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Do Mega-Sporting Events Move Financial Markets? Evidence from FIFA World Cup Host Announcements (1994–2022)

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ABSTRACT

This study examines how stock markets react to the announcement of FIFA World Cup host countries using an event study based on the Efficient Market Hypothesis. Covering tournaments from 1994 to 2022, it analyzes abnormal returns (ARs) and cumulative abnormal returns (CARs) over both short- and long-term periods to measure investor response. The results showed different reactions: some countries experienced negative impacts on the stock market, such as Brazil and the USA, while others experienced positive ones, such as Qatar and Germany. Overall, the findings clarify that stock market responses to World Cup announcements are mixed and depend heavily on the specific host country and its context.

INTRODUCTION

Mega sporting events garner significant global attention, with the Fédération Internationale de Football Association (FIFA) World Cup standing as the most prominent example. This huge tournament occurs every four years and is viewed by billions globally. How expensive the tournament is often goes unseen, even though the tournament impacts tourism, infrastructure development, and international reputation. The net effects remain uncertain, as evidenced by varied conclusions in the literature. For instance, Baade et al. (2004) found that Japanese and South Korean host cities for the 2002 World Cup experienced cumulative losses of approximately 5.5 to 9.3 billion USD. This outcome contradicts the expected gain of 4 billion USD. On the other hand, Allmers and Maennig (2009) found a 0.1% increase in GDP following the German World Cup, which is basically negligible. But Germany also found a sustained increase in international reputation from the tournament. These findings suggest generally modest but positive outcomes. Additionally, Du Plessis and Maennig (2011) identified consistently positive tourism effects. However, the costs of large-scale infrastructure projects and risks of not using post-event contribute to uncertainty regarding economic benefits. Furthermore, the enhancement of the host nation's international image, noted as the 'feel-good' effect (Maennig & Du Plessis, 2006), is consistently regarded as a beneficial and lasting consequence.

Host nations for the World Cup are typically announced approximately 7 years in advance, leading to significant dissemination of new information as the selected country attracts global attention. Positive outlooks for economic growth tend to boost stock prices, whereas concerns about financial costs and debt may lead to declines. According to the Efficient Market Hypothesis, market prices fully incorporate all publicly available information. Introduced by Eugene Fama in 1970, this theory says that it is impossible to outperform the market and that the best investment strategy is to respond to newly released public information. Accordingly, investors adjust their positions following the announcement, which explains fluctuations in stock prices (Butet & Kesuma, 2025).

The most important positive effect is the expected tourism boom that the World Cup will bring. This is because tourism improves the economy, from increased jobs to increased spending (Maennig & Du Plessis, 2006). Infrastructure spending and demand for hotels and transportation also increase. This is categorized as general economic optimism because people typically view this announcement as broadly positive. On the other hand, there are many negative aspects that people can take away from the host announcement. For example, high public spending can create debt or lead to misallocation of funds, resulting in inefficiency (Wu & Li, 2016). As a result, the net effect on the host country is uncertain. The stock market's reaction in the host country depends on investors' perceptions, which vary across countries.

In this study, I am looking at the eight World Cups from 1994 to 2022, held in nine countries (one of which was jointly hosted by two countries). The eight announcements provide a large sample size to eliminate any outlier effect in the data. The range allows us to compare decades and regions, and the countries include both developed and developing nations. This lets us spot trends and irregularities by economic standing. Three windows will be used in this study, including [-30,30], [-10,10], and [-5,5] days. The different windows used in this paper also allow us to see short- and long-term trends and analyze them to reach a concrete conclusion. Having many countries to look at also allows us to entirely capture the investor feelings as a whole.

The main question guiding the paper is: Do stock markets respond to FIFA World Cup host announcements? Are reactions positive, negative, or mixed? Do reactions vary by country, year, or economic context? Are market replies short-term or longer-term?

LITERATURE REVIEW

The FIFA World Cup's impacts have been extensively studied, but no consensus has been reached. Results depend on researchers' focus on different areas, such as macroeconomic outcomes, tourism indicators, or financial market responses. Some studies focus on announcement-based event studies that seize investor expectations at the moment new public information is revealed, a type of research closely related to this paper.

