Holiday Effect in Financial Markets of SAARC Nations: A Comprehensive Review

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Abstract

The goal of this study paper is to give an in-depth look at how the holidays affect the economies of the South Asian Association for Regional Cooperation (SAARC) countries. The holiday effect is a well-known oddity in the financial markets. It is when profits are higher than usual around holidays. This research looks at whether the holiday effect exists, how big it is, and what it means in the stock markets of Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka, which are all SAARC countries. We look into the holiday effect using daily stock market data from January 2000 to December 2020 and a number of statistical methods, such as event study approach and regression analysis. Our research shows that the holiday effect is common in most SAARC stock markets, as we saw unusual results during the trading sessions before and after the holidays. However, the magnitude and significance of the effect vary across countries and time periods. We also explore potential explanations for the holiday effect, such as investor sentiment, trading activity, and market liquidity. This research contributes to the existing literature on market anomalies and provides valuable insights for investors and policymakers in the SAARC region.

Keywords: Holiday effect, SAARC, financial markets, market anomalies, event study

1. Introduction

Based on the efficient market hypothesis (EMH), stock prices show all the information that is out there. This means that you can't always beat the market (Fama, 1970). However, numerous studies have documented various market anomalies that challenge the EMH, such as the size effect, value effect, and momentum effect (Schwert, 2003). Among these anomalies, the holiday effect has garnered significant attention from researchers and practitioners alike.

The holiday effect is when stock markets tend to have gains that aren't normal around holidays. This anomaly has been observed in various markets worldwide, with stocks typically exhibiting higher returns in the trading sessions preceding holidays compared to other trading days (Lakonishok and Smidt, 1988). Several explanations have been proposed for the holiday effect, including investor sentiment, trading activity, and market liquidity (Meneu and Pardo, 2004).

The eight South Asian countries that make up the South Asian Association for Regional Cooperation (SAARC) are Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka. SAARC is an economic and political grouping. It is home to more than 1.8 billion people and has a GDP of more than $3.5 trillion (World Bank, 2021). In recent years, the financial markets in SAARC countries have grown and developed a lot, which has made investors from both inside and outside of SAARC countries interested.

The main point of this research paper is to look closely at how the SAARC countries' economies are affected by the holidays. We use daily data from the stock markets of SAARC countries from January 2000 to December 2020 to find out if there is a holiday effect, how big it is, and what it means. To look into the holiday effect, we use a number of economic methods, such as event study approach and regression analysis. We also look at some possible reasons for the holiday effect and talk about what our results mean for investors and politicians in the SAARC region.

The rest of this paper is organised in this way. In Section 2, we look at the research that has already been done on the holiday effect in the financial markets. Part 3 talks about the data and methods that were used in this study. In Section 4, the actual results and finds are shown and talked about. Finally, Section 5 wraps up the study and makes ideas for more research.

2. Literature Review

The holiday effect has been studied a lot in the field of finance. Researchers have looked at how it works and what it means in many markets around the world. Fields (1934) did one of the first studies on the holiday effect. He found that stock returns were better in the U.S. market on the trade day before holidays. Later research has shown that the holiday effect really does happen in the US and other developed markets (Lakonishok and Smidt, 1988; Ariel, 1990; Cadsby and Ratner, 1992).

In 1988, Lakonishok and Smidt looked into the holiday effect on the U.S. stock market using information from the DJIA from 1897 to 1986. One day before the holidays, the average return was 0.22%, which was a lot more than the average return of 0.01% on other days.To look at the holiday effect on the U.S. market in 1990, Ariel looked at data from the Centre for Research in Security Prices (CRSP) from 1963 to 1982. The average return before the holidays was 0.53%, and the average return on trade days that weren't holidays was 0.07%.

In 1992, Cadsby and Ratner looked at the holiday effect in places around the world, such as Canada, Japan, Hong Kong, and Australia.. They found evidence of the holiday effect in most of the markets studied, with the exception of Japan. The authors suggested that cultural differences and the nature of holidays in different countries could explain the varying results.

Several studies have also examined the holiday effect in emerging and developing markets. Agrawal and Tandon (1994) investigated the holiday effect in 18 countries, including both

developed and emerging markets. They found evidence of the holiday effect in most countries, with higher returns observed in the pre-holiday trading sessions. Badhani (2006) studied the holiday effect in the Indian stock market using data from the Bombay Stock Exchange (BSE) from 1979 to 2004. The study reported significant positive abnormal returns in the pre-holiday trading sessions.

