
COVID 19 Outbreak and Tokyo 2020 Olympic Games: A Perspective from Japan's Economy and Capital Market

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Abstract – This study highlights the key impacts of hosting an international sports event, Tokyo 2020 Olympic Games, during the period of deadliest contagious disease outbreak in history, COVID 19. The perspective is analysed in terms of the performance of capital market, investment market and sectoral market by the indexes of TOPIX, Stock Market, Bond Market, Foreign Exchange, FTSE, MSCI, and sectoral index of Air Transportation, Construction, Pharmaceutical which shows different range of fluctuation.

Keywords: Olympic games, Japan, economy, capital market, and sectoral index.

1. Introduction

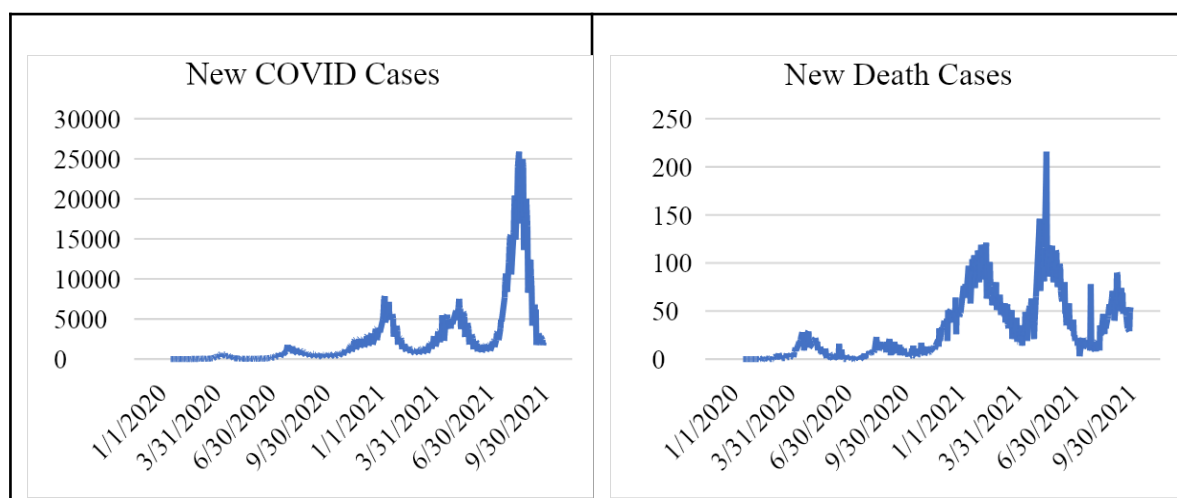
1.1 Hosting International Sports Events

International sports events, often known as mega sporting events, are athletic tournaments that gather athletes from a variety of nations. According to Dollesa and Soderman, (2008), these sports events are significant because they provide a universally valid manner for host countries to depict and on a global basis, they be able to cultivate their national identities and traditions., in addition to professional athletes representing their country competing for greatness. International athletic program, such as the Olympic Games, Cricket Tournament, Football Cup and International Exhibitions, tend to have a strong economic, social, and cultural influence on the host country and/or territory, as well as promote innovation, science, and technology. Several governments have gone to considerable lengths in the past to acquire a hosting rights big athletic events in order to enjoy the largest economic rewards. The World Cup, for example, has long been a high-profile event, with the 2006 World Cup in Germany garnering more than 20 billion television viewers, according to

FIFA in 2010. World Cup matches have always been seen as worthwhile investments since they provide host countries with significant revenue from sponsorship, advertising, product sales, and tourism. The host country of an international athletic event receives economic advantages in the creation of additional infrastructure and monetary inputs from outside, as per scholar Nauright (2004). Furthermore, because foreign visitors may have a significant effect on tournaments that are aired internationally, these events provide social advantages to the hosting towns. According to Preuss (2013), prominent sporting events support the expansion of the green economy by signalling power and educational prospects. The sports business is also thriving in terms of the concept of a global community. In the twentieth century, the sports business was worth \$213 billion and was the sixth largest industry in the United States. According to statistics analysed by researchers Huang and Chang (2011), the global sports market has already reached \$500 billion in the new century. Researchers examined the impact of UEFA Euro 2012 on the Polish economy and discovered that increased investment in transportation infrastructure, which supported the rise of total productivity factor and influx of foreign direct investment, was the primary source of economic gains. International sporting events have evolved to have a big influence on the world's financial markets as the sports business has grown over the last several decades.

1.2 COVID 19 in Japan

On the other hand, the globe saw the advent of a new viral zoonotic infection (SARS-CoV2) in 2020, resulting in a Coronavirus disease outbreak (COVID 19). COVID 19 caused stock markets worldwide and in all major economies to plummet. While the WHO has a coronavirus strategic preparation and action strategy in place, large events such as that of the Olympic Games need substantial planning and responsiveness on the part of the host country. The number of COVID cases and fatalities in Japan on a daily basis has risen dramatically. The scientific community throughout the globe is working hard to detect quickly and provide relevant epidemiological evidence so that appropriate preventive activities and decisions concerning the Tokyo 2020 Olympic and Paralympic may be made.



