

Is There a Relationship Between Stock Market Returns and Consumer Confidence in China?

Yi He*

University of Sussex, UK

*Author to whom correspondence should be addressed.

Abstract: *This study mainly explores whether there is a short-term dynamic relationship between China's stock market returns and consumer confidence. The focus is on the interaction between the Hang Seng Index (HSI) and the China Consumer Confidence Index (CCI), and the analysis is carried out using classical economic theories such as wealth effect theory and behavioral finance as auxiliary tools. This paper will use monthly data from 2005 to 2024, and gradually adopt the vector autoregression (VAR) model and Granger causality test to identify the causal relationship between variables and possible response dynamics. The empirical results show that the Hang Seng Index returns do have a significant short-term impact on changes in consumer confidence, but unfortunately the returns of the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE) do not show similar significant effects. The study will further point out that the performance of the Hong Kong market is more immediate and sensitive, which means that as a special financial and economic component of China, the Hong Kong market has a unique role and plays a key role in reflecting macroeconomic sentiment. This paper fills the gap in the study of the interaction between stock market returns and sentiment in the Chinese market, and these empirical evidences also have important practical policy significance. And in the future, it will help to optimize the prediction model and formulate stabilization strategies. Finally, this study also discussed the limitations of the research and possible future research directions.*

Keywords: Consumer Confidence; Financial Market; Stock Returns; Market Index; Economic Data; Financial Relationship; Statistical Test; China; Empirical Research; Quantitative Analysis; Interest Rate.

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1. Introduction

1.1 Background

In recent months, global financial markets have experienced widespread and dramatic fluctuations, partly due to the escalation of global economic and trade frictions and the intensification of geopolitical uncertainties. In particular, the implementation of a new round of US tariff policies has recently triggered a general decline in stock markets around the world, including China (BBC News, 2025).

At the same time, consumer confidence indexes in major economies around the world, including the United States and China, fell sharply in April, even approaching historical lows (CNN Finance, 2025). This phenomenon not only highlights the intricate relationship between financial markets and consumer sentiment, but also further leads to my research interest in exploring the impact of stock market fluctuations on consumer confidence and economic expectations.

In this tense global conflict, China, a country with a rapidly expanding financial market since the 1990s, is the world's second largest economy. The interactive relationship between stock returns and consumer confidence is particularly worthy of study and thought.

Previous studies have pointed out that stock market performance may have a significant impact on consumer behavior through wealth effects and future economic expectations (Otoo, 1999; Jansen & Nahujs, 2003). Conversely, changes in consumer sentiment may also further influence and affect asset prices by affecting

investment decisions (Baker & Wurgler, 2007).

Therefore, exploring the possible two-way relationship between the two has far-reaching and important research significance for understanding the overall economic dynamics.

1.2 Problem Statement

This study will focus on a core question:

Is there a short-term dynamic relationship between China's stock market returns, especially the Hang Seng Index (HSI), and the Consumer Confidence Index?

Among China's many stock markets, especially the Hong Kong stock market, the region is a semi-autonomous, highly integrated global financial center, which is extremely special for China's financial system (Lai, 2012), and this relationship may make it different from other economies.

Among China's many stock markets, the Hong Kong stock market is especially relevant given the semi-autonomous status of the region and its financial integration with the rest of the world (Lai, 2012).

This article will gradually explore the relationship between changes in the Hang Seng Index and changes in mainland consumer sentiment (and vice versa). This research has important practical significance for investors and policymakers.

1.3 Research Significance

This research will be committed to discovering economic change patterns with important policy and practical value.

If specific stock market returns have a significant impact on consumer confidence, the government can design more effective stabilization policies during severe market fluctuations to prevent negative feedback loops in the economy (Lemmon & Portniaguina, 2006).

In addition, if there is a clear predictive relationship between stock market returns and sentiment changes, the accuracy of consumption and economic growth in specific forecasting models can be further improved (Chen, Roll & Ross, 1986).

From a practical perspective, it can reveal the role of the Hang Seng Index in influencing mainland consumer sentiment from the side, and it also helps to understand the continued importance and special status of Hong Kong in China's overall economic landscape (Fratzscher, 2012).

1.4 Structure of the Dissertation

The main structure of this study is as follows:

Starting from the second part, the theoretical framework and empirical literature related to this topic will be systematically reviewed, the existing research results will be sorted out, and the positioning of this study in the literature will be further clarified and implemented.

The third part will introduce the data sources, the definition of key variables and the econometric methods used in detail. This article will estimate a VAR model and perform a Granger causality test for its analysis.

