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# Understanding the impact of changes in consumer confidence on hotel stock performance in Taiwan

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ABSTRACT

This study contributes to the hospitality literature by providing a comprehensive investigation of the effects of changes in consumer confidence ($\Delta CCI$) in Taiwan on hotel stock performance, including hotel sales growth ($\Delta SALES$), hotel stock returns ($HSR$) and the perceived riskiness of stock cash flows from holding hotel stocks (proxied by the risk of hotel stock returns ($RISK$)). Empirical test results reveal that $\Delta CCI$ can significantly benefit $HSR$ by stimulating hotel sales growth and by lowering the perceived riskiness of hotel stock cash flows. Quantile regression tests demonstrate that among six economic variables, only $\Delta CCI$ can consistently and significantly affect $HSR$, $\Delta SALES$ and $RISK$ at all different quantiles. Changes in consumer confidence are also found to be significant in helping the prediction of $HSR$, $\Delta SALES$ and $RISK$. Specifically, an increase in $\Delta CCI$ can cause an increase in $HSR$ and $\Delta SALES$ and a decrease in $RISK$.



## 1. Introduction

Consumer confidence (or sentiment) is consumers' optimism or pessimism with the state of the economy and their personal financial situation. The level of consumer confidence reflects how confident consumers feel about the economic climate and the stability of their incomes, both of which can affect their economic decisions, such as saving and spending activity. Hence consumer confidence is considered as an important indicator of economic performance. For example, if consumers have confidence in their future income, they are willing to make more purchases. By the same token, if consumer confidence is lower, consumers tend to save more and spend less. Understanding the changes in consumer confidence enables business owners and managers to gauge the willingness of consumers to make new purchases and adjust their operations accordingly, since shifts in consumer confidence are indicative of consumers' perception of the state of the economy and their own financial situation.

The economic literature suggests that consumer confidence is highly correlated with real economic activity (Ludvigson, 2004). In particular, consumer confidence may play an important role in business cycle fluctuations (Chen, 2011). Movements in consumer confidence are important leading indicators in (commercial) business cycle forecasting (Weder, 1998). Moreover, Blanchard (1993) finds a strong connection between the early 1990s recession and the consumption shocks resulting from a decline in confidence. In general, consumer confidence increases (decreases) when the economy expands (contracts). Nonetheless, this linkage does not always hold true because consumers may not be rational and may not have perfect information on economic conditions.

The stock valuation model posits that stock prices reflect investors' expectations about future corporate earnings. Consumer confidence is expected to affect the stock market since it is an important economic indicator of future economic conditions, and economic conditions generally have a strong impact on corporate earnings. Many studies of economics and finance have shown that consumer confidence has a significant effect on stock returns. For instance, Romer (1990) proposes that the late October 1929 stock market crash could be attributed to the lack of consumer confidence. This argument is echoed by Otoo's (1999) study which displays a correlation between stock prices and consumer sentiment. Fisher and Statman (2003) reveal that stock market returns are highly correlated with consumer confidence. Similar conclusions have been reached by Jansen and Nahuis (2003) and Lemmon and Portniaguina (2006).

Several research papers in hospitality have examined the impact of economic factors on stock performance. For example, Barrows and Naka (1994) investigate whether some selected economic variables can affect returns of US hospitality stocks. Chen et al. (2005) and Chen (2007b) study the impact of economic and non-economic factors on hotel stock returns in Taiwan and China, respectively. Chen (2007a) analyzes the influences of different (expansive and restrictive) monetary conditions on hotel stock returns in Taiwan.

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Similarly, Chen (2010) examines the hospitality stock performance under two monetary policy regimes in Hong Kong. Chen (2012) tests the response of daily US hospitality stock prices to the Fed's monetary policy announcements.

Singal (2012) argues that consumer sentiment is especially pertinent to the hospitality industry because purchases of services provided by hospitality industry tend to be greatly discretionary. This kind of consumption can be postponed if economic conditions are unfavorable for consumers. Therefore, if people foresee economic contraction, they can delay vacations, or limit the level or frequency of leisure services, such as eating out, vacationing, or gambling. The author reveals that consumer sentiment can affect consumption expenditures and stock returns in the US hospitality industry.

This study makes another contribution to the hospitality finance literature by investigating the effects of changes in consumer confidence on hotel stock performance in Taiwan. The detailed explanations of the proposed hypotheses and tests of the hypotheses are as follows. First of all, given that the economic and finance literature reveals a relationship between consumer confidence and stock performance, and since previous hospitality research papers have found that several economic variables can affect Taiwanese hotel stock returns, this study hypothesizes that consumer confidence in Taiwan can be another important economic variable that has a significant and positive effect on hotel stock performance:

**Hypothesis I.** Changes in consumer confidence can significantly and positively affect hotel stock returns.

An examination of whether the effect of changes in consumer confidence on hotel stock returns is significant and positive is used to test Hypothesis I. The finding can offer an insight into whether the significant impact of consumer confidence on hospitality stock returns is a general finding or unique to the US hospitality industry, as found in Singal (2012).