<p>Figure 1.1.1(a) <i>New COVID cases reported in Japan</i></p>	<p>Figure 1.1.1(b) <i>New death cases reported in Japan</i></p>
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The COVID cases and deaths caused of that illness in Japan have been discussed by countable scholars. The low number of cases in initial period of the pandemic, continual surge of cases thereafter and the hike in death rate due to COVID in Japan are the key topics that have been addressed in their respective article (K Shimizu, Y Tokuda, K Shibuya – 2020 & 2021). The Olympic Games of Tokyo 2020, which were scheduled to begin event from July 24 to August 9, 2020, were later postponed to 2021 in March 2020. This is because of the COVID-19 outbreak, which is the very first time in the history of Olympic games. Thus, the fear on the impacts of COVID 19 can be seen in organising mass international events as per health concerns which potentially creates an influence towards the hosting country’s economic and capital market performance.

1.3 Japan as a Hosting Country for Tokyo 2020 Olympic Games during COVID 19 Outbreak

Japan's candidacy to host the Summer Olympic Games in 2020 was about something more than simply having the summer games in the country. The 2020 Summer Olympics were to be a display of Japan's resurgence, according to Prime Minister Shinzo Abe. Another declaration to the world that "Japan is back!" Japan's technical supremacy, resilience in the face of adversity, and hospitality were to be the themes, echoing the 1964 Tokyo Olympics. Despite the fact that the Olympics were postponed until 2020 and that Shinzo Abe, the Prime Minister departed the year before due to health concerns, Yoshihide Suga, the next Prime Minister has campaigned for the continuation of the events.

As to be a hosting country for Olympic games, Japan had an enormous sum of money which was invested financially. According to official data, Japan spent \$15.4 billion on the Games of Olympic and Paralympic in Tokyo in 2008. However, government audits place the cost substantially higher. Additionally, private corporations have invested a sizable amount, which the Mainichi Shimbun estimates at \$3 billion. The decision to continue was also influenced by the International Olympic Committee (IOC). The vice president of the organising committee stated on May 21 that the games would go forward despite growing public dissatisfaction.

Tokyo 2020 Summer Olympics and Paralympics will have a positive economic impact on Japan, with an estimated economic impact of approximately 20 trillion Japanese yen in Tokyo Prefecture alone. Even postponing the event by a year gives a chance for recovery of the country's economy, albeit much will rely on the event's methodology and, most importantly, on the worldwide health status. Thus, by hosting the Olympic games, an economic impact as mentioned in context above can be created on Real GDP rate and selective Consumer Price Indexes of Japan that potentially impacts an international mega sports event hosting country together the volume of tourist arrival. As per the reliable and available sources, Japan's quarterly statistics from the second quarter of 2019 through the

third quarter of 2021 is shown below has been gathered to support this study’s objective. Graphs below picturizes it respectively.

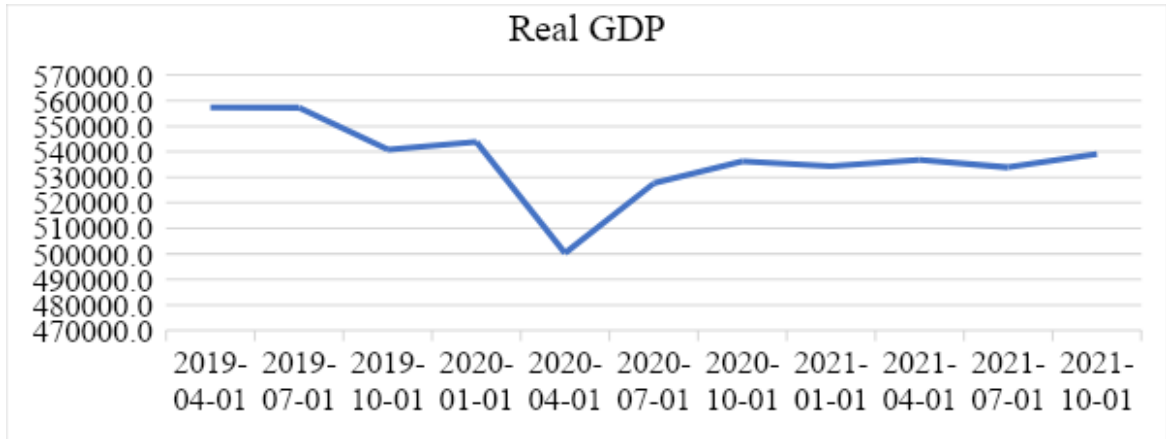
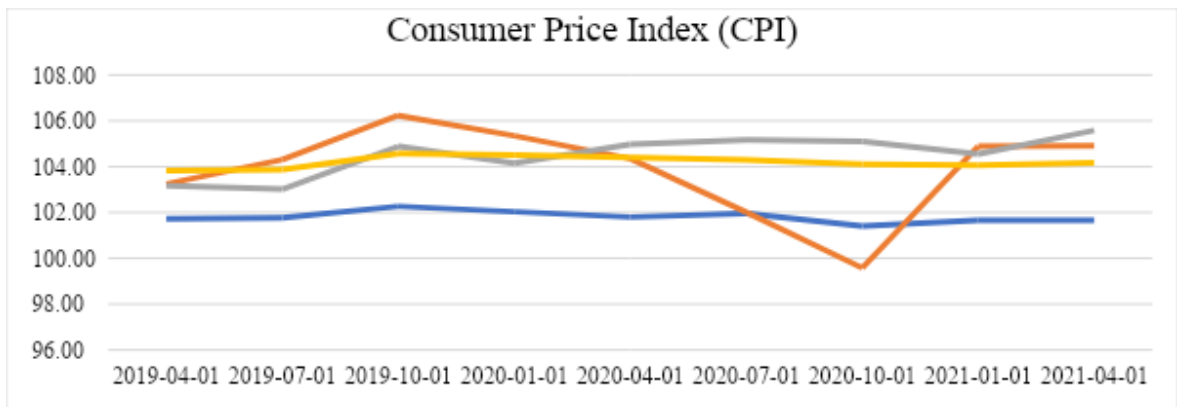


