A STUDY ON ROLE OF STOCK MARKET INDEX.

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ABSTRACT

Stock Market: The stock market refers to the collection of markets and exchanges where the issuing and trading of equities (stocks of publicly held companies), bonds, and other kinds of securities take place, either through formal exchanges or over-the-counter markets. It is also known as the equity market. The stock market is one the most vital components of the free-market economy, as it provides companies with access to capital in the exchange for giving investors a slice of ownership. A Stock market is one of the most important sources for companies to raise money. This allows trades to be publicly traded or raise additional capital for expansion by selling shares of ownership of the company in a public market. The buying and selling of equity shares of corporations take place on a stock market (buyers and sellers of stocks). Investors and traders looking for profits over the long or short term can be participants. The majority of the stockholders' prospects are long-term, and they gain from capital growth over time. However, traders concentrate on the minute price changes in equity shares, which typically persist for a few minutes or the duration of the trading session, in an effort to make quick gains. The two main exchanges in India where the majority of stock trading takes place are the Bombay Stock Exchange and the National Stock Exchange. Here, brokers who provide online trading services are used by both buyers and sellers to place orders. The T+2 format is used for the settlement cycle. Simply said, you have two days to complete the entire trading cycle, from the start to the end.

Keywords: Customer Satisfaction, Factors.

1. INTRODUCTION

The primary attraction of stock markets is that they give businesses and governments a way to raise money directly from investors while also offering liquidity to those same investors. Liquid markets have also been said to increase resource allocation and boost chances for long-term economic growth. Placing the order is the initial stage in the trade life cycle. The matching and execution of the placed order come next. The trade would subsequently be cleared by the stock exchange's clearinghouse. The settlement phase, which takes place on the last trading day, involves the pay-in and pay-out of taxes and securities.

The stock market is also anticipated to have a significant impact on how management at a company is penalized. Equity market development in India gained prominence from the very beginning of liberalization in the early 1980s. After the liberalization, the process gained additional prominence, and in 1991, it broadened and deepened as the expansion of capital markets was considered a key component of the reformation agenda.

Increasing share prices are usually linked with increased business investment and vice versa. This also interrupts the wealth of households and their needs. Thus, central banks tend to keep an eye on stock market activity and the functioning of the financial system.

Variations in the stock price are primarily determined by external factors, such as socio-economic conditions, inflation, and exchange rates. Capital is not a factor that influences the current earnings of a company. Stock return growth has been positively influenced by balanced capital. According to economic and financial theories, macroeconomic factors affect stock prices. Among the changes in the economy are those affecting GDP, unemployment rates, innovations, output, investment, consumption, energy, national income, inflation, lower productivity growth, lower company earnings, increasing profits, aging populations, and savings.

Stock Market Conditions: General conditions of the stock market are defined in two ways:

Bull Market: The stock market is said to be in a bull market when it is always moving upward. Bullish refers to a stock that appears to be appreciating in value.

Bear Market: A bear market is when the stock market is consistently moving down. Bearish stock behavior refers to a stock that appears to be losing value.

Key terms in the Stock Market:

Open: The value of the stock at the start of the day. (The next morning)

High: The stock prices increased to their highest point for the day.

Low: The stock price drops down to its daily low.

Close: The closing price of the stock at the end of market timings or the final closing price of the stock for the day.

Volume: Volume is the number of shares in a given market.

Bid: The buying price is called the Bid price.

Ask/Offer: The selling price is called the offer price.

Beta: Beta is a numeric value that measures the variations of stock changes in the overall stock market.

Agent: In the stock market, an agent is a company that handles the purchasing and selling of shares on behalf of the investor.

Blue Chip Stocks: Shares of very large and well-established companies with an excellent reputation.

Board lot/round lot: Every board defines a standard trading unit that relies on the per-share price. Board lot sizes can be 50, 100, 500, or 1000 units.

Call option: It is a contract between a buyer and a seller to purchase a certain stock at a certain price.

Put option: A put option gives you the right, but not the obligation, to sell a stock at a specific price.

Spread: The difference between the ask and bid prices of a security or asset, such as a stock, bond, or commodity, is known as the spread.