Studies using macroeconomic and tourism indicators generally find limited short-term benefits. Baade et

al (2004) analyzed the effect of the 1994 U.S. World Cup using a linear econometric model on income, wages, and tax data across 13 host cities. A cumulative loss of 5.5-9.3 billion dollars was found, suggesting the event did not generate the projected economic boost. Allmers and Maennig (2009) analyzed the 1998 France and 2006 Germany World Cups using tourism and retail sales data over a 41-day period, which included 20 days before and 20 days after the announcement. They reached similar conclusions about the World Cup's general negative economic impact on host countries. On the other hand, Manzenreiter (2008) found relatively neutral results for the 2002 Japan-South Korea World Cup, where a cost-benefit analysis showed GDP growth of only 0.1%-0.3%.

More optimistic conclusions appear when implicit benefits are included. Maennig and Du Plessis (2007) conducted a cost-benefit analysis of the 2006 World Cup in Germany, incorporating the "feel-good" effect. They argued that public image and national sentiment should be taken into account. The paper found that the host country incurred economic losses but benefited overall, thanks to the “feel-good” factor. Du Plessis and Maennig (2011) used tourism data from the 2010 South Africa World Cup and found fewer tourists and lower occupancy rates than predicted, but substantial increases in international awareness, which also relates to the “feel-good” effect.

A smaller literature examines how stock markets behave during the World Cup and on game days. Levy (2010) analyzed U.S. market data from 1950-2008 and compared World Cup periods to non-World Cup years. He found lower returns and reduced trading volume during or around match days. He attributed these effects to investor distraction and other behavioral biases rather than economic fundamentals associated with the games. Since this paper focuses on the tournament period itself, it can not be directly explained by economic theories.

The studies that focus directly on the actual announcement dates are most related to this paper. Gopane and Mmotla (2019) examined Africa’s stock markets following bids for major sporting events: the 1995 Rugby World Cup, the 2003 Cricket World Cup, and the 2010 FIFA World Cup. They used an event-study framework with a [-20,20] day window and an EGARCH model. They found that countries that won the bid to host the sporting event experienced positive abnormal returns, whereas those that lost the bid experienced negative abnormal returns. This suggests investors were generally positive about the announcement when the bid was won. Ramdas et al. analyzed five World Cups between 1994 and 2010 and used cumulative abnormal returns near the announcement date (windows of [-5,5] and [-10,10]) to reach their conclusion. They found mixed results, including short-term positive reactions for the United States, Germany, and South Africa, but negative or insignificant reactions for France and Japan.

Charles and Darne (2016) extended this period of study to eight World Cups (1994-2022) using national stock indices and a GJR-GARCH model with a very short event window of [-1,+2] days to capture immediate investor reactions. Their results are inconsistent across hosts: Qatar and Russia showed significant positive abnormal returns, while Brazil showed a negative reaction. Al Refai and Eissa (2017) focus on just Qatar’s hosting announcement. They used a GARCH model on the Qatar Exchange index

and found that significant positive abnormal returns took place. Volatility also increased, which shows investor reassessment rather than uniform optimism.

In conclusion, macroeconomic studies and studies focused on tourism indicate limited short-term benefits from hosting a World Cup, but studies that focused on announcement dates capture sentiment for the upcoming event rather than expectations. Announcement-date stock market studies show different reactions across host countries, with positives and negatives observed. By focusing solely on the announcement dates, our paper adds to this topic by isolating how investors reacted to the announcements themselves. My paper adds to the existing literature by examining how several countries reacted to the announcement of the FIFA World Cup, rather than focusing on a single country. It examines eight World Cups to analyze a wide variety, rather than focusing on just a couple. Also, my paper includes windows of [-5,5], [-10,10], and [-30,30] to concentrate on immediate investor reaction, while also examining broader-scale reactions. This extensive dataset will enable a more thorough assessment of investor outlook following the announcement.

METHODOLOGY

I use an event-study framework to investigate the impact of hosting the FIFA World Cup on the host country's stock market. This study is grounded in the Efficient Market Hypothesis (EMH), first introduced by Eugene Fama in 1970, which says that financial markets reflect all publicly available information. As a result, the announcement of a FIFA World Cup host is immediately incorporated into stock prices, leaving no opportunity for investors to consistently earn abnormal returns based solely on that information (Butet & Kesuma, 2025). EMH provides the conceptual basis for using event studies to measure abnormal returns, since deviations from expected returns around an event indicate how the market reacts to new, relevant information. According to the theory, market fluctuations are driven by investor expectations about the World Cup's outcomes. These results include infrastructure spending, tourism inflows, economic confidence, and potential fiscal costs. Investors might react positively, increasing stock prices, or negatively, decreasing prices. Theoretically, investor reaction is ambiguous, so empirical testing is required to determine the effect of these announcements on stock market returns. Also, according to the EMH, the largest fluctuations in the stock market occur on the next day and slowly even out. I investigate the impact of the World Cup host announcement by measuring abnormal stock market returns in host countries in response to the official FIFA announcement.