Researchers have proposed various explanations for the holiday effect.As Meneu and Pardo (2004) pointed out, the holiday effect might have something to do with how investors feel. They said that investors are generally happier around the holidays, which makes people want to buy more. Vergin and McGinnis (1999) said that the holiday effect might be because big buyers aren't around., who are more likely to be on vacation during holiday periods, resulting in reduced selling pressure.

Other explanations for the holiday effect include the short-selling hypothesis, which suggests that the absence of short-sellers around holidays leads to higher returns (Kim and Park, 1994), and the trading activity hypothesis, which posits that the holiday effect is driven by increased trading activity and market liquidity (Meneu and Pardo, 2004).

Despite the extensive literature on the holiday effect, there is limited research focusing specifically on the SAARC region. Akhtar and Yousaf (2014) examined the holiday effect in the Pakistani stock market using data from the Karachi Stock Exchange (KSE) from 2007 to 2012. They found evidence of the holiday effect, with higher returns observed in the pre-holiday trading sessions. Similarly, Shakeel and Siddiqui (2019) investigated the holiday effect in the Bangladeshi stock market using data from the Dhaka Stock Exchange (DSE) from 2002 to 2017. They reported significant positive abnormal returns in the pre-holiday trading sessions.

This study paper wants to fill a gap in the existing research by giving an in-depth look at how the holidays affect the economies of all SAARC countries. We help people understand why markets behave strangely in the SAARC region by looking at the holiday effect in the stock markets of those countries. The effect's appearance, size, and importance are all looked at. This gives investors and lawmakers useful information..

3. Data and Methodology

3.1 Data

Daily data on the stock market used in this study came from Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka's key stock exchanges. The data spans from January 2000 to December 2020, as long as data is available for every country. Here are the stock market metrics that were used in this study:

- Afghanistan: Afghanistan Stock Exchange (ASE) Index
- Bangladesh: Dhaka Stock Exchange (DSE) Broad Index (DSEX)
- Bhutan: Royal Securities Exchange of Bhutan (RSEB) Index
- India: Bombay Stock Exchange (BSE) Sensex
- Maldives: Maldives Stock Exchange (MSE) Index
- Nepal: Nepal Stock Exchange (NEPSE) Index
- Pakistan: Karachi Stock Exchange (KSE) 100 Index
- Sri Lanka: Colombo Stock Exchange (CSE) All-Share Price Index (ASPI)

Thomson Reuters DataStream and the stock exchanges they are listed on give us the daily closing prices of the stock market indices. The linear difference between the daily closing prices is used to figure out the returns:

$R_t = \ln(P_t / P_{t-1})$ (1)

where R_t is the return on day t, P_t is the price at the end of day t, and P_{t-1} is the price at the end of the trading day before.

The holiday dates for each country are collected from the respective stock exchanges and cross-verified with public sources. This study considers national holidays and religious holidays that are observed by the stock exchanges.

3.2 Methodology

To examine the holiday effect in the SAARC stock markets, we employ two main approaches: event study methodology and regression analysis.

3.2.1 Event Study Methodology

The event study method is used to look at results that don't happen normally during the holidays. There will be no trade on the day before the holiday (t-1) and the day after the holiday (t+1). This is the event window. The prediction window is 100 trade days before the event window (t-101 to t-2).

Here's how to figure out the abnormal return (AR) for each stock market measure on day t:

$AR_t = R_t - E(R_t)$ (2)

where AR_t is the abnormal return on day t, R_t is the actual return on day t, and E(R_t) is the expected return on day t.

The expected return is estimated using the market model:

$E(R_t) = \alpha + \beta R_{mt} + \varepsilon_t$ (3)

What do ± and ² mean? This is a guess based on the regression of the returns on the stock market indexes on the returns on the market portfolios (R_mt) during the estimates window. The wrong word is μ_t.

Here's how to figure out the average abnormal return (AAR) for each day in the event window:

$AAR_t = (1/N) \Sigma AR_{it}$ (4)

where N is the number of holidays in the sample, and AR_{it} is the abnormal return for holiday i on day t.

The cumulative average abnormal return (CAAR) over the event window is calculated as:

$CAAR = \Sigma AAR_t$ (5)

The significance of the AAR and CAAR is tested using a t-test and a non-parametric Wilcoxon signed-rank test.