Stock Exchange:

According to the Securities Regulation Act of 1956, a stock exchange is an organization or individual established to support regulating and controlling business activities involving the acquisition, sale, and dealing of securities. By offering a common platform for the transaction, a stock exchange serves as a mediator between businesses and investors and aids in capital development.

Exchanges also serve as the clearinghouse for every transaction, collecting and delivering the shares and ensuring that the seller of a security will be paid. As a result, there is no longer any chance that a particular buyer or seller will experience a counterparty default.

Features:

- It is a wholesome market
- It includes second-hand securities
- Their dealings are only in registered securities
- It indicates the growth and security of a business in the index of an exchange
- It is a voluntary association of persons dealing in securities
- It is the market used for long-term financing i.e., Capital market

2. REVIEW OF LITERATURE

❖ Alaoui Mdaghri determined whether the global Coronavirus (COVID19) pandemic will impact stock market liquidity based on the depth and tightness dimensions. Through the panel data regression model the paper shows that the liquidity related to the depth measure was positively correlated with the growth in reported deaths and the stringency index and also market depths were positively correlated with confirmed COVID-19 cases. According to this study, both the depth and the tightness of the market have decreased due to the pandemic.

❖ Ravleen Kaur compared several major world stock exchanges in terms of both qualitative and quantitative rankings. India's Stock exchange includes both BSE and NSE and various regulations are differently applied on different stock exchanges over the world. The analysis is formed in two parts, which are quantitative and qualitative in which the stock exchanges of different countries are compared to their indexes. During the research, six main stock exchanges were examined for 16 years of data from 2001 to 2018 and the integration of Global Markets has forced the Indian Stock Exchange to know how it compares to its international markets.

❖ Marcin Stawarz and Michal Boskovic's the stability of stock markets during the COVID-19 pandemic. A key purpose was to find how various sectors reacted to the COVID-19 shock and find out which sectors managed to keep stability and remained protected from the outbreak. By using two clustering methods: K-means and Ward techniques, the study found that 5 clusters of sector indices in the short term and 4 clusters in the medium term could be identified, and also the cluster composition is equally stable over time and none of the obtained clusters are unique.

❖ Taofeek Olusola and Taofeek Ayinde investigated how the global economic recovery affected the stability of the emerging African stock markets, using normality statistical tests and trend analysis with the use of panel quantile regression. The study found that this hypothesis should be rejected because most developing African stock

markets are unstable, not only as a result of the global financial crisis but also because there are several institutional and structural rigidities in typical African economies.

❖ Man Dang and Miguel Vega investigated the effect of COVID-19 on the stock market behavior during the crash of March 2022 using data from S&P 1500 firms. However, some sectors may benefit from the pandemic. They excluded firms that do IPOs in March 2022, as IPO stocks begin trading in the middle of the month. The study found that natural gas, food, healthcare, and software stocks earn high positive returns, whereas equity values in petroleum, real estate, entertainment, and hospitality sectors fall steeply. Loser stocks display extreme unequal volatility and negatively correlate with stock returns.

❖ Shameem Jawed and Manish Sarkhe linvestigated the changes in the dynamics of the stock markets of the G20 nations and their ties in the outcome of COVID-19. The study used Network theory and Detrended cross-correlation analysis (DCCA) to determine the cross-correlation coefficient between index price series of countries in pairs. This indicates that COVID-19 has caused contagion in the global equity market, and therefore, increased the risk of international portfolio diversification.

❖ Praveen Ranjan Srivastava examined the impact of the Coronavirus on the stock market during prelockdown and post-lockdown phases as well as the difference in Twitter sentiment about the Coronavirus during pre and post covid-19. The authors extracted tweets and comment related to Coronavirus from Twitter and used the closing prices of the stock exchanges' stock markets in the USA (S&P 500), the UK (London Stock Exchange), China (Shanghai Stock Exchange), and India (National Stock Exchange. The study uses a machine learning method to analyze and follow investor sentiment on Twitter and found that the only relief for the recovery of financial markets is the lowering of COVID-19 cases.

❖ Muhammad Mohsin and Wang Huianalyzed the investor psychology and stock market behavior during COVID-19. This study explores Shanghai, Nikkei 225, and Dow Jones stock markets by employing principal component analysis. The results showed that investor psychology was negatively related to three selected stock markets under psychological flexibility and pandemic burden. This research will open up new dimensions in understanding investor sentiment towards investment decisions in the stock market under special conditions during the outbreak of pandemics.