Figure 1.1.1(c) *Japan's Real GDP Rate*

Japan’s Real GDP rate marks a hike right after the advent of COVID 19 outbreak. Tokyo 2020 Olympic Games’ announcement and occurrence discussion potentially impacts Japan in positive manner for the economic basis.



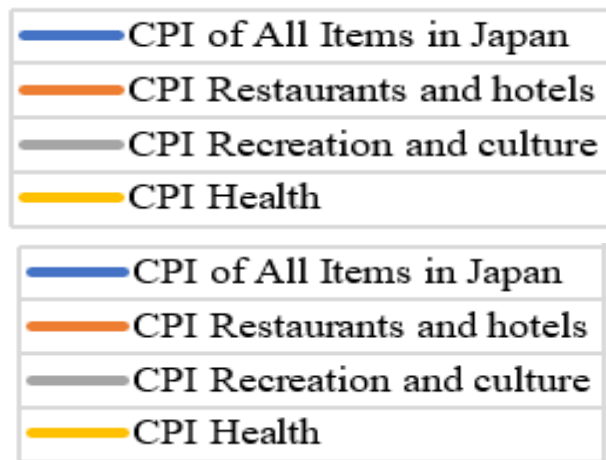


Figure 1.1.1(d) Japan's selected Consumer Price Index (CPI)

Japan's overall Consumer Price Index of All Items, Consumer Price Index of Health and Consumer Price Index of Recreation and Culture seems to be almost stable over the period. Whereas Consumer Price Index of Hotels and Restaurants fluctuates drastically where it marks a drop over the advent of COVID 19 outbreak. Around the period of Tokyo 2020 Olympic Games announcement, a hike is noticeable for Consumer Price Index of Hotels and Restaurants. Thus, in basis over economy Consumer Price Index of Hotels and Restaurants marks a positive impact upon the event of Tokyo 2020 Olympic game.

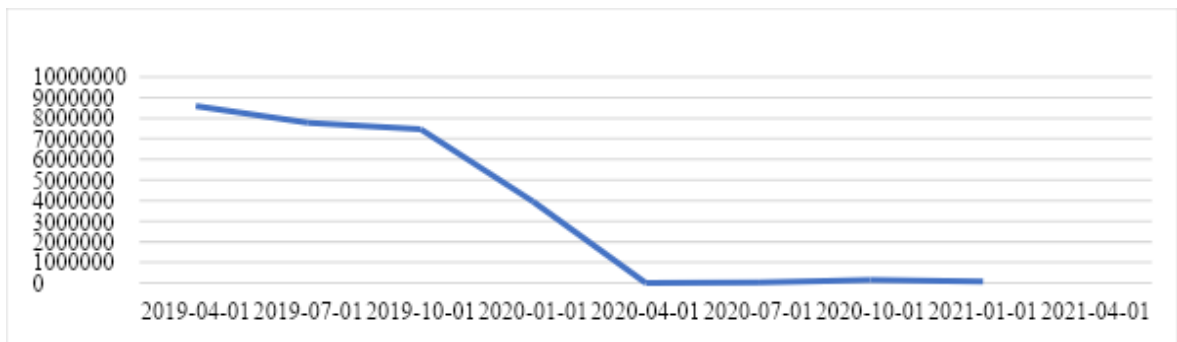


Figure 1.1.1(e) Number of Tourist Arrived at Japan

Dramatic impact occurred towards the volume of tourist arrival to Japan upon COVID 19 outbreak can be seen in graph above. The restriction imposed on international travel and also the domestic travel by Japan is the main cost of the decline in number of tourist arrival to Japan. Yet, as discussed above on the matter of positive economic impact of the execution of Tokyo 2020 Olympic games is being indicated by the mild movement to increase that is visible in the initial period of 2021 which is upon the confirmation of executing the event is evident.

Consequently, the announcement of major sporting events has an impact on host nations' stock markets, as highlighted by Martins and Serra (2007), who argue that when announcements are absolute shocks, market responses are favourable for victors and unfavourable for losers. Scholars Coates and Humphreys (2008), on the other hand, made an economic intuition-based case against sports subsidies and the economic consequences of professional sports. Most economists feel that sports subsidies are unnecessary, according to them. Due to a lack of monetary benefits, the authors strongly oppose sports subsidies. According to the author Coates, D (2015), the rapidly growing body of peer-reviewed leading economists on the possible effects of arenas, stadiums, sporting mega events, and sports franchises has revealed little evidence of significant employment, salaries and taxes for a population associated with these kinds of activities. So, there arise a conclusion that if major league sports franchises and services have no significant positive economic impact on the local economy, subsidies for their development and maintenance will be considerably more difficult to determine. Furthermore, scholar Horton, P. (2011) stated that many major international sporting competitions, such as the Olympic and International Cup, have been held predominantly in developing or developed countries outside of Asia in recent decades, and thus economic studies on major international sporting events are primarily based on non - Asian countries. At the same time, there is a scarcity of data on Asian Developed Countries' ability to stage big international sporting events which is debatable and opens path for further discussion as to fill the gap in the literature.