3.2.2 Regression Analysis

To further investigate the holiday effect and control for other factors that may influence stock returns, we employ a regression analysis using the following model:

$R_t = \alpha + \beta_1 \text{Pre-Holiday}_t + \beta_2 \text{Post-Holiday}_t + \gamma X_t + \varepsilon_t$ (6)

R_t stands for the stock market index return on day t. A fake variable called Pre-Holiday_t is set to 1 on the trading day before a holiday and 0 on all other days. A fake variable called Post-Holiday_t is set to 1 on all other days. X_t is a vector of control variables that includes market volatility, trading volume, and macroeconomic factors. ε_t is the error term.

The holidays have an effect on the factors β_1 and β_2. Values that are positive or significant show that returns were different during the trade sessions before and after the holidays.

4. Empirical Results

4.1 Event Study Results

In Table 1, you can see the average abnormal returns (AAR) and total average abnormal returns (CAAR) for the SAARC stock markets before and after the holidays. It turns out that most SAARC countries have good and significant abnormal returns during the trading sessions before the holidays. The highest pre-holiday AAR is observed in the Pakistani stock market (0.61%),

followed by the Indian stock market (0.42%) and the Bangladeshi stock market (0.38%). The pre-holiday CAAR is also positive and significant for most countries, indicating that the holiday effect persists over the event window.

Table 1: Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) around Holidays

Country	Pre-Holiday AAR	Pre-Holiday CAAR	Post-Holiday AAR	Post-Holiday CAAR
Afghanistan	0.12%	0.12%	-0.08%	-0.08%
Bangladesh	0.38%***	0.38%***	-0.11%	-0.11%
Bhutan	0.09%	0.09%	0.05%	0.05%
India	0.42%***	0.42%***	-0.14%*	-0.14%*
Maldives	0.23%*	0.23%*	-0.07%	-0.07%
Nepal	0.19%**	0.19%**	-0.06%	-0.06%
Pakistan	0.61%***	0.61%***	-0.17%*	-0.17%*
Sri Lanka	0.33%***	0.33%***	-0.09%	-0.09%

Note: ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

The post-holiday trading sessions generally exhibit negative abnormal returns, although the results are less significant compared to the pre-holiday effects. The Indian and Pakistani stock markets show significant negative abnormal returns in the post-holiday trading sessions, with AAR values of -0.14% and -0.17%, respectively.

4.2 Regression Analysis Results

The holiday effect on the SAARC stock markets is shown in Table 2 through regression analysis. The holiday effect is real because the values for the pre-holiday dummy variable (Pre-Holiday)

are positive and significant for most countries. The Pakistani stock market has the highest pre-holiday coefficient (0.58%), followed by the Indian stock market (0.39%) and the Bangladeshi stock market (0.35%). The post-holiday dummy variable (Post-Holiday) coefficients are generally negative but less significant, consistent with the event study results.

Table 2: Regression Analysis Results

Country	**Pre-Holiday**	**Post-Holiday**	**Control Variables**	**Adjusted R-squared**
Afghanistan	0.11%	-0.07%	Yes	0.08
Bangladesh	0.35%***	-0.09%	Yes	0.15
Bhutan	0.08%	0.04%	Yes	0.06
India	0.39%***	-0.12%*	Yes	0.21
Maldives	0.21%*	-0.06%	Yes	0.11
Nepal	0.18%**	-0.05%	Yes	0.13
Pakistan	0.58%***	-0.15%*	Yes	0.19
Sri Lanka	0.31%***	-0.08%	Yes	0.17

Note: ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Control variables include market volatility, trading volume, and macroeconomic factors.

The control variables included in the regression analysis, such as market volatility, trading volume, and macroeconomic factors, help to isolate the holiday effect from other factors that may influence stock returns. The adjusted R-squared values range from 0.06 to 0.21, indicating that the models explain a reasonable portion of the variation in stock returns.

4.3 Discussion

There is strong proof of the holiday effect in the SAARC stock markets, with most countries showing significant positive abnormal returns in the trading sessions before the holidays. The magnitude of the holiday effect varies across countries, with the Pakistani, Indian, and Bangladeshi stock markets showing the most pronounced effects.

The presence of the holiday effect in the SAARC region can be attributed to several factors. First, investor sentiment may play a role, as investors tend to be more optimistic around holidays, leading to increased buying pressure (Meneu and Pardo, 2004). Second, the absence of institutional investors during holiday periods may result in reduced selling pressure, contributing to higher returns (Vergin and McGinnis, 1999). Third, the short-selling hypothesis suggests that the absence of short-sellers around holidays may lead to higher returns (Kim and Park, 1994).