❖ Khakan Najaf aims to identify the reasons behind the biggest stock market decline on the 13th March 2022 (Black Friday). By using graphical representation and the OLS regression model the study found that there is a unidirectional relationship between China and the global stock markets. As a result, the value of the t-1 closing price on the China stock market describes the value of the t price on the global stock markets. And the study predicts that the stock market will suffer its sharpest one-day decline since October 1987 (Black Monday) on 13th March 2022.

❖ Elias kampouris and Stathis polyzoic study financial contagion risk by identifying movements and spillover effects from Covid-19 and lockdowns to other countries. By using dependence dynamics and network analysis, the study identified volatility and contagion risk among stock markets during the COVID-19 pandemic. The results verify the presence of infected risk on the dates where there is thought of a significant increase in the correlations and consequences. This verifies that this approach is highly effective in identifying and predicting risk inside financial networks and uses additional methods instead of dynamic conditional correlations to measure the risk.

❖ Badar Nadeem Ashraf examined the expected economic impact of government actions by analyzing the effect on stock market returns by using the mutual panel ordinary least squares regression model. The study made the hypotheses regarding the direct and indirect impact of government social distancing measures, health policies, and economic support programs on stock market returns. Findings show that announcements of government social distancing measures have a direct negative effect on stock market returns due to their adverse effect on economic activity, while an indirect positive effect through the reduction in COVID-19 confirmed cases.

❖ Afees A.Sailsu evaluated the connection of health-news trends in the predictability of stock returns. The study uses a predictive model to determine the clear relationship between health-related news and stock returns of the worst-hit countries. The results show that health news has a negative and statistically significant effect on stock returns, indicating that returns decrease as more information is related to health issues since the pandemic effect. Findings suggest that rational investors who are seeking to maximize returns may need to evaluate the extent of uncertainty linked with various diseases before taking any investment decision in the stock market.

❖ Abu Amin and Md Lutfur Rahman explained how the Australian stock market responded to the uncertainties created by the COVID-19 pandemic and followed government incentive packages on their stock market. The Author mainly focused on two negative events and two positive events. The study uses an event-study methodology and cross-sectional study to check out the effects of two negative and two positive events. Based on

this study, shows a negative stock market reaction to the pandemic announcement. Finally, significant drivers of abnormal returns are size and liquidity and it appears economically significant.

❖ Mohammad Noor examined the impact of COVID-19 on India's stock market during the lockdown period. The study is based on the Market Model Event approach and the market has responded positively with significantly positive abnormal returns during the current lockdown period. At last, investors lost control and it has been reflected in negative AAR in the post-lockdown period. The study concludes that the present lockdown period led to a positive abnormal return, and confirms that lockdowns have a beneficial effect on the stock market performance of stocks until the situation improves in the Indian context.

❖ Mohammad Bani Hani examined how COVID-19 pandemics affect leading stock market indices for a group of the top affected countries. The study analyses stock market reactions to a pandemic outbreak of COVID-19 using a standard event study methodology. It has been found that the first confirmed COVID-19 case announcement negatively impacted the returns. Further, these effects became widespread after the WHO announced the COVID19 pandemic on March 11, 2022.

❖ Sameer Yadav studied the volatility of the Indian stock market. The study uses daily closing index values and averages to get the index value for each year. Commonly, the higher the volatility, the greater the risk associated with the security. The results show that stock market cycles have reduced in the recent past. Volatility has declined in the post-liberalization phase for both the bull and bear phase of the stock market cycle. Developed markets continue to provide over a long period with higher returns constituting low volatility.

❖ Hai Yue Liu and Aqsa Manzoor examine the short-term effects of the Coronavirus outbreak in 21 major stock market indices in affected countries. Based on the event study method, it was found that not only can business factors have an impact on investment risk, but also sudden events can cause investors to lose their money. The results from an event study method indicate that stock markets in major affected countries and areas fell rapidly after the virus outbreak. Countries in Asia experienced more negative abnormal returns as compared to other countries.