The sample for this study comprises eight tournaments held between 1994 and 2022. The selected tournaments were hosted by 9 countries, including the USA in 1994, France in 1998, South Korea and Japan in 2002, Germany in 2006, South Africa in 2010, Brazil in 2014, Russia in 2018, and Qatar in 2022. Since Japan and South Korea hosted the same tournament and have the same announcement date, they will be treated independently. This means that their data will be different, but their announcement date will be the same. This range allows us to analyze a mix of developed and developing countries over a long period. Country-level stock market indices are used, and the data is from Investing.com. The indices are as follows: the Qatarian QE General (QSI), the Russian Moscow Exchange (MOEX), the Brazilian

IBOVESPA (IBOV), the South African FTSE/JSE (JALSH), the American S&P 500 (^GSPC), the French Cotation Assistée en Continu (CAC40), the Japanese Nikkei 225 (NI225), the South Korean Korea Composite Stock Price Index (KOSPI), and the German DAX40 (DAX). The rationale for selecting data from these indices is the assumption that the country's main index represents the entire stock market.

The event date is defined as the day FIFA officially announced the host country. To capture the initial reaction to the news, announcement dates are used instead of game dates. Multiple event windows are employed in this study, including a short window of [-5,5] to capture immediate reactions and longer windows of [-10,10] and [-30,30] to capture long-term reactions.

The mean-adjusted model estimates normal returns, assuming constant average stock index returns during the estimation window (Brown & Warner, 1985). Actual returns were defined as Ri,t, and we calculated them using

$$R_{i,t}=\ln(S_{i,t}/S_{i,t-1}) \quad (1)$$

where Si,t represents the closing price of index *i* on day *t* and Si,t-1 represents the closing price of index *i* on the prior closing day. Normal returns were defined as NR, and I used a pre-event estimation window of 100 trading days to estimate them using equation (2). The use of a 100 trading day estimation window is appropriate as it provides a sufficiently long period to generate stable parameter estimates for expected returns while remaining recent enough to reflect current market conditions. This length is consistent with Gaaelen & Bolton (2015) as they provide the suggestion to use between 100 to 250 days prior to the announcement. However, one limitation of the event design is that the pre-event window may capture speculative trading behavior, as World Cup host outcomes are often anticipated by media reports and betting markets prior to the official announcement. As a result, some information may be partially incorporated into prices before the event date, potentially leading to an understatement of abnormal returns measured around the announcement window.

$$NR_t=\frac{1}{T}\sum_{T-1}^{T} R_{i,t} \quad (2)$$

T is defined as the estimation window. Abnormal returns are estimated by subtracting the actual returns from the normal returns:

$$AR_{i,t}=R_{i,t} - NR_i \quad (3)$$

Then, I calculate cumulative abnormal returns (CARs) by aggregating ARs across event windows:

$$CAR_{i,t1,t2}=\sum AR_{i,t} \quad (4)$$

Lastly, I calculate the t-test by dividing the cumulative abnormal returns for stock index i (Ri) by the standard deviation of its abnormal returns (σi) during the estimation window.

$t_{i,t1,t2}=CAR_{i,t1,t2}/\sigma_i$ (5)

I used a t-test with a significance level of 5% and a critical value of ±1.98. If the stock market reaction is above or below this critical value, it is considered significant.

RESULTS

The findings are represented in graphs. These graphs include the daily CARs for [-30,30], [-10,10], and [-5,5] event windows across each country.

