



IMPACT OF MACROECONOMIC INDICATORS ON STOCK MARKET PERFORMANCE

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ABSTRACT-----

To study the stock market is a key driver of the economic growth of a nation by offering companies a platform to raise funds and investors a means to increase their wealth. It is a barometer of the economic well-being of a country, capturing the sentiment of businesses, investors, and consumers. Yet, stock market performance is not only driven by company-specific factors but also by macroeconomic indicators that determine the overall economic landscape.

Purpose

"Impact of Macroeconomic Indicators on Stock Market Performance" is to explore and analyze the relationship between macroeconomic variables and stock market trends. It aims to provide insights into how factors like GDP growth, inflation, interest rates, unemployment rates, and fiscal or monetary policies influence investor behavior, market volatility, and stock valuations.

Design/Methodology/Approach

The research starts with a comprehensive literature review, analyzing existing studies and theoretical frameworks that will form the basis of the study. Relevant macroeconomic data, including GDP and inflation, interest rates, and stock market performance metrics such as index trends and stock returns, will be sourced from reliable databases on government sites, central banks, and financial platforms. A comparative analysis will then be conducted to examine trends across different countries, industries, or time periods to identify patterns and anomalies. Finally, the study will interpret the findings within the context of economic theories, offering valuable insights and discussing implications for investors, policymakers, and other stakeholders.

Findings

The key macroeconomic factors that affect the stock market are interest rates, inflation, GDP growth, unemployment rates, and monetary and fiscal policies. Poorer market performance is usually seen with higher interest rates and unemployment because of increased costs and economic downturns. Conversely, lower rates and unemployment support growth. Moderate inflation supports market optimism, but high inflation erodes confidence. Positive GDP growth goes hand in hand with strong markets, and expansionary policies enhance performance, whereas contractionary measures can dampen it. These indicators together provide a framework for analyzing stock market trends.

Originality

The study employs high-frequency regional data and state-of-the-art methodologies, such as machine learning and econometric models, to explore how changes in current macroeconomics influence the stock market. It compares the market sensitivities between countries, industries, and periods and offers sector-specific insights on asset class responses to economic shocks. Further, it offers prescriptive recommendations to policymakers and investors with new light on the dynamic relationship between economic conditions and market performance.

KEYWORDS: Macroeconomic Indicators, Stock Market Performance, GDP Growth ,Inflation, Interest Rates ,Unemployment Rates ,Monetary Policy ,Fiscal Policy , Market Volatility, Exchange Rates



JEL Codes: E44,G12,G14,E32,E52,E62,G15

Article classification: Research Article, Empirical Study, Financial Performance Analysis

INTRODUCTION

The stock market plays a pivotal role in the economic development of a country by providing a platform for businesses to raise capital and for investors to grow their wealth. It acts as a barometer of a nation's economic health, reflecting the collective sentiment of businesses, investors, and consumers. However, stock market performance is not influenced solely by company-specific factors; it is heavily impacted by macroeconomic indicators that shape the broader economic environment. Macroeconomic indicators such as Gross Domestic Product (GDP) growth, inflation, interest rates, and unemployment rates are critical drivers of stock market dynamics. These indicators provide insights into the overall economic conditions and directly influence investor behavior and market trends. For instance, positive GDP growth signals a healthy economy, boosting investor confidence and driving stock prices upward. Conversely, high inflation and rising interest rates can dampen market performance by increasing costs and reducing corporate profitability. The relationship between macroeconomic factors and stock market performance is complex and multifaceted. Governments and central banks play a vital role in managing these indicators through monetary and fiscal policies. Monetary policies, such as adjusting interest rates or controlling the money supply, influence borrowing costs and liquidity in the economy. Fiscal policies, including government spending and taxation, impact economic growth and consumer spending, which in turn affect market performance. Global economic events also play a significant role in shaping stock market performance. Factors such as geopolitical tensions, oil price fluctuations, and currency exchange rates can create volatility and uncertainty in domestic markets. Investors must consider both domestic and international economic conditions when making investment decisions to navigate market fluctuations effectively. Understanding the impact of macroeconomic indicators on stock market performance is essential for investors, policymakers, and financial analysts. By analyzing these indicators, stakeholders can better predict market trends, manage risks, and develop informed investment strategies. This study aims to explore the relationship between key macroeconomic factors and stock market performance, providing valuable insights into how economic changes influence market behavior and how investors can optimize their portfolios in response to these changes.