❖ Debjiban Mukherjee analyzed the activities and movements of the Indian Stock Market in its international markets. A Comparative Analysis was conducted for several different years, to compare the different exchanges, both qualitatively and quantitatively. The period has been divided into different periods to examine the correlation between the various exchanges so that the Indian markets can be compared to their global counterparts. Studies mainly investigated the efficiency of the stock market on a stand-alone basis and then attempted to conclude decisions taken by investors. Moreover, it illustrates the extent to which the various stock exchanges have an impact on each other, including the influences of other exchanges on Indian markets.

❖ Hawkar Anwer and Bayar Gardi examined the key factors to be considered before starting an investment in financial markets. By using the random sampling method it was found that (1) economic growth has a high predictive power over financial markets, suggesting that economic growth would have a direct beneficial influence on financial markets(2) styles have appreciably expected monetary markets, this shows that the differentiation method can have an inclined effect on monetary markets (3) demographic qualities have significantly expected monetary markets, this shows that demographic qualities can have an inclined effect on monetary markets.

OBJECTIVES:

❖ To study the impact of stock prices, GDP, inflation rate, and unemployment rates before and during covid among 5 countries.

❖ To study the relationship between global stock prices, GDP, inflation rates, and unemployment rates over a range of 7 years.

❖ To analyze the individual performance of stock indices

HYPOTHESIS OF THE STUDY:

H1: There is a significant change in the Closing stock prices, Gross Domestic Product, inflation

rates, and unemployment rates among 5 countries before and during the covid.

H2: There is a relationship between Closing stock prices and Gross Domestic Product, inflation

rates, and unemployment rates.

3. RESEARCH METHODOLOGY

Need For the Study- As most of the entities are globalized, there is a requirement of understanding the entire global stock market for investing. Every investor needs to analyze before investing in the stock market as they are subjected to risk. It also shows and growth of the industry.

Scope Of the Study: The scope of the study is limited to selected stock indices globally. Data required for the study be collected from 2017-to 2023. The study is based on secondary data

4. DATA ANALYSIS &INTERPRETATION

Data of 5 stock indices during 2017-2023 were collected from various sources. Mainly average closing prices are considered as the dependent variable for the data analysis.

Table.1

Indices	The yearly average closing price of indices 2017-2023						
	2017	2018	2019	2020	2021	2022	2023
NASDAQ	4932.729	5015.927	6293.024	7405.502	8013.87	10295.29	14398.9
SSE	3657.402	2978.145	3257.327	2920.177	2928.942	3109.778	3529.007
NIKKEI	19227.2	17044.59	20281.63	22285.02	21779.97	22709.56	28550.37
HANGSENG	24145.21	21511.54	26453.67	28804.14	27650.63	24915.82	26751.06
NIFTY	8294.05	8139.233	9661.417	10826.45	11535.4	11150.46	15942.68

Table.2

Countries	GDP from 2017 to 2023						
	2017	2018	2019	2020	2021	2022	2023
USA	2.70%	1.70%	2.30%	2.90%	2.30%	3.40%	5.70%
CHINA	7%	6.80%	6.90%	6.70%	6%	2.20%	8.10%
JAPAN	3.10%	2.80%	3.40%	3.30%	2.60%	3.30%	5.80%
HONGKONG	3.40%	2.20%	3.79%	2.80%	1.70%	6.50%	6.40%
INDIA	8%	8.30%	6.80%	6.50%	3.70%	6.60%	8.90%

Table.3

Countries	Inflation rates from 2017 to 2023						
	2017	2018	2019	2020	2021	2022	2023
USA	0.12%	1.26%	2.13%	2.44%	1.81%	1.23%	4.70%
CHINA	1.44%	2.00%	1.59%	2.07%	2.90%	2.42%	0.98%
JAPAN	0.80%	0.13%	0.50%	1.00%	0.47%	0.02%	0.23%
HONGKONG	2.99%	2.41%	1.48%	2.41%	2.86%	0.25%	1.57%
INDIA	4.91%	4.95%	3.30%	3.90%	3.70%	6.60%	5.13%

Interpretation: By considering the above independent and dependent variables in which tools like Descriptive statistics, correlation, and paired t-tests are used based on hypothesis.