As an additional point of reference, the outbreak of SARS-CoV2, a rare viral zoonotic sickness in 2020 that led to the outbreak of Coronavirus disease in 2019, leading the World Health Organization to establish a Public Health Emergency of International Concern. Throughout this context, the media and the general public have raised concerns about COVID-19 in Asia, particularly concerning is the potential effect of COVID-19 on Japan, particularly in the context of the 2020 Tokyo Olympic Games. which is the first mega international sport event that took place by creating Olympic bubble. From July 24th through August 9th, 2020, the event was initially scheduled but was postponed until 2021 in March 2020 due to the COVID-19 outbreak, marking the first time in Olympic history that the former games were cancelled but not rescheduled. Amidst of the global pandemic, an International Sport event like Olympics games was prioritized despite the daily COVID-19 cases and its death rate as it was hoped that the event would be a great economic stimulus by expecting a replication of previous hosting benefits in terms of capital market achievements and the overall economic performance in terms of consumer price index (overall, restaurants and hotels, recreation and culture, and health), GDP rate and also tourism prospective for visitors volume as shown in the discussion of previous segment. A contradictory statement has arisen by the BBC news on August 2021 which was after the event of Olympic games that hosting Tokyo 2020 Olympic worsens Japan's economy along the rise occurred in COVID 19 cases as well as the death rates of the illness.

2. Literature Review

2.1 Key Indicators of Japan's Economy and Capital Market Performance

The purpose of this study is to fill in the gaps in the literature by examining the impact and effect of hosting the Olympic Games during the pandemic of COVID 19 on Japan's economy and capital market, which includes the index of TOPIX, the stock market, the bond market, the foreign exchange market, the FTSE, the MSCI, and sectoral indexes of air transportation, construction, and pharmaceuticals. Thus, these nine variables are considered as key indicators for Japan's economy and capital market performance.

2.2.1 Japan's Capital Market Performance Indicator

i. TOPIX

TOPIX is a market baseline with investable index functionality, covering a sizable portion of the Japanese stock market. TOPIX is a market capitalization-weighted index that is adjusted for free float. TOPIX is a measure of current market capitalisation based on the assumption that market capitalization was 100 points on the base date (Jan 4, 1968). This index is an indicator of the stock market's general movement and is used as a benchmark for investing in Japanese companies. According to scholar Shingo Ide (2001), TOPIX's calculating approach makes sense as an indicator for gauging general market trends, and the Tokyo Stock Exchange, which controls TOPIX, adds that each issue's influence on the overall index represents the degree to which it is held. Besides, in comparison to the Japan's Nikkei 225 Stock Average, the TOPIX is regarded a more representative index of all Japanese stock markets since it provides a more accurate picture of price fluctuations and includes the major businesses trading on the TSE.

ii. Japan Stock Market Index (Nikkei 225)

It is a financial phrase that describes an index that measures the stock market or a sector of the stock market and that allows investors to contrast current prices to previous values as to measure the performance of the stock market. It is often computed as a weighted arithmetic mean based on the prices of a selection of stocks. The Nikkei 225, generally known as the Nikkei Stock Average, is a stock market index that tracks the performance of the Tokyo Stock Exchange (TSE). Nikkei 225 is a measure of the stock market's overall health (TSE). As of 1950, the Nikkei newspaper has been compiling it every day. The Japanese Yen (JP) price index is a price-weighted index whose components are updated yearly. It measures the performance of Japan's 225 largest publicly traded companies in a wide variety of sectors. Scholar Robin Greenwood (2008) stated in his article stated that the Nikkei 225 index is essentially equal weighted, which means that stocks have a proportional impact on the index's performance based on their lagged price. This approach assures that the weight of the stock is primarily determined by the price at when it joined the index.

iii. Japan Bond Market Index

A bond market index is a quantitative measure of the bond market's investment performance and characteristics. Numerous indexes of varying composition are used to track the aggregate bond market and its many sectors, including government, municipal,

and corporate. A bond index is calculated using the change in market prices and, in the case of a total return index, the change in interest payments on chosen bonds over a set time period. The S&P Bond Index of Japan is designed to track the performance of Japanese government and corporate bonds that are denominated in the country's currency over a period of time. Scholar Michele Leung (2014) states that Japan's total par outstanding amount has reached over 1,070 trillion Yen by August 2014, according to data from the S&P Japan Bond Index, a broad-based benchmark that tracks the performance of government and corporate local currency bonds in Japan. Not unexpectedly, almost 92 percent of them are government debts, which have increased by 3.7 times since the index was initially valued on January 30, 1998, according to the index.

iv. Japan Foreign Exchange Index

The conversion of one country's currency into another is referred to as foreign exchange, or FX. It is the rules of supply and demand that determine how much a country's currency is worth in a free market economy. In other words, the value of a currency can be tied to the value of another country's currency. Foreign Exchange index are intended to quantify changes in the value of two currencies that are traded against one another. To accomplish so, it is necessary to follow the exchange rates of currencies with the greatest amount of liquidity on the market. The index of the United States dollar is the most popular and widely traded currency index in the world. It is largely regarded as a reliable indicator of the global value of the United States dollar. The foreign exchange index as an indicator which according to Scholar R Fatum (2009), the JPY/USD exchange rate is a great indicator to look for when analysing Japanese engagement over a period of time since it has an influence on day-to-day developments in the Japanese market. O Castrén (2004) investigates variations in the currency options market's assessment of predicted future exchange rate movements throughout times of official intervention in the Japanese yen to US dollar exchange rate.