The fourth part focuses on presenting the descriptive statistical results of the data, including mean, standard deviation, extreme value and correlation analysis, and gradually verifies the model, and conducts unit root test to verify the stability of the data.

The fifth part will be dedicated to reporting the results of empirical regression analysis, and explain the Granger causality test in detail, and further analyze the dynamic relationship between variables by combining the data of impulse response analysis (IRF) and variance decomposition (FEVD).

In the last sixth part, the article will mainly summarize the findings of this study and deeply discuss the limitations that exist today. Further policy recommendations are put forward and possible research directions in the future are prospected.

2. Reviews of the Issue

2.1 Research Overview

2.1.1 Theoretical Framework

In order to correctly understand the dynamic changes between stock market returns and consumer confidence, it is necessary to rely on multiple classic theoretical frameworks.

2.1.2 Wealth Effect Theory

The wealth effect theory holds that fluctuations in asset values (including stock prices) will inevitably have a significant impact on consumer behavior. When people perceive their wealth to have increased due to rising stock prices, they usually increase their consumer spending, thereby stimulating economic growth (Otoo, 1999; Case, Quigley & Shiller, 2005). On the contrary, if asset prices fall, consumer confidence may decline, which in turn leads to a suppression of consumption.

In recent years, China's middle class has continued to expand. Although more and more people have begun to try to participate in the financial market, the savings rate of the country's residents remains high. This phenomenon can be attributed to the sharp increase in income uncertainty across the country and structural adjustments such as pension reform, which have prompted Chinese households to choose a more cautious savings strategy (Chamon, Liu & Prasad, 2013).

2.1.3 Behavioral Economics and Consumer Sentiment

Behavioral economics mainly emphasizes the interaction between psychological factors and investor sentiment in financial decision-making. Baker & Wurgler (2007) pointed out that emotionally driven investors can drive asset price fluctuations without fundamental changes, thereby forming a cycle between market performance and economic expectations.

Lemmon & Portniaguina (2006) further found that changes in consumer confidence are inseparable from stock returns, which also shows that emotional factors are important and cannot be ignored in understanding market behavior.

2.1.4 Theory of Linkage Between Stock Market and Macroeconomics

The stock market and macroeconomics are closely linked and inseparable. Chen, Roll & Ross (1986) proposed that stock prices reflect people's expectations for future economic prospects, including factors such as productivity changes, inflation and economic growth.

In the context of China's economy, Lai (2012) also emphasized that Hong Kong itself, as a financial node connecting domestic and international markets, plays an important role in enhancing the transmission of external shocks to the mainland economy.

Therefore, studying the relationship between the Hang Seng Index and consumer confidence will help to deepen the understanding of macro-financial dynamics.

2.2 Empirical Literature Review

2.2.1 Early Research

Many early studies have focused on exploring the relationship between consumer confidence and stock market returns. For example, Otoo (1999) found that in the United States, changes in consumer sentiment could once significantly predict future stock market trends and performance.

Jansen & Nahuis (2003) also conducted research based on European data, and their conclusions also supported the existence of a two-way relationship between stock market performance and consumer confidence.

2.2.2 Research on the Chinese Market

Research on the Chinese market is relatively blank.

Chen (2010) analyzed the Shanghai Stock Exchange data and found that stock market returns can have a certain impact on the consumption behavior of urban residents.

Li et al. (2016) further studied the regional differences in different parts of China and found that the wealth effect in coastal areas is more significant than that in inland areas.

Wu & Zhang (2016) also pointed out that in the current environment of segmented finance in China, international markets such as Hong Kong have a greater influence on mainland sentiment.

2.2.3 Other Related Studies

International evidence also supports the important connection between stocks and consumer confidence.

Baker & Wurgler (2007) showed that market anomalies often occur during periods of sentiment and are accompanied by predictability. Fratzscher (2012) emphasized that a more open market means a greater sensitivity to global capital flows. This further confirms the importance of considering Hong Kong's role when studying Chinese consumer confidence.

2.2.4 Research Gap

Although there are a lot of studies on the relationship between consumer confidence and stock market dynamics in developed economies, there are still few studies on the Chinese market, especially short-term causal relationships. Most of the existing studies today focus on asset pricing perspectives, which means that they ignore short-term dynamic feedback mechanisms.

In addition, few studies combine China's unique financial structure and Hong Kong's unique economic policies as a world financial intermediary node for analysis.

This study is committed to filling this empirical gap through causal testing methods.