Figure 1. [-5,5] event window

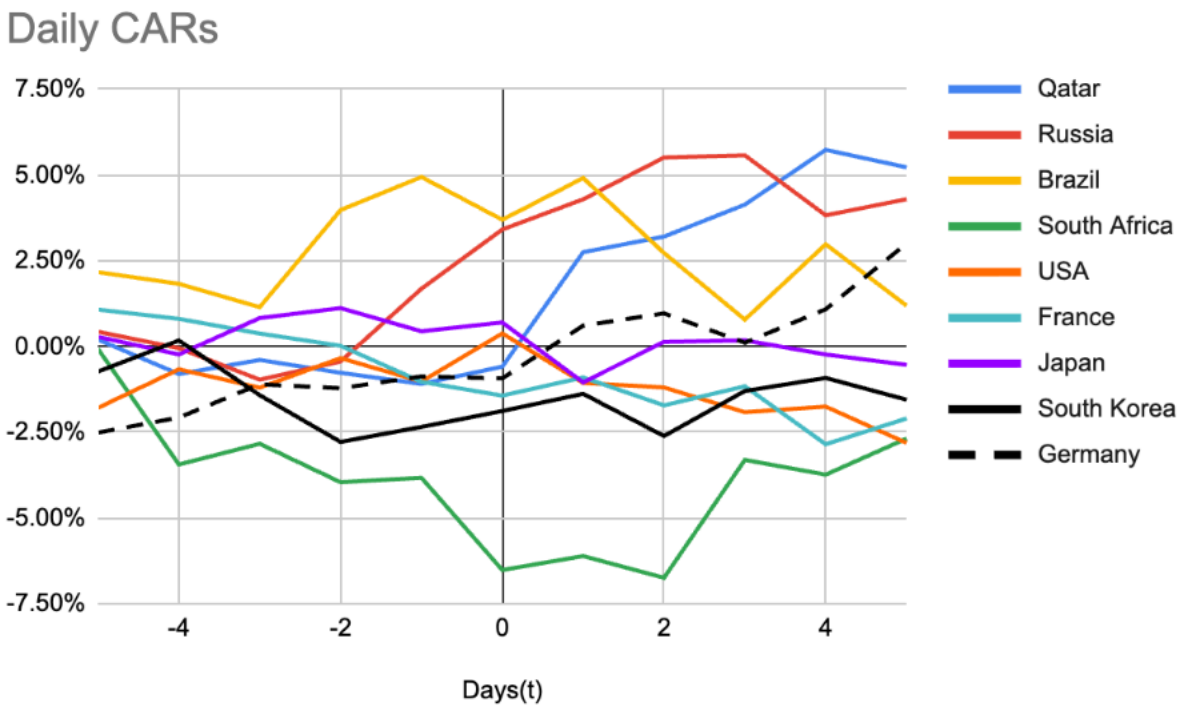

Figure 1 shows that on the first day, right after the announcement, all the countries except the USA and Japan had an increase in CARs. This can be used as evidence that the announcement had a positive effect on most local stock markets and on investors who viewed it as a plus for the economy. This effect was more pronounced in Qatar and less pronounced in countries such as South Africa, France, and South Korea. Shortly after the first day following the announcement, CARs either barely increased or decreased across countries, suggesting investor hesitancy to fully believe the announcement is good news. In line with the Efficient Market Hypothesis, prices are expected to adjust rapidly to new information on average, although the exact speed of adjustment may vary across events and markets, so this makes sense. Overall, the five-day window after the announcement date shows that CARs increased in most countries, though

only slightly. The only countries that experienced slightly increased CARs were Russia and South Korea, along with a couple that actually experienced a decline in CARs following the five-day window, including Japan, Brazil, France, and the USA. The three other countries saw a significant jump in CARs during the five days after the announcement date. These countries include Qatar with about a 5% increase, South Africa with about a 4% increase, and Germany with about a 4% increase. The different changes in CAR exemplify the various beliefs and ideals across countries about the impact of the announcement date on their own economies.