2.2.2 Japan's Investment Performance Indicator

i. Japan FTSE Index

Asian investors may use the FTSE Japan Index to measure the performance of their investments in the region. Market-capitalization weighted, the FTSE Japan index is a gauge of Japanese big and medium-cap firms' performance. Global equity market capitalisation is covered by the FTSE Global Equity Index Series (GEIS), which is generated from this index. Rules-based construction and open-source approaches are used in the index's creation. Real-time and end-of-day price and total return approaches are used to construct the index. There are other indices that are free of taxes. Scholar K Nakajima (2011) in his research used the FTSE Japan Index components' return instead of traditional risk-free rates with changes on the benchmark to analyse the robustness of excess returns. Josef Licsauer (2021) disclosed that FTSE Japan Index gained 17.6 percent return over the past year.

ii. Japan MSCI Index

MSCI indexes are market capitalization-weighted, which implies that companies are assigned a weight based on their market capitalization, which is computed as the stock price multiplied by the total number of shares outstanding. The index gives the most weight to the stock with the biggest market capitalization. Whereas The MSCI Japan Index is meant to track the performance of the Japanese market's big and mid-size categories. The index, which has 272 members, captures about 85 percent of Japan's free float-adjusted market capitalisation. Basically, this index is created using the GIMI (Worldwide Investable Market Indexes) Methodology, which gives a worldwide view as well as cross-regional comparability within all market capitalization levels, industries, and style segments and mixtures. Focusing on index liquidity, investing ability, and replicability, this method aims to provide full coverage of the applicable investment option set by using a combination of these factors. This differs somewhat from the FTSE version. The FTSE index, for example, includes over 500 components, compared to the MSCI Japan index's maximum of roughly 320. The performance of the two indexes, however, is highly connected. In his paper, H Suzuki (2015) claimed that since the MSCI Japan Index is comparable to the Nikkei 225, a comparison of the two indexes is important. The researcher used BSW's bivariate regression on the Nikkei 225 and the MSCI Japan index, which adds to the evidence that co-movement exists.

2.2.3 Japan Sectoral Performance Indicator

The sectoral indices of a nation provide summaries and benchmarking statistics for certain sectors or industries. It enables investors to monitor a stock's performance in relation to a given industry. The main three sectoral indices of Japan namely Air Transportation Sector, Construction Sector and Pharmaceutical Sector are considered in this research. Air transport, which uses the second most energy, comprises passenger and freight planes, which may convey people, goods, or mail. Infrastructure and related operations are all part of construction. For the purpose of curing or vaccinating or relieving patients' symptoms, the pharmaceutical business research, develops, manufactures, and distributes pharmaceutical pharmaceuticals for oral administration (or self-administration). Japan's selected sectoral indexes also been considered as key indicator of the economic performance of Japan in the note where it has the potential and possibility to give implication on Japan hosting the Tokyo 2020 Olympic Game during COVID 19. As per scholars KY Ho and AKC Tsui (2004) employed GARCH Approach that is multivariate and also with Time-Varying Correlations to investigate chosen Tokyo Stock Exchange sectoral indices in order to get a better understanding of the Japanese stock market, which they published in 2004. Sectoral Index has the potential to indicate the performance level of a country's economy and can detect the impact of research event. As for the Tokyo 2020 Olympic Game, sectors that have been majorly impacted are Air Transportation sector, Construction sector, and Pharmaceutical Sector.

i. Air Transportation Sectoral Index

Japanese industry and economy rely heavily on air transportation and hosting the Olympics will need efficient and plentiful capability, as well as appropriate deploy and infrastructure, all of which will benefit the host city's airlines and economics. Japan is studying sustainable alternative biofuel for use in flights during the Olympics, according to Lewis

Burroughs and Dan Galpin (2020). The international airline industry has a huge environmental effect, which Japan intends to show can be decreased greatly. This aim is being pursued by a consortium that includes airlines of Boeing, ANA, Nippon Cargo and the Japanese government themselves together the University of Tokyo. A total of 46 entities are working toward this goal.

ii. Construction Sectoral Index

The construction industry in the Japanese economy, which accounted for around 5.7 percent of the country's revenue in 2018, is a significant pillar of the country's economic foundation. The construction industry has shown an overall upward trend in recent years, with total building investments hitting over ¥ 61 trillion in financial year 2018. When it comes to building for the Tokyo 2020 Olympics, the sub-sectors of Leisure and Hospitality construction and Outdoor Leisure construction saw compound annual growth rates (CAGRs) of 7.0 percent between 2015 and 2019.