3. Methods

This study mainly uses the vector autoregression (VAR) model and Granger causality test method. The study will attempt to explore the dynamic relationship and rules between stock market returns and consumer confidence. The VAR model was first proposed by Sims (1980). The specific content is: all variables are regarded as endogenous variables, and each variable is modeled as a function of its own lag term and the lag term of other variables (Asteriou & Hall, 2007). This flexible framework allows us to further explore the mutual influence between variables under the premise of gradually imposing strict theoretical assumptions.

In a simple two-variable VAR system, the model can be expressed as the following figure:

$$y_t = \beta_{10} + \beta_{12}x_t + \gamma_{11}y_{t-1} + \gamma_{12}x_{t-1} + u_{yt}$$

$$x_t = \beta_{20} + \beta_{21}y_t + \gamma_{21}y_{t-1} + \gamma_{22}x_{t-1} + u_{xt}$$

Figure 1: VAR formula

Among them, y_t and x_t can represent the two time series of the study, while u_{yt} and u_{xt} are white noise error terms. As for causality testing, this paper will use Granger causality test. According to Granger's definition (1969), if the lagged term of x_t can provide additional and significant explanatory power after controlling the lagged term of y_t itself, then it can be considered that x_t Granger causes the change of y_t . This test method is mainly carried out by estimating the restricted and unrestricted forms of the VAR model, and in the next step, the coefficients of the lagged explanatory variables are statistically tested using the F test (Asteriou & Hall, 2007).

All estimates are based on the OLS method, which will be performed after the variables are stationary or appropriately differentiated. The selection of the lag period is determined based on information criteria such as AIC (Akaike Information Criterion).

This method is rigorous and is very helpful for testing whether stock market returns can predict changes in consumer confidence, and can also be used to test whether there is an inverse relationship between the two.

4. Data Analysis

4.1 Brief Description of Data Sources and Variable Definitions

First, the data of this study comes from multiple authoritative databases.

The monthly return data of the Hang Seng Index (HSI), Shanghai Stock Exchange Index (SSE) and Shenzhen Stock Exchange Index (SZSE) are all from Yahoo Finance. The data of China Consumer Confidence Index (CCI) and unemployment rate are from the OECD database.

The overall time span used in the study is from January 2005 to December 2024, and the overall frequency is monthly data.

The main variables include:

CCI (dependent variable): China Consumer Confidence Index.

Stock return rate (independent variable): monthly return rate of HSI, SSE, and SZSE.

Unemployment rate (control variable): macroeconomic status control indicator.

Figure 2 below shows the monthly time series changes of China's Consumer Confidence Index (CCI) from 2005 to 2024. We can clearly see that the index remained stable overall before 2019, but dropped significantly during the epidemic and further deteriorated after 2022, which directly reflects that consumer confidence is highly sensitive to macro uncertainties.

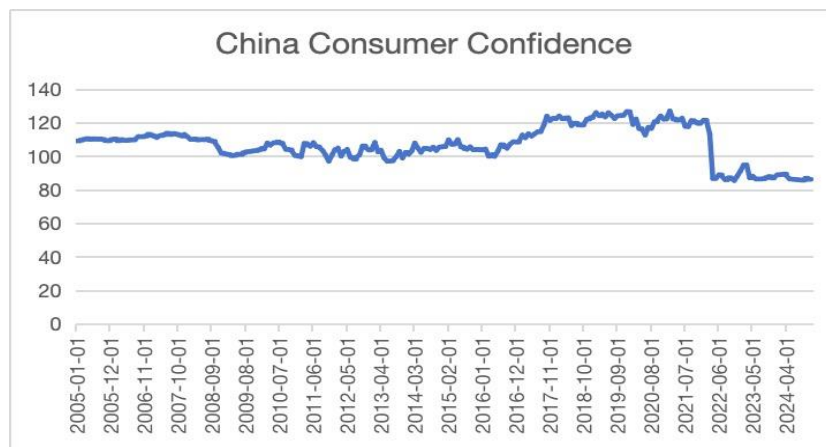


Figure 2: Time Series of the China Consumer Confidence Index (2005–2024)

4.2 Data Processing and Preprocessing

First, basic data processing is required. Convert the date variable into a monthly time format suitable for time series analysis, and use the `tsset` command through Stata software to further set the time series.

Next, we need to perform a unit root test (ADF test) on all variables to confirm whether they are stationary. The test results show that CCI is a non-stationary series at the original level, so it should be processed by first-order difference and recorded as (`dcci`). As for the HSI return rate, SSE return rate, SZSE return rate and unemployment rate, they are all stationary at the horizontal level, so no further processing is required.