Second, the study offers clear explanations for the relationship between consumer confidence and hotel stock returns, which are missing from the previous studies.

As mentioned, based on the stock valuation model, stock prices reflect investors' expectations about future corporate earnings. Accordingly, variations in stock price reflect not only the future earnings stream but also the perceived riskiness of stock cash flows (Harvey, 1989). In other words, both components (changes in sales earnings and the perceived riskiness of stock cash flows) could cause fluctuations in stock price.

To examine if changes in consumer confidence could affect hotel stock returns through which component(s), the study can test the influences of changes in consumer confidence on both hotel sales growth (the first component) and the perceived riskiness of hotel stock cash flows (the second component). The first component is related to economic condition; the second component concerns investors' perception of the riskiness of cash flows from holding hotel stocks. Hence the interesting questions raised here are whether changes in consumer confidence could impact one, both, or neither component of hotel stock returns. In other words, the economic variable of changes in consumer confidence could affect hotel stock returns through its significant effect on both components of hotel stock returns, on just one component, or on neither component.

If consumer confidence is rising, hotel firms can anticipate higher sales earnings since consumers are expected to increase their spending. Thus the study hypothesizes that an increase in consumer confidence has a significant and beneficial effect on the first component of hotel stock returns. In other words, hotel sales growth is expected to be positively related to changes in consumer confidence:

**Hypothesis II.** Changes in consumer confidence have a significant and positive effect on hotel sales growth.

This hypothesis is tested by investigating whether the effect of changes in consumer confidence on growth rate of hotel sales is significant and positive.

While an increase in consumer confidence is expected to raise demand for hotel services and hence hotel sales earnings, it is unknown whether changes in consumer confidence have a strong influence on the perceived riskiness of cash flows from holding hotel stocks. However, given that movements in consumer confidence can reflect consumers' perception of the economic outlook and their personal financial situation, this study hypothesizes that changes in consumer confidence can have a favorable effect on the second component by reducing investors' perception of the riskiness of hotel stock's cash flows. In other words, changes in consumer confidence are negatively related to the second component:

**Hypothesis III.** Changes in consumer confidence can significantly and negatively affect the perceived riskiness of hotel stock cash flows.

The study tests Hypothesis III by following Harvey (1989) in using the risk of stock returns as a proxy for investors' perception of the riskiness of a stock's cash flows and see if movements in consumer confidence can significantly decrease the risk of hotel stock returns. Therefore, the test results of Hypotheses II and III together can answer whether changes in consumer confidence affect hotel stock returns through a significant (or insignificant) impact on one or both components.

Third, this study does not only examine the contemporaneous relationship between changes in consumer confidence and hotel sales growth, risk and stock returns, but also tests whether changes in consumer confidence can predict hotel sales growth, risk and stock returns. The study analyzes whether lagged changes in consumer confidence can predict hotel stock performance. Moreover, a Granger causality test is used to investigate whether changes in consumer confidence can cause hotel sales growth, risk and stock returns. Specifically, the study hypothesizes that an increase in consumer confidence can cause a decrease in risk of hotel stock returns and an increase in hotel sales and hotel stock returns.

**Hypothesis IV.** Changes in consumer confidence can positively cause hotel sales growth and stock returns, and negatively cause risk of hotel stock returns.

Accordingly, this study makes an original contribution by providing a comprehensive examination of the effects of changes in consumer confidence on hotel stock performance. The study is distinguished from previous work (e.g. Barrows and Naka, 1994; Chen et al., 2005; Chen, 2007a,b; Singal, 2012) in several ways.

Note that consumer confidence is commonly assumed to have a significant influence on corporate sales earnings and stock performance. Empirical research studies supported this assumption by revealing that changes in consumer confidence can significantly affect sales growth and stock returns. The focus of the study by Singal (2012) is on the effects of changes in consumer confidence on consumption expenditures and stock returns in the US hospitality industry. However, it is unknown whether changes in consumer confidence can significantly affect the perceived riskiness of stock cash flows from holding stocks. This paper is the first to scrutinize this issue. Thus, by looking into the impact of changes in consumer confidence in Taiwan on both components of hotel stock returns (i.e. hotel earnings and the perceived riskiness of hotel stock cash flows), this study can shed light on how changes in consumer confidence affect hotel stock returns and through which component(s) of hotel stock returns.