According to Tim Hornyak (2021), the construction industry is among the most major benefactors of the Olympic Games' economic activities. The National Stadium, which seats 68,000 people and was designed by Kengo Kuma, as well as seven other arenas, were erected for the Olympics at an expenditure of approximately \$3 billion, with another 25 facilities being refurbished. Following the conclusion of the Games, the stadium will be used for a variety of events, including football and rugby matches, as well as cultural performances. This project, which will cost around \$490 million, will transform the athletes' village and associated road construction and infrastructure into residential units.

iii. Pharmaceutical Sectoral Index

The pharmaceutical market in Japan has shown modest growth rates in recent years and is considered to be the most promising business area in the nation. In addition to the thriving market for generic medications, the planned change of the Japanese pharmaceutical industry will be fuelled by a growth in the usage of biosimilars, which is likely to be the fastest-growing sector in the future, with a range of items now in the pipeline. As a result of the coronavirus outbreak, Japanese authorities authorised the first vaccination against COVID-19, an mRNA vaccine produced by Pfizer Inc. and BioNTech SE, in February 2021, making it the first vaccine to be licenced in the country. The viral vector vaccine developed by AstraZeneca plc and the mRNA vaccine developed by Moderna, Inc. were both authorised in May 2021. After receiving permission, the administration of the Moderna vaccination began as soon as possible in collaboration with Takeda Pharmaceutical Company Limited, who served as the local distributor. As a result, the pharmaceutical industry in Japan is taking a cautious approach to the upcoming Tokyo 2020 Olympic Games, which will be a major athletic event. Coronavirus vaccine was administered by the Tokyo Metropolitan Government to personnel and members of the media who were scheduled to work at the Tokyo Olympics and Paralympics this summer. Japanese officials have received COVID-19 dosages for around 40,000 personnel who will be involved in the Tokyo Olympics as part of a deal with a U.S. pharmaceutical business

and the International Olympic Committee. Thus, the massive vaccination directly leads the pharmaceutical sector to experience impacts.

2.2 Underpinning Theory

The notion of the Efficient Market Hypothesis serves as the foundation for this investigation (EMH). When it comes to economics and finance, the EMH is an approach that aims to explain how financial markets function. Economic analyst Eugene Fama developed the concept in the 1960s. Fama said that all security rates are entirely equivalent and that they reflect an asset's inherent worth at any point in time. It also argues that stock prices represent all information, and that consistent alpha generation is impossible.

An effective market, in the eyes of the EMH, is one in which prices adjust to new information quickly and on average without being influenced by prejudice. According to scholars Alam et al., (2017), and Sathyanarayana & Gargasha (2017), the efficient market hypothesis proposes that all important information about a market stock is entirely reflected in stock prices, and that no one can make an abnormal profit from the market over this.

According to this study, the underpinning theory of EMH can be seen where the respective Japan's economic index and Japan's capital market indexes responded efficiently to the announcement of the Tokyo 2020 Olympic Games when there was no abnormality in the market but did not respond appropriately to the news of the event when there was an abnormality. Respective Japan's economic and capital market index is efficient in the weak-form when there is no abnormality in the market; but, when there is abnormality in the market, the market is inefficient in the weak-form.

3. Impact of Tokyo 2020 Olympic Games during COVID 19 Outbreak

As stated in previous segment, the key indicators' performance has been impacted by the Olympic game of Tokyo 2020 since it was held during the outbreak of COVID 19 after its postponements as the indexes marks a significant viewpoint to be analysed and this research studies about it as well. The key indicators technically were impacted by pre and post event of Japan hosting the Olympic games. Key indicators of Japan's economy and capital market performance indexes were examined from the period of 2019 to 2021 to get the clear picture of the impacts as of before and after the event of hosting Tokyo 2020 Olympic Games.

3.1 Impact on Japan's Capital Market Performance

i. Stock Market

The stock market performance of Japan is examined through the main index which is TOPIX and the other relevant index NIKKEI 225. Scholar Takahashi, H., and Yamada, K. (2021) in their study found that the Japanese stock market was rather insensitive to the propagation of the virus. Rather, it seems that the Japanese stock market has been

influenced by events occurring outside of the country of Japan. The results of his research, in which he reported the correlation matrix of stock market returns in Japan and the United States, along with the daily growth rate of infected people in several regions such as China, the United States, Japan, and other parts of the world, it can be seen that the only variable that has a relationship with the Japanese stock market is the return of CRSP, which is a return of the US stock market. Furthermore, he said that, throughout the pandemic time, two markets behaved in a similar manner to one another. For starters, in January 2020, the two stock markets seemed to be moving in the same direction. This is significant since the first case of COVID-19 was discovered on January 15, five days before the first case in the United States. Because of the close connection between the two markets, it is likely that the first few occurrences in Japan had a less significant influence on the country's stock markets.

Besides, the stock market performance of Japan is evident to underperform in recent months as of May 2021 as per the source of Hideyuki Sano from The Japan Times. Stock market performance was allegedly impacted as a result of a combination of delaying vaccination implementations, a new breakout of diseases, and mounting worries about the hazards associated with organising the Olympics during the COVID 19 pandemic. Following that Market Focus who gives news of economy and finance states that Japanese markets plummet on the eve of the 2021 Summer Olympics in July. Japanese shares, which are a proxy for stock market performance, have suffered a severe decrease in response to the country's anticipated reinstatement of a state of emergency in response to the return of Covid-19 cases in the Japanese archipelago during the time specified. The government's many restrictive measures concern investors about the country's situation and the remaining vestiges of optimism for recovery, which have been washed away by the advent of the Delta version and are having a significant influence on the stock market performance of Japan. The Nikkei index fell 0.88 percent to 28,118.03, its lowest level in almost two weeks, while the TOPIX index fell 0.90 percent to 1,920.32 during same time period.