The above data processing process strictly meets the prerequisites of VAR modeling and Granger causality test (Asteriou & Hall, 2015).

4.3 Descriptive Statistics Analysis

This paper calculates the mean, standard deviation, minimum and maximum values of all variables respectively, which is helpful to grasp the basic characteristics of the data.

| Variable | Obs | Mean | Std. dev. | Min | Max |
|-------------------|-----|------------|-----------|------------|-----------|
| cci | 240 | 107.1784 | 10.71637 | 85.5 | 127 |
| dcci | 239 | -0.0949791 | 2.799285 | -26.5 | 8 |
| hsi_returns | 239 | 0.003504 | 0.0619001 | -0.2246611 | 0.2662358 |
| sse_returns | 239 | 0.0070476 | 0.0734316 | -0.246317 | 0.2744668 |
| szse_returns | 239 | 0.0087948 | 0.0856167 | -0.2563536 | 0.270982 |
| unemployment_rate | 240 | 0.0652617 | 0.3134403 | 0.039 | 4.9 |

Figure 3: Descriptive Statistics Table

From the data in the figure, we can see that the mean of CCI is 107.18 and the standard deviation is about 10.72, which shows that the overall consumer confidence is relatively moderate.

The average monthly return rate of the Hang Seng Index (HSI), Shanghai Composite Index (SSE) and Shenzhen Composite Index (SZSE) is close to zero, which is consistent with the expected characteristics of the efficient market hypothesis (Fama, 1991).

The overall mean of unemployment rate is about 6.5%, and the standard deviation is also small. This data shows that the overall labor market remains relatively stable during the sample period.

4.4 Correlation Analysis

In order to preliminarily and simply explore the relationship between stock market returns and consumer confidence, Pearson correlation coefficient analysis was carried out.

| | | |
|------------------------|-----------------------|-------------------------|
| Correlation (CCI-SZSE) | CCI-SZSE(LAG 1 month) | Correlation (DCCI-SZSE) |
| 0.094123237 | 0.101995545 | 0.1128 |
| Correlation (CCI-SSE) | CCI-SSE(LAG 1 month) | Correlation (DCCI-SSE) |
| 0.112814779 | 0.113649821 | 0.12 |
| Correlation (CCI-HSI) | CCI-HSI(LAG 1 month) | Correlation (DCCI-HSI) |
| 0.600498778 | 0.598976657 | 0.0741 |

Figure 4: Correlation Matrix

The analysis results of the above figure show that:

The HSI return rate and CCI show a moderately strong positive correlation (correlation coefficient is about 0.60). The return rates of SSE and SZSE are both weakly correlated with CCI (about 0.11).

This shows that, in a sense, the volatility of the Hong Kong stock market is more closely related to consumer confidence and more sensitive than the stock market in mainland China.

We can also see that when using the first-order difference consumer confidence index (DCCI), its correlation with the returns of various markets is weakened overall. For example, the correlation coefficient with the Hang Seng Index drops to 0.0741, which indicates that the short-term relationship is weak (see Figure 4).

4.5 Stationarity Test

Next, this study will use the ADF test to test the stationarity of each sequence.

| Variable | Z(t) Statistic | 5% Critical Value | Stationary? |
|-------------------|----------------|-------------------|-------------|
| CCI(Level) | -1.564 | -2.881 | NO |
| dcci (1st diff) | -15.282 | -2.881 | YES |
| hsi_returns | -15.156 | -2.281 | YES |
| sse_returns | -13.698 | -2.881 | YES |
| szse_returns | -13.172 | -2.881 | YES |
| unemployment_rate | -15.432 | -2.881 | YES |

Figure 5: Unit root test results table

According to the test results, it can be seen that:

The original CCI sequence did not pass the 5% significance level test ($Z(t) = -1.564$, significantly higher than the critical value of -2.881). However, the dCCI series after the first-order difference, as well as the HSI, SSE, SZSE return rate and unemployment rate all pass the stationarity test, which further meets the VAR modeling requirements. And the above overall meets the premise that Granger causality test requires stationary data proposed by Granger (1969).

4.6 Summary

In summary, by preprocessing all variables such as unit root test, it is effectively ensured that all data meet the stability assumption required by the VAR model.

Descriptive statistics are used to help understand the basic characteristics of each variable, and correlation analysis is used to make a preliminary judgment on the possible relationship between variables. It is worth noting that there is a strong positive correlation between CCI and the Hang Seng Index yield, which provides strong theoretical support for the subsequent analysis of its causal relationship. In addition, this article also introduces unemployment rate as a macro control variable, which helps to improve the stability of the model.