Figure 2. [-10,10] event window

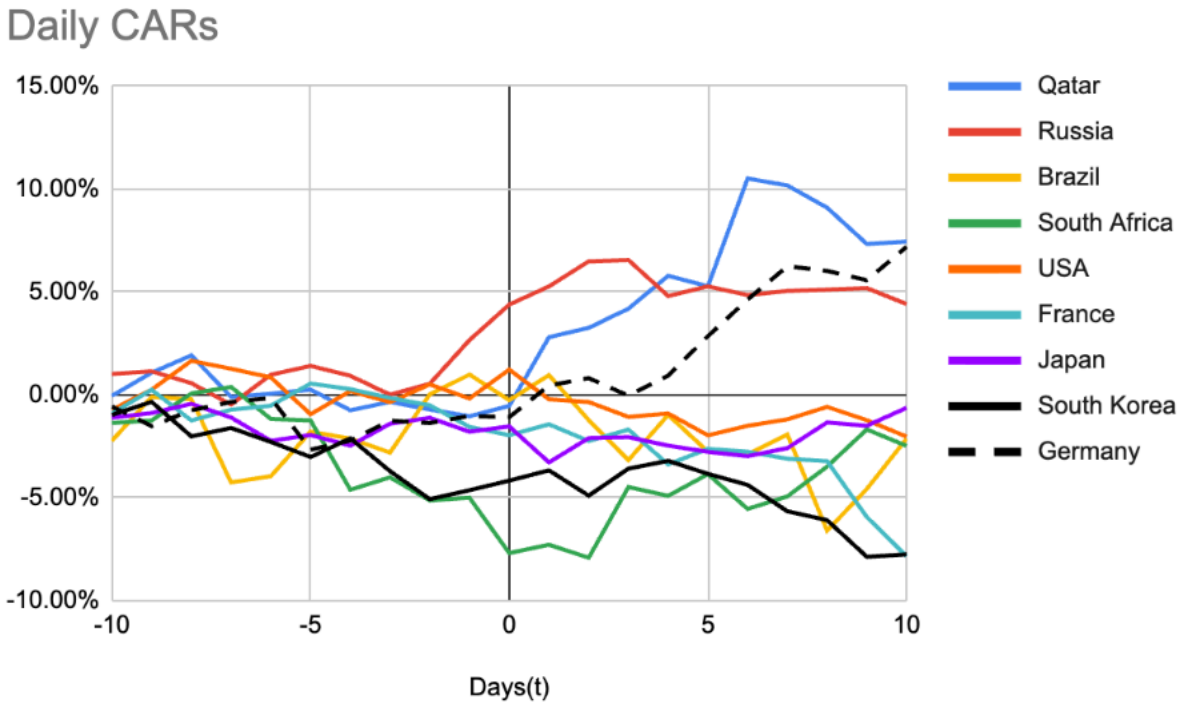

Figure 2 shows that most countries in the days leading up to the announcement date were experiencing negative CARs. Brazil and Russia were the only markets experiencing positive CARs. After the announcement date, CARs for most countries increased during the 10-day window. The countries that saw downward-trending CARs were South Korea, the USA, France, and Brazil. Some countries experienced negligible CAR changes in the 10-day window after the announcement date, including Russia and Japan. Qatar, South Africa, and Germany experienced a marked upturn in CARs in the 10-day window following the announcement date.