H_{1a}: There is a relationship between Closing Stock prices and Gross Domestic Product, inflation rates, and unemployment rates.

USA (NASDAQ): A stock market index known as the NASDAQ Composite (IXIC) contains practically all of the companies listed on the NASDAQ stock exchange. Along with the S&P 500 Index and the Dow Jones Industrial Average, it is one of the most well-known stock market indexes in the US. The NASDAQ Composite is significantly biased toward businesses in the information technology industry. Over 90% of the NASDAQ Composite's movement is accounted for by the NASDAQ 100, which consists of 100 of the biggest non-financial businesses listed on the Nasdaq Composite.

Table.4

Unemployment rates from 2017 to 2023

Countries	2017	2018	2019	2020	2021	2022	2023
USA	5.30%	4.90%	4.40%	3.90%	3.70%	8.10%	5.30%
CHINA	4.63%	4.53%	4.40%	4.30%	4.50%	5.00%	4.80%
JAPAN	3.40%	3.10%	2.80%	2.40%	2.40%	2.80%	2.80%
HONGKONG	3.30%	3.40%	3.10%	2.80%	2.90%	5.80%	5.32%
INDIA	5.44%	5.42%	5.36%	5.30%	5.30%	4.70%	8.70%

NASDAQ Composite is a capitalization-weighted index, and its price is determined by adding the closing price and index share of each security included in the index. During the 2022 stock market crash, on March 23, 2022, the index hit a low of 6,860.

The below Tables.1&2 show the Descriptive statistics and correlation of dependent and independent variables for the period 2017-2023 i.e., before and during covid for the 5 countries.

Table.5 Descriptive Statistics

	Mean	Std. Deviation	N
V1	7973.60600	3449.489913	7
V4	.019564	.0142494	7
V6	.02029	.027207	7
V8	.05086	.014724	7

Table.6 Correlations

		V1	V4	V6	V8
Pearson Correlation	V1	1.000	.814	.153	.326
	V4	.814	1.000	.577	-.187
	V6	.153	.577	1.000	-.706
	V8	.326	-.187	-.706	1.000
Sig. (1-tailed)	V1	.	.013	.372	.238
	V4	.013	.	.088	.344
	V6	.372	.088	.	.038
	V8	.238	.344	.038	.
N	V1	7	7	7	7
	V4	7	7	7	7
	V6	7	7	7	7
	V8	7	7	7	7

Interpretation:

1. There is a high degree of correlation between Closing price and inflation rate for which r= 0.814.
2. There is no correlation between the closing price and GDP for which r=0.153
3. There is a low degree of correlation between the closing price and unemployment rate for which r=0.326

CHINA (SSE) The SSE Composite Index also known as the SSE Index is a stock market index of all stocks (A shares and B shares) that are traded on the Shanghai Stock Exchange.

SSE Indices are all calculated using a Paasche weighted composite price index formula. This means that the index is based on a base period on a specific base day for its calculation. The base day for SSE Composite Index is December 19, 1990, and the base period is the total market capitalization of all stocks of that day. The Base Value is 100. The index was launched on July 15, 1991.

There are also SSE 180, SSE 50, and SSE Mega-Cap Indexes for the top 180, 50 and 20 companies, respectively.

The below tables.3&4 shows the Descriptive statistics and correlation of dependent and independent variables for the period 2017-2023 i.e., before and during covid for the 5 countries.

5. CONCLUSION OF THE STUDY

Using macroeconomic metrics including the Gross domestic product, inflation rate, and unemployment rate, the study looked at how the COVID-19 epidemic influenced stock indexes internationally. Different variables were analyzed statistically to determine the impact of the COVID-19 Pandemic on the countries before and during the epidemic. Stock index prices have fluctuated significantly during these intervals. Considering the volatility in the stock market, the most appropriate solution to volatility is not to sell assets and keep withholding, but to rebalance the portfolio to protect long-term goals. Over half of the countries have already faced challenges due to the unprecedented pandemic. Stock markets were destroyed and economic output fell to historic lows due to the spread of Covid-19. Therefore, our paper focuses on using global stock indices and macroeconomic indicators to provide an original, yet simple, statistical analysis of the COVID-19 pandemic.

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