Overall, this paragraph provides a solid foundation for subsequent VAR regression modeling, Granger causality test and empirical analysis.

5. Econometric Analysis

5.1 VAR Model Estimation

First, the lag order should be selected. According to the information criteria (AIC, HQIC, SBIC), the optimal lag order is zero. However, in order to capture the dynamic relationship and conduct further Granger causality test, this study directly uses the VAR(1) model.

The general form of VAR(1) is as follows:

$$Y_t = A_0 + A_1 Y_{t-1} + \varepsilon_t$$

Figure 6: VAR formula

Where Y_t is the endogenous variable vector, A_0 is the constant term vector, A_1 is the coefficient matrix of the first lag period, and ε_t is the error term vector.

This model contains five variables: *dcci* (first-order difference of CCI), *hsi_returns*, *sse_returns*, *szse_returns* and *unemployment_rate*. According to the estimation results, the system is stable (all characteristic roots are within the unit circle), which can be inferred to be suitable for subsequent analysis.

From the perspective of R^2 , the explanatory power of the *dcci* equation is weak ($R^2 \approx 0.042$), indicating that the model may not be able to fully explain the changes in consumer confidence. But more importantly, the lagged one-period coefficient of *hsi_returns* is still significant ($p=0.010$), which indicates that the Hang Seng Index return rate has an important short-term impact on CCI. For the remaining variables, the 5% significance level was not reached.

Since the full VAR results are long, please see Appendix for details.

5.2 Granger Causality Test

The specific data results of the Granger Causality Test are shown in Table 1.

Table 1: Granger Causality Test Results

| Equation | Excluded | chi2 | df | Prob > chi2 |
|--------------------------|--------------------------|---------------|----------|--------------|
| <i>dcci</i> | <i>hsi_returns</i> | 6.6787 | 1 | 0.010 |
| <i>dcci</i> | <i>sse_returns</i> | .2958 | 1 | 0.587 |
| <i>dcci</i> | <i>szse_returns</i> | .22718 | 1 | 0.634 |
| <i>dcci</i> | <i>unemployment_rate</i> | 2.0778 | 1 | 0.149 |
| <i>dcci</i> | ALL | 10.332 | 4 | 0.035 |
| <i>hsi_returns</i> | <i>dcci</i> | 1.7072 | 1 | 0.191 |
| <i>hsi_returns</i> | <i>sse_returns</i> | .52887 | 1 | 0.467 |
| <i>hsi_returns</i> | <i>szse_returns</i> | .92286 | 1 | 0.337 |
| <i>hsi_returns</i> | <i>unemployment_rate</i> | .96654 | 1 | 0.326 |
| <i>hsi_returns</i> | ALL | 3.7629 | 4 | 0.439 |
| <i>sse_returns</i> | <i>dcci</i> | .07162 | 1 | 0.789 |
| <i>sse_returns</i> | <i>hsi_returns</i> | .04906 | 1 | 0.825 |
| <i>sse_returns</i> | <i>szse_returns</i> | 1.0745 | 1 | 0.300 |
| <i>sse_returns</i> | <i>unemployment_rate</i> | .0011 | 1 | 0.974 |
| <i>sse_returns</i> | ALL | 1.1986 | 4 | 0.878 |
| <i>szse_returns</i> | <i>dcci</i> | .21182 | 1 | 0.645 |
| <i>szse_returns</i> | <i>hsi_returns</i> | .00044 | 1 | 0.983 |
| <i>szse_returns</i> | <i>sse_returns</i> | .02156 | 1 | 0.883 |
| <i>szse_returns</i> | <i>unemployment_rate</i> | .17238 | 1 | 0.678 |
| <i>szse_returns</i> | ALL | .42687 | 4 | 0.980 |
| <i>unemployment_rate</i> | <i>dcci</i> | .00685 | 1 | 0.934 |
| <i>unemployment_rate</i> | <i>hsi_returns</i> | .19055 | 1 | 0.662 |
| <i>unemployment_rate</i> | <i>sse_returns</i> | 2.7276 | 1 | 0.099 |
| <i>unemployment_rate</i> | <i>szse_returns</i> | 2.4364 | 1 | 0.119 |
| <i>unemployment_rate</i> | ALL | 2.7724 | 4 | 0.597 |

According to the data, the Hang Seng Index return rate (*HSI_returns*) has a Granger causal relationship with the Consumer Confidence Index (*DCCI*) at a significant level of 1% ($p = 0.010$), which also shows that the past *HSI_returns* can effectively predict changes in consumer confidence.

