest stock market in the world today through a "problem-solving" thinking mode.

## 5.2. China -U.S Trade Fluctuations Relations

There is a huge trade cooperation relationship between China and the United States. In 2016, China exported US\$ 462.813 billion and China imported US\$ 115.775 billion. The trade deficit between China and the United States has continued to expand in the past nine years, from 342.632 billion dollars in 2014 to 365.694 billion dollars in 2015; In 2016, the trade balance between China and the United States decreased to 347.038 billion USD. [45] The trade surplus is still huge.

China and the United States have a close trade relationship. Take 2015, the year with the largest total trade value between China and the United States, as an example. China's import and export volume to the United States reached 598.066 billion USD, accounting for 15.13% of China's annual import and export volume and 11.90% of that of the United States. In 2015, exports to the United States accounted for 16.09% of China's export market in the whole year, and total imports from the United States accounted for 6.91% of China's total import market in the whole year; The total amount of US exports to China accounts for 5.13% of the annual US export market, and the total amount of imports from China accounts for 17.4% of the annual US import market. In 2015, the United States exported \$116.2 billion of goods to China, 30 times that of 1985. [46] As a result, China has become the third largest trading partner of the United States, which is twice as high as Japan, the fourth largest. China's exports to the United States reached \$481.9 billion in 2015, 123 times that of 1985. [47]

## 5.3. Volatility Link between China -U.S. Stock Market

During the decade from 2007 to 2016, the stock markets of China and the United States conducted in-depth cooperation in trade, finance and investment, and made many important achievements. In this process, China's stock market is constantly reforming and gradually connecting with the international stock market. As the two countries with the largest GDP in the world, the two countries have cooperation in many fields, and the cooperation in the financial field has been gradually strengthened. The stock markets of the two countries are closely related, so it is of great significance to study the fluctuation relationship between the stock markets.

The New York Stock Exchange has accumulated nearly 80 Chinese listed companies, such as Alibaba, China Life, China Mobile, etc. Most of these companies' main businesses are concentrated in China. From the above 2007-2016 NYSE Composite Index and Shanghai Composite Index, it can be clearly seen that although the fluctuations of the two indexes are different, the index trends are generally similar.

## 6. Conclusion and Policy Recommendations

### 6.1. Overview

According to the actual needs of research, this article analyzes from two aspects: theory and demonstration, starting from neo-realism theory and expectation, uncertainty theory. According to the specific characteristics of American and Chinese stock markets, it discusses the direct impact of American stock markets to Chinese stock markets.

### 6.2. Findings

This uses neo-realism about state-to-state conflict to analyze stock conflict. According to the index fluctuations of listed companies in China and the United States, although the fluctuation ranges of stock market indexes in the two countries are different, the fluctuation trends are still quite consistent. Therefore, a detailed empirical analysis is needed to judge the volatility transmission of Chinese and American stock markets.

### 6.3. Policy Recommendations

There are still many areas for cooperation in financial market supervision between China and the United States. First, establish a common financial risk supervision system. Once the U.S. stock market fluctuates abnormally, information can be released to the Chinese stock regulatory authorities in time to avoid blind panic among Chinese investors. Secondly, the financial institutions of the two countries have important cooperation space in the field of resisting the spread of financial risks. China holds huge foreign exchange and national debt of the United States, and there is a large amount of cross-border trade between China and the United States. China has increased its investment in the United States year by year. China's financial market authorities need to gain a high degree of trust with the US financial authorities and reach a stable consensus on the financial markets of the two countries. This is in line with the consensus of common interests between China and the United States, and facilitates in-depth cooperation between the financial markets of the two countries. [48] Finally, the two countries share common interests in combating transnational financial crimes. Therefore, it is in the interests of both countries to strengthen financial market cooperation between China and the United States.

### 6.4. Limitation

By constructing development of the U.S. stock market and China stock market, this article needs to compare the influence of different U.S. stock markets on Chinese stock market, and comprehensively analyzes the fluctuation transmission influence of U.S. and Chinese stock markets.

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