Figure 3. [-30,30] event window

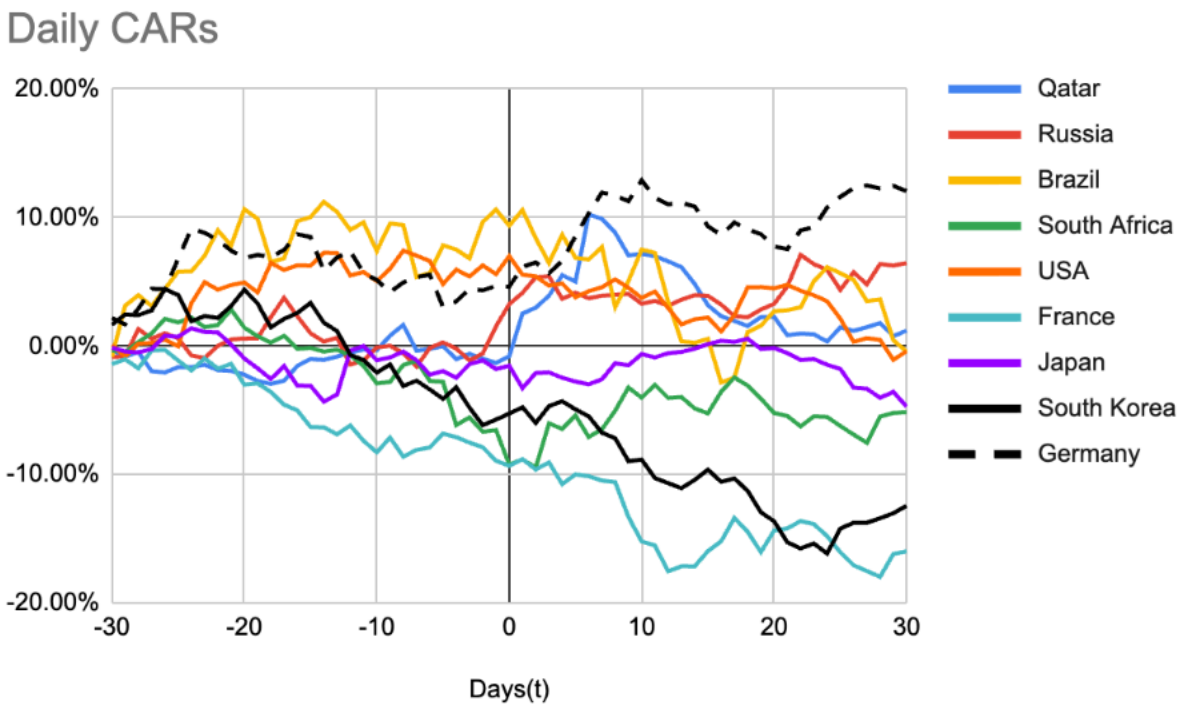

Figure 3 shows that, with the exception of Germany, all countries exhibit either a negative trend or no general trend in Daily CARs over the 30-day window. Germany and Russia experienced a positive trend in CARs during this window. The countries that experienced a negative trend in CARs most likely saw the news of the FIFA World Cup as negative because of the economic costs associated with hosting the tournament. Since Germany experienced the largest positive trend in daily CARs, it was likely that local investors generally viewed the announcement as good news. It is also important to consider the effects of external factors in the local market on this trend, given the longer time frame. As for countries that showed no clear trend or pattern, such as Qatar, Brazil, and the USA, investors generally felt indifferent toward the announcement.

The CARs for each country for each given window are shown in Table 1.

Table 1 - CARs and t-test significance in each country

	Qatar	Russia	Brazil	South Africa	USA	France	Japan	South Korea	Germany
[-30,30]	1.20%	6.46%	-0.44%	-5.15%	-0.40%	-15.98%	-1.04%	-12.44%	12.05%
t-stat	1.10	6.41*	-0.23	-4.60*	-0.39	-16.22*	-1.27	-12.42*	11.05*
[-10,10]	7.45%	4.42%	-2.12%	-2.48%	-2.03%	-7.84%	0.64%	-7.75%	7.20%
t-stat	4.62*	4.53*	-0.99	-1.58	-2.20*	-7.77*	0.81	-8.3*	6.62*
[-5,5]	5.22%	4.29%	1.19%	-2.68%	-2.81%	-2.10%	0.13%	-1.55%	3.00%

t-stat	4.37*	3.78*	0.65	-1.47	-2.68*	-2.50*	0.16	-1.55	2.48*

Note: The t-test statistics with a "*" next to them are considered significant, and the t-test statistics that are highlighted are considered insignificant.

CONCLUSION

This study examined how the stock market reacts to the announcement that a country will host the FIFA World Cup. I have looked to determine if the reactions are positive, negative, or mixed across the different countries. The findings show that these announcements do trigger market response, but the responses are very different. For example, some countries experience short-term optimism reflected in positive abnormal returns, and others show negative or insignificant reactions, suggesting investor worries about costs, fiscal burdens, or uncertain long-range benefits. These findings add to the literature by supporting the idea that World Cup announcements can markedly alter the host country's stock market. It also shows how investor attitude is strongly context-dependent and is not uniform across hosts or periods. By analyzing multiple World Cups and different event windows, this study offers a broader perspective and underscores the importance of considering both short- and long-term market reactions.

The findings of this study are broadly consistent with prior research on FIFA World Cup hosting announcements, though some differences in magnitude and significance are observed. The closest prior works include Ramdas et al. (2015) and Chalres & Darné (2016) found different results to this paper. For example, Ramdas et al. (2015) found positive short-term effects for hosts such as the United States, while this paper found negative. On the other hand similarities were also found, for example Chalres & Darné (2016) found significant positive short term effects for Qatar, as well as this paper. Differences in results may be attributed to several factors, including variations in sample periods, the set of countries included, differences in event window lengths, and methodological choices (e.g., CAR-based approaches versus GARCH-based volatility modeling). Additionally, evolving global financial conditions and shifts in investor expectations may help explain why market reactions differ across studies.

At the same time, this analysis relies heavily on national stock indices and an event-study framework. This sort of study can not fully account for concurrent macroeconomic shocks or country-specific economic policies that may have influenced returns. Research could build on the results by incorporating firm-level data or institutional and governance variables to better explain the fluctuations of investor responses across countries. Also, cross-sectional independence throughout countries was not addressed in this paper. In this case, since some countries experience the announcement of their FIFA World Cup hosting together, any abnormal returns generated during the time periods considered may have some degree of correlation across stock markets of different countries. This may mean that the t-test conducted at the country level will not be completely independent, thus making the test results somewhat more statistically significant than they actually should be. Future research could address this by conducting portfolio-level tests or panel data methods instead. Overall, the evidence suggests that hosting a mega

sporting event is not perceived as entirely an economic opportunity by investors and financial markets, underscoring the need for global officials to meticulously weigh expectations against potential costs when seeking such events.

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