For the Shanghai Composite Index (SSE returns), Shenzhen Composite Index (SZSE returns) and unemployment rate (unemployment rate), it was found through testing that their Granger causal relationship with DCCI was not significant.

5.3 Interpretation of Results

From the figure 6, we can see that HSI returns have a causal relationship with DCCI, while SSE returns and SZSE returns do not. Perhaps we can try to further explain this from Hong Kong's unique financial position in the Chinese economic system.

As an international financial center, Hong Kong is more open than the mainland market and has strong capital mobility, which leads to its faster response to global economic changes (Lai, 2012).

At the same time, Fratzscher (2012) pointed out that international capital flows (“push factors”) have a greater impact on open markets such as Hong Kong than on the mainland market, which also prompted financial shocks to quickly transmit to consumer confidence.

Therefore, at this stage, we can conclude that the fluctuations of the Hang Seng Index may be able to more keenly reflect changes in Chinese consumer sentiment, while the mainland stock market is subject to stricter supervision and its response is relatively lagging compared to Hong Kong.

5.4 Impulse Response Functions

The dynamic response of DCCI to the shock of HSI_returns is shown in the figure below.

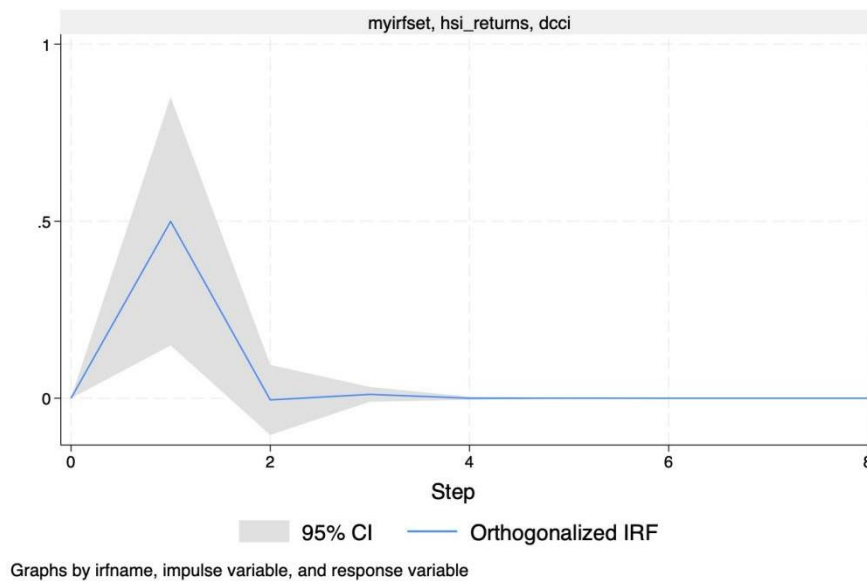


Figure 7: Pulse response of DCCI to HSI_returns

As can be seen from the above figure, the Hang Seng Index return has an immediate positive impact on the DCCI, but the effect quickly weakens after reaching a peak in the first period. This shows that its impact is particularly short-lived and mainly concentrated in the first period. This also further confirms from the side that the change of Hang Seng Index returns has a certain positive impact on consumer confidence in the short term.

5.5 Forecast Error Variance Decomposition

The detailed decomposition results of the DCCI variance are shown in Table 2.

Table 2: Variance Decomposition (FEVD) of DCCI Forecast Error

| Step | DCCI own shocks (%) | HSI returns (%) | Other shocks (%) |
|------|---------------------|-----------------|------------------|
| 1 | 95.8979 | 0.4488 | 3.6533 |
| 5 | 95.8724 | 1.1916 | 2.936 |
| 8 | 95.8724 | 1.1916 | 2.936 |

We can see from the results that although in the early stage, the fluctuation of DCCI can be mainly explained by its own shock, and the contribution rate even exceeded 95% at one time. However, it can be found from the data that as time goes by, the proportion of HSI returns explaining the fluctuation of DCCI gradually increases, reaching about 1.19% in the 8th period.

This trend shows that although the financial market shock may account for a small proportion of the overall explanation, it cannot be ignored that its marginal impact on changes in consumer confidence is also gradually increasing.

However, considering that consumer confidence itself is affected by many complex factors, even if the contribution of financial variables is limited nowadays, it has a high practical significance, which can undoubtedly effectively help capture changes in economic expectations and market sentiment.

This finding is highly consistent with Fratzscher's (2012) research conclusion on the sensitivity of open markets to global financial fluctuations. We can conclude that an open and highly liberalized market like Hong Kong is more sensitive to global financial fluctuations, so it can transmit external shocks to local economic indicators more quickly, just like our research focus: consumer confidence.

