

The behavior of stock returns before the public holidays in the time intervals associated to Halloween Effect

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Introduction

Several studies revealed abnormal stock returns that occurred in some trading days that preceded public holidays. This form of seasonality, known as pre-holiday effect, was explained, mainly, by two circumstances: the worries of investors about the unexpected events that could occur on holidays and the good mood experienced by traders these days.

There are two main forms of the pre-holiday effect:

- a classical form, that refers only to one trading day before a public holiday;
- an extended form, that takes into consideration more trading days adjacent to the public holidays.

For many capital markets, investigations revealed the pre-holiday effect weakened or even reversed.

The circumstances that induce the pre-holiday effect could interfere with factors that cause other calendar anomalies. This paper approaches the behavior of stock returns from four trading days before the public holidays, in the time intervals associated to Halloween Effect: November - April and May - October.

This investigation use daily values of five known indexes from developed stock markets: three from United States (Dow Jones Industrial Average, Standard and Poor's 500 and NASDAQ Composite), one from Sweden (OMX Stockholm 30) and one from Japan (Nikkei Stock Average). The period of investigation is January 2009 - May 2026.

Data and Methodology

Data Description

This study uses daily closing values, provided by the Federal Reserve Bank of St. Louis, of the five indexes. For each of the five indexes the log returns are computed.

For the period of investigation, Nikkei Stock Average experienced the highest volatility, while Standard and Poor's 500 the lowest one. The highest average returns occurred to NASDAQ Composite and the lowest to OMX Stockholm 30. The returns of all five indexes were stationary.

Methodology

We emply regressions with dummy variables associated to the trading days before a public holiday in the time intervals specific to Halloween Effect.

Corrections are to be applied to the standard errors and p-values associated to the coefficients of OLS models, when there is found heteroskedasticity or autocorrelation of the residual values.

Empirical Results

a. For the time interval November - April

Three indexes (Dow Jones Industrial Average, Standard and Poor's 500 and NASDAQ Composite) displayed abnormal high returns for the fourth trading day before a public holiday.

In the case of Nikkei Stock Average there were found abnormal returns for two trading days:

- abnormal high returns for the third trading day before a public holiday;
- abnormal low returns for the first trading day before a public holiday.

No abnormal returns were identified for the OMX Stockholm 30 index.

b. For the time interval May - October

Nikkei Stock Average displayed abnormal high returns for the fourth trading day before a public holiday.

Two indexes, Standard and Poor's 500 and NASDAQ Composite, had abnormal high returns for the third trading day before a public holiday.

For the OMX Stockholm 30 index, there were found abnormal returns for two trading days:

- abnormal high returns for the third trading day before a public holiday;
- abnormal low returns for the first trading day before a public holiday.

No abnormal returns were identified for the Dow Jones Industrial Average index.

Conclusions

For both time intervals associated to Halloween Effect, the extended form of the pre-holiday effect was more visible than the classical one. The abnormal low returns identified for the first trading day before a public holiday (for Nikkei Stock Average, in the case of time interval November - April and for OMX Stockholm 30 index, in the case of time interval May - October) could be explained by the overreaction associated with the abnormal high returns that occurred some trading days before.

There are significant differences about the extended pre-holiday effect in the two time intervals. These differences could be linked to some circumstances specific to the Halloween Effect: weather, vacations and expectations regarding the economy.