Next, the post-Tokyo 2020 Olympic Games era revealed that Japan's Olympic team, which won 27 gold medals, is well-positioned for a time of greater inflation in the aftermath of record stimulus expenditure internationally. "Japanification" has become synonymous with economic decline after decades of deflation and stagnant domestic development. It requires bravery to predict that Japan's stock market would rebound. Japan has long been seen as a market for short-term, rather than long-term, investments. However, there are encouraging signals that the country may be on the verge of a comeback. In the wake of the Covid-19 outbreak, Japan looks to benefit from changing global economic circumstances, which will be bolstered by domestic measures tackling structural issues.

ii. Bond Market

Scholar Mariko Sakaguchi (2021) states that in the period of June 2021, Japan's government bond market witnessed trade volumes fall to levels not seen in almost two decades by May 2021. The central bank had hoped that its policy objectives clarification in March 2021 would revive a market that had been inactive due to its massive presence. The

Bank of Japan (BOJ) confirmed in a policy review in March 2021 that it would allow 10-year rates to fluctuate by 50 basis points around its 0% objective. It was also hoped that a hands-off stance by the central bank would encourage investors to exchange bonds more freely. However, according to Refinitiv statistics, the monthly trade volume for freshly issued 10-year Japanese government bonds (JGBs) fell to 339 billion yen (\$3.10 billion) in May 2021, the lowest level since May 2002. According to Morgan Stanley MUFG Securities Strategist and scholar Koichi Sugisaki, the JGB markets are not moving because markets assume that the BOJ will be unable to move either towards tightening or loosening its monetary policy. There is a distinct difference between the United States and Europe when it comes to inflation. In Japan, consumer prices have fallen in recent months due to the sluggish vaccination deployment and the return of COVID-19 infections. Those developments have bolstered market views that the BOJ would keep its ultra-loose policy longer than other central banks in order to reach its elusive 2 percent inflation objective. The BOJ maintains short-term interest rates at -0.1 percent and 10-year yields at 0 percent under yield curve management. JGBs and other hazardous assets are also purchased in large quantities by the government. There is a delicate balancing act that the BOJ must do in order to maintain low interest rates while protecting the economy from the negative repercussions of protracted monetary policy easing. Policymakers hoped that if external variables, such as the expectation of US Federal Reserve policy normalisation, boosted market trade, rates would begin to move more.

iii. Foreign Exchange Market

Scholar Yohay Elam (2021) stated that the USD/JPY foreign exchange market has shown to be a reliable indicator of COVID 19 fears, increasing and dropping in tandem with worries and US rates. Bondholders had to keep a watch on Tokyo's COVID 19-clouded Olympics Game of Tokyo 2020, the Federal Reserve's decision, the first look at America's second quarter growth, and the Delta variant as well during the pre-event time. Concerns about the economic consequences prompted a stock sell-off and a rush into bonds in July 2021. The USD/JPY foreign currency market fell in response to worries, which coincided with a decline in Treasury rates, in contrast to the dollar's movements against other currencies. While the currency pair offered uncomplicated trades in which the safe-haven dollar had capacity to grow versus the majority of currencies, it would almost certainly fail to compete with the yen due to the strong correlation between decreasing US rates and USD/JPY.

3.2 Impact on Japan's Investment Performance

Impacts created on Japan's investment performance can be seen mainly through FTSE and MSCI investment market performance. As per the source from MSCI Japan Index in USD by 30th September 2021, the total return and market price marked positive 21.02 percent and 20.27 percent respectively for 1 year term of investment. On the other hand, as per the source from Franklin Templeton, Japan's FTSE investment marks 20.53% of one year price return as of 30th September 2021 as well. The positive investment value of MSCI and FTSE indicates a positive impact where it could have significantly implicated from the

successful execution of Olympic game in the midst of COVID 19. According to Mondrian Investment Partners (2021), MSCI Japan has underperformed substantially year to far, although it boasts the highest dividend increase since 2001. The same source also stated their viewpoint that despite political and COVID 19 uncertainties, Japan continues to provide appealing options for bottom-up stock selection in the investing market, especially the FTSE and MSCI. It suggests that Japan is an appealingly priced market with solid corporate profits growth, a protective dividend stream, and ongoing corporate governance changes that are helping to unlock more value. Furthermore, they add that in this broad and deep market, Japan, which accounts for only 7% of MSCI World by market capitalization but accounts for more than 17% of the index's constituents, continues to find strong bottom-up value opportunities, particularly in companies with overcapitalized balance sheets. Mondrian also believes that this strategy has performed effectively for investors over time, with Japan stock selection being a good contributor to long-term results. After the post-Olympic era, attractive prospects can be found in Japan, and it turned out to be a well-covered developed equities market for investment based on the fundamental, forward-looking, bottom-up, and value-focused investing strategy.