5.6 Summary

This chapter started with VAR modeling, and further conducted Granger causality test, impulse response analysis and variance decomposition to conduct a comprehensive regression analysis of the research data of this article.

The analysis results consistently show that HSI returns have a significant impact on DCCI, while the effects of SSE, SZSE and unemployment rate are relatively limited.

For further research, we can use the combination of Granger causality test and FEVD analysis to further strengthen the empirical conclusion that the Hang Seng Index leads and influences Chinese consumer confidence.

The research results of this chapter not only echo the theoretical framework, but also strive to be consistent with the relevant literature discussed in the previous article, and at the same time lay a data foundation for the discussion of research limitations and future prospects in the next chapter.

6. Conclusion and Limitations

6.1 Summary of Main Findings

This study found that the Hang Seng Index returns (HSI returns) can reveal changes in consumer confidence (CCI) in Granger causal predictions, while the Shanghai Composite Index (SSE) and Shenzhen Composite Index (SZSE) did not show a significant impact.

This finding is consistent with the conclusions of Lai (2012) and Fratzscher (2012) that Hong Kong's financial markets play a unique role in the transmission of global shocks. At the same time, it also directly supports the view that stock market performance is often closely related to consumer sentiment (Jansen & Nahuys, 2003; Lemmon & Portniaguina, 2006).

6.2 Research Limitations

Although this paper provides some new empirical evidence for exploring the relationship between stock market

returns and Chinese consumer confidence, it is undeniable that there are still some limitations.

First, this study uses monthly data from 2005 to 2024, which may result in missing data for short-term dynamic changes (Asteriou & Hall, 2011). In the future, further research can consider using weekly or daily data, which may better capture the rapid changes in consumer sentiment.

Second, although HSI, SSE, SZSE return rates and unemployment rates are included, adding macro control variables may be more conducive to accurate data analysis. Future research can add more macroeconomic indicators such as interest rates, GDP growth (Baker & Wurgler, 2007), and inflation, which will be of great help in improving the explanatory power of the model.

Third, the Consumer Confidence Index (CCI) comes from the OECD. Although the data source is reliable, it is inevitable that there may be reporting lags or sample biases, which will also have a certain impact on the accuracy of the results (Otoo, 1999).

In addition, the VAR model used in this study is based on the linear relationship between variables, but in fact, financial market behavior is not necessarily a simple linear relationship (Bekaert & Wu, 2000).

6.3 Policy Implications and Future Research

From the above conclusions, it can be seen that policymakers should pay special attention to the high sensitivity of consumer confidence to fluctuations in Hong Kong's special financial market.

Effectively strengthen financial communication and risk warning mechanisms. The formulation of such policies will help reduce the overreaction of consumer sentiment to short-term stock market fluctuations (Baker & Wurgler, 2007).

For the deepening direction of this study, it can be considered to extend the sample period and introduce more macroeconomic variables (Chen, Roll & Ross, 1986), or try to apply advanced methods such as TVP-VAR and machine learning (Gu, Kelly, & Xiu, 2020), which will help to portray a more comprehensive dynamic relationship between market and sentiment.

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Appendix

```
. var dccci hsi_returns sse_returns szse_returns unemployment_~e, lags(1)
```

Vector autoregression

| | | | |
|---|---------------|---|------------------|
| Sample: 2005m3 thru 2024m12 | Number of obs | = | 238 |
| Log likelihood = 522.8412 | AIC | = | -4.141523 |
| FPE = 1.09e-08 | HQIC | = | -3.965129 |
| Det(Sigma_ml) = 8.50e-09 | SBIC | = | -3.703842 |

| Equation | Parms | RMSE | R-sq | chi2 | P>chi2 |
|------------------|----------|----------------|---------------|-----------------|---------------|
| dccci | 6 | 2.77534 | 0.0416 | 10.33884 | 0.0662 |
| hsi_returns | 6 | .062167 | 0.0157 | 3.807622 | 0.5774 |
| sse_returns | 6 | .073446 | 0.0188 | 4.554537 | 0.4726 |
| szse_returns | 6 | .085337 | 0.0260 | 6.34958 | 0.2737 |
| unemployment_r~e | 6 | .316289 | 0.0115 | 2.773811 | 0.7348 |