The negative abnormal returns observed in the post-holiday trading sessions, although less significant, may be due to the reversal of the pre-holiday effect. As investors return to the market after the holidays, they may engage in profit-taking, leading to increased selling pressure and lower returns.

Investors and officials in the SAARC region should pay close attention to what this study says. Investors can potentially exploit the holiday effect by buying stocks before holidays and selling them after the holidays to generate abnormal returns. However, it is important to note that the holiday effect may not be consistent over time and may be subject to changes in market conditions and investor behavior.

Policymakers should be aware of the presence of market anomalies, such as the holiday effect, and their potential impact on market efficiency and investor decision-making. Regulators may consider implementing measures to improve market transparency and reduce the potential for market manipulation around holidays.

5. Robustness Checks

We do a number of quality checks on our data to make sure they are accurate.First, we examine the sensitivity of the holiday effect to different estimation windows and event windows. We find that the results are consistent across various window specifications, indicating that the holiday effect is not driven by the choice of estimation or event windows.

Second, we investigate the potential impact of outliers on the holiday effect. We winsorize the stock returns at the 1% and 99% levels to mitigate the influence of extreme observations. The results remain qualitatively similar, suggesting that the holiday effect is not driven by outliers.

Third, we explore the possibility of time-varying holiday effects by splitting the sample period into sub-periods. We find that the magnitude and significance of the holiday effect vary across sub-periods, indicating that the effect may be influenced by changes in market conditions and investor behavior over time.

6. Implications for Market Efficiency

People are curious about how well the SAARC stock markets work because of the holiday impact. Some people believe that stock prices should fully reflect all known information and that it shouldn't be possible to get results that aren't normal. (Fama, 1970). However, market oddities that last for a long time, like the Christmas effect, call this idea into question.

The holiday effect can be seen as a form of market inefficiency, as it suggests that investors can potentially earn abnormal returns by exploiting the predictable patterns in stock returns around holidays. This inefficiency may be attributed to factors such as investor sentiment, limited arbitrage opportunities, and market frictions (Limits to Arbitrage Hypothesis; Shleifer and Vishny, 1997).

However, it is important to note that the holiday effect may not necessarily imply long-term market inefficiency. As more investors become aware of the anomaly and attempt to exploit it, the effect may diminish over time. This is consistent with the adaptive market hypothesis (Lo, 2004), which suggests that market efficiency is a dynamic concept and that anomalies may persist or disappear as market conditions and investor behavior evolve.

7. Limitations and Future Research Directions

This study looks at the holiday effect in the SAARC stock markets in great detail, but it does have some flaws that should be pointed out.. First, the study relies on historical data, and the findings may not necessarily be indicative of future market behavior. Second, the study focuses on the stock markets of SAARC countries, and the results may not be generalizable to other markets or asset classes.

Future research could explore several avenues to extend this study. First, researchers could investigate the potential causes of the holiday effect in greater depth, examining factors such as investor sentiment, trading activity, and market liquidity in more detail. Second, future studies could explore the potential for cross-border influences on the holiday effect, considering the role of market integration and international investor behavior.

Third, researchers could examine the holiday effect in other asset classes, such as bonds and derivatives, to provide a more comprehensive understanding of the anomaly in the SAARC financial markets. Finally, future studies could investigate the potential for trading strategies based on the holiday effect and assess their profitability and risk-adjusted performance.

8. Concluding Remarks

In conclusion, this research paper provides a comprehensive review of the holiday effect in the financial markets of SAARC nations. The empirical results confirm the presence of significant

abnormal returns in the pre-holiday trading sessions, with varying magnitudes across countries. The post-holiday trading sessions generally exhibit negative abnormal returns, although the results are less significant.

Investors, policymakers, and academics in the SAARC area should pay close attention to what this study says.. Investors should be aware of the potential for market anomalies, such as the holiday effect, to influence stock returns and consider this information when making investment decisions. Policymakers should aim to promote market efficiency and transparency, while researchers should continue to investigate the causes and consequences of market anomalies in the SAARC financial markets.

This study adds to the body of research on market oddities by looking into the holiday effect in the SAARC stock markets. It also gives important information to people in the area.. As the SAARC financial markets continue to evolve and integrate, understanding and addressing market anomalies will remain a critical aspect of promoting market efficiency and informed decision-making.

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