3.3 Impact on Japan's Sectoral Performance

Hosting an international sports event like Tokyo 2020 Olympic game resulted short-term impacts on its sectoral performance where mainly the sectors of air transportations, construction and pharmaceutical is impacted and leave a lasting effect. As per scholar Michael Wolf (2021) claimed that inflation is expected to rise in the near future. Deloitte report by the scholar mentioned above reported that Japan's inflation rate remained moderate in September 2020, climbing only 0.2 percent from a year earlier, despite concerns about growing prices in other advanced nations. Several portions of the country were under state of emergency until September 2021 because of Japan's sluggish vaccination rate and as of safety precaution due to the Olympic game. This has added to inflationary pressures elsewhere by delaying the recovery of consumer demand. For example, in September, airline rates in Japan rose by only 6.5 percent year-over-year, but in the United States they rose by 24.6 percent. Thus, a significant negative impact can be found on the air transportation sector. Whereas for construction sector, Businesswire (2021) mentioned that as a result of the residential building slowdown and the COVID 19 crisis, Japan's construction industry suffered a limited expansion in 2020. In addition, Japan's building industry slowed down as preparations for the Tokyo Olympics neared completion, resulting in a decrease in construction activity. Despite the downturn in the construction industry in 2020, the country's GDP will continue to expand. Annualized, the Japanese GDP shrank by 28.2 percent in the second quarter of 2020. GDP fell by a record-breaking amount in the third and fourth quarters of 2020, although it rebounded impressively in the following months. Lastly, as for impact arose on pharmaceutical sectoral performance Businesswire (2021) also mentioned that as a result of the COVID 19 outbreak and an increase in per capita healthcare spending in Japan, the country's demand for healthcare in terms of pharmaceutical sector, grew during the pre-event time of the Olympic games, and this growth is expected to continue in the post-event period as well. Thus, the three mention sectoral performance of Japan above is impacted both positively

and negatively towards the event of Tokyo 2020 Olympic game based on the period as of before and after the event.

3.4 Economic Implications in terms of gains and expenses for the Tokyo 2020 Olympic Games

Tokyo's bid to host the Olympic Games was clearly part of the Abenomics agenda. Increased investment and consumer demand were predicted to provide major economic benefits on a municipal, regional, and national scale. The Bank of Japan anticipated that between 2015 and 2018, when Olympic preparations were at their zenith, they would contribute an average of 0.2-0.3 percentage points to yearly economic growth rates.

The Tokyo 2020 Olympic and Paralympic Games will cost an estimated USD 15.84 billion, excluding ancillary costs associated with the organisation, such as airport building and road maintenance. When Tokyo hosted the Games in 2013, organisers said that the Games would cost USD 7.3 billion. By contrast, in December 2019, the fourth version of the budget was revealed, which included expenditures by TOCOG, the Tokyo Metropolitan Area Authority, and government agencies, which had already totalled USD 12.6 billion in 2019. These were the official estimates made before to the epidemic. According to research, the Olympic Games are the type of project that experiences the greatest cost overruns.

The entire cost of holding the Olympics is expected to exceed USD 20 billion and, according to some Japanese media, would be between USD 26 and 28 billion. The Japanese Board of Audit accused the organisers of forgetting to include USD 9.7 billion for Games-related projects in its evaluation. In December 2020, the organizers revealed the sixth version of the budget, which said that the game will cost USD 15.4 billion.

4. Conclusions and Recommendations

Referring to the overview of economical and capital market performance studied and developed for this conceptual paper, the perspective generated reveals that there has been a significant influence on Japan's economy and capital market performance as of before and after the event due to hosting Olympic Game of Tokyo 2020 during the pandemic of COVID 19. As highlighted by Martins and Serra (2007), the announcement of major sporting events has an impact on host nations' stock markets, and there can be seen positive economic impact on local economy. Thus, subsidies for the local economic development and maintenance are advisable to be considered. It is evidentially can be seen that hosting an international event during the outbreak of COVID 19 brings a greater impact towards the pharmaceutical sector of Japan. Although the increasing vaccination rate remarks a good progress of the sector, hosting the event during the illness is still active might bring the worst-case situation if the number of covid cases reported increases. Besides, the announcement of postponing the athletic event of Olympic brings an absolute shock in the index returns as well as of before and after event of hosting Olympic games of Tokyo 2020 as well.

Policymakers, capital market investors, sports, and other relevant businesses in developed Asian nations will benefit from this study. Stakeholders will be able to consider how to plan big sporting events as well as the implications for stock markets in developed Asian nations. This article has the potential to further as event study research to show governments in developed Asian nations the economic benefits of hosting international sporting events and to encourage authorities to consider bidding for future events as to increase the efficiency of the capital market and the country's economy. This paper will help capital market regulators and investors better understand the influence of sporting events on the stock market, enhance investing methods, and increase market efficiency. Besides, this paper also suggests that a developed Asian country like Japan is more efficient and sensitive to international news and events. The analysis also indicates that the announcement of a sporting event and the time period during which it takes place are critical for the host country, neighbouring countries, global investors, capital market authorities, policymakers, and monitoring agencies in order to improve the efficiency of the economic market.

5. Suggestions for Future Research

Last but not least, in the mere future hosting country of any international events should conduct researching the basis of before and after an event as to study the performance of key indicators that will be impacted due to the event as such how Olympic games hosted in Japan impacted its performance of capital market, investment market and also sectoral market. Although the key indicators may vary, government of the respective hosting country of the international event should appoint specific research team in the national university or can consider collaboration with participating countries of the event to study the economic performance of the respective countries as to imply necessary policy as per before and after the event. Policy implied before the event undergoes can help the government of host country to identify the key indicators, they have to focus more in terms of budget allocation while any policy that uphold after the event can stabilize the performance of the key indicated that have potential to be impacted from worst case scenarios.

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