| | | Coefficient | Std. err. | z | P> z | [95% conf. interval] | |
|-------------------|-------------|------------------|-----------------|--------------|--------------|----------------------|-----------------|
| dccci | dccci | | | | | | |
| | L1. | -.0084258 | .0639319 | -0.13 | 0.895 | -.1337299 | .1168784 |
| | hsi_returns | | | | | | |
| | L1. | 9.151688 | 3.541236 | 2.58 | 0.010 | 2.210993 | 16.09238 |
| | sse_returns | | | | | | |
| | L1. | -3.814755 | 7.014081 | -0.54 | 0.587 | -17.5621 | 9.93259 |
| szse_returns | L1. | 2.780503 | 5.833686 | 0.48 | 0.634 | -8.653311 | 14.21432 |
| | | | | | | | |
| unemployment_rate | | | | | | | |
| | L1. | .821734 | .570065 | 1.44 | 0.149 | -.2955729 | 1.939041 |
| _cons | | -.1808869 | .1830045 | -0.99 | 0.323 | -.539569 | .1777953 |

| | | | | | | | |
|---------------------|--|-----------|----------|-------|-------|-----------|----------|
| hsi_returns | | | | | | | |
| dcci | | | | | | | |
| L1. | | .0018711 | .0014321 | 1.31 | 0.191 | -.0009357 | .0046779 |
| hsi_returns | | | | | | | |
| L1. | | -.0012598 | .0793227 | -0.02 | 0.987 | -.1567294 | .1542098 |
| sse_returns | | | | | | | |
| L1. | | -.1142584 | .1571134 | -0.73 | 0.467 | -.4221951 | .1936783 |
| szse_returns | | | | | | | |
| L1. | | .1255316 | .1306729 | 0.96 | 0.337 | -.1305826 | .3816459 |
| unemployment_rate | | | | | | | |
| L1. | | .0125538 | .0127693 | 0.98 | 0.326 | -.0124735 | .0375812 |
| _cons | | .0024232 | .0040992 | 0.59 | 0.554 | -.0056112 | .0104576 |
| sse_returns | | | | | | | |
| dcci | | | | | | | |
| L1. | | .0004528 | .0016919 | 0.27 | 0.789 | -.0028632 | .0037688 |
| hsi_returns | | | | | | | |
| L1. | | .0207569 | .0937146 | 0.22 | 0.825 | -.1629203 | .2044341 |
| sse_returns | | | | | | | |
| L1. | | -.0691256 | .1856193 | -0.37 | 0.710 | -.4329327 | .2946814 |
| szse_returns | | | | | | | |
| L1. | | .1600305 | .1543815 | 1.04 | 0.300 | -.1425517 | .4626128 |
| unemployment_rate | | | | | | | |
| L1. | | .0004999 | .0150861 | 0.03 | 0.974 | -.0290683 | .0300681 |
| _cons | | .0056766 | .004843 | 1.17 | 0.241 | -.0038155 | .0151687 |
| szse_returns | | | | | | | |
| dcci | | | | | | | |
| L1. | | .0009047 | .0019658 | 0.46 | 0.645 | -.0029481 | .0047576 |
| hsi_returns | | | | | | | |
| L1. | | -.0022743 | .1088866 | -0.02 | 0.983 | -.2156881 | .2111396 |
| sse_returns | | | | | | | |
| L1. | | .0316655 | .2156703 | 0.15 | 0.883 | -.3910405 | .4543715 |
| szse_returns | | | | | | | |
| L1. | | .1298477 | .1793753 | 0.72 | 0.469 | -.2217214 | .4814169 |
| unemployment_rate | | | | | | | |
| L1. | | .0072775 | .0175285 | 0.42 | 0.678 | -.0270776 | .0416327 |
| _cons | | .006614 | .0056271 | 1.18 | 0.240 | -.0044149 | .0176428 |

| | | | | | | |
|--------------------------|------------------|-----------------|--------------|--------------|------------------|-----------------|
| unemployment_rate | | | | | | |
| dcci | | | | | | |
| L1. | -.0006032 | .0072859 | -0.08 | 0.934 | -.0148834 | .0136769 |
| hsi_returns | | | | | | |
| L1. | -.1761665 | .403573 | -0.44 | 0.662 | -.967155 | .6148221 |
| sse_returns | | | | | | |
| L1. | 1.320171 | .7993518 | 1.65 | 0.099 | -.2465295 | 2.886872 |
| szse_returns | | | | | | |
| L1. | -1.037727 | .6648294 | -1.56 | 0.119 | -2.340769 | .2653148 |
| unemployment_rate | | | | | | |
| L1. | -.0084902 | .0649668 | -0.13 | 0.896 | -.1358228 | .1188425 |
| _cons | .0664951 | .0208559 | 3.19 | 0.001 | .0256183 | .1073719 |

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