REVIEW OF LITARATURE

Isbat Alam, Muhammad Mohsin, Khalid Latif, Muhammad Zia-ur-Rehman The main purpose of this research is to empirical inspect the association exist among the China stock exchange (SSE), Pakistan Stock Exchange (KSE-100) with macroeconomic variables (Gross Domestic Product, Balance of Trade, Foreign Direct Investments, Lending interest rate and Money Supply). The annual time series data from 1995 to 2019 used to find out the results. Macroeconomic variables have an essential role in any changes in every economy. Any unexpected variations amongst these variables influence the economy in several ways. Multiple regression techniques were analysed and examine for the significance of data to approximate the probable impacts of variables on stock market prices. Breusch Godfrey Serial Correlation with heteroskedasticity assessment is utilized to investigate the correctness as well as residual normality of series data

Chetana R. Marvadi The present study attempts to evaluate the impact of macroeconomic variables on the performance of the Indian stock market during the study period 1993-94 to 2018-2019. Gross Domestic Product, Broad Money, Crude oil Price, Current deficit and Foreign Exchange Reserve have been used as Macroeconomic Indicators whereas; Sensex and Nifty have been used as Stock Market performance to study the research objectives. Step-wise Backward Elimination Method of Multiple Regression Analysis has been used. It is found that GDP and FER are the significant variables in explaining the variations of Sensex whereas FER, CD and COP are the significant variables contributing to the variations of NSE Nifty.

J. K. M. Kuwornu This study investigates the effect of macroeconomic variables on the Ghanaian stock market returns using monthly data over period January 1992 to December, 2008. Macroeconomic variables used in this study are consumer price index (as a proxy for inflation), crude oil price, exchange rate and 91 day Treasury bill rate(as a proxy for interest rate). The study employs the Johansen Multivariate Co-integration Procedure. The empirical results reveal that there is co-integration between the four macroeconomic variables and stock returns in Ghana indicating long run equilibrium relationship. Further, the results reveal that; in the short run, Treasury Bill Rate significantly influences the stock returns, with an elasticity of 0.005, implying that a 1% rise in the Treasury bill rate will lead to a 0.005% rise in the stock returns. The inflation rate is also significant at 1% with elasticity -0.135744, implying that a 1% increase in inflation rate will decrease stock returns by 0.14 %. The residual value of 0.785548 of the Error Correction Model indicates that about 79% of the deviations of the stock



returns are corrected in the short run, which is quite high and encouraging for an emerging market like the Ghana Stock Exchange

Khaled Hussainey The purpose of this paper is to investigate the effects of macroeconomic indicators (the interest rate and the industrial production) on Vietnamese stock prices. The paper examines how US macroeconomic indicators affect Vietnamese stock prices .Design/methodology/approach – The authors use monthly time series data covering the period from January 2001 to April 2008. The methodology introduced by Nasseh and Strauss and Canova and de Nicolo to investigate the linkage between stock prices and macroeconomic indicators

Seema Narayan and Paresh Kumar Narayan The aim of this paper is to examine the impact of US macroeconomic conditions—namely, exchange rate and short-term interest rate—on the stocks of seven Asian countries (China, India, the Philippines, Malaysia, Singapore, Thailand, and South Korea). Using daily data for the period 2000 to 2010, we divide the sample into pre-crisis period (pre-August 2007) and crisis period (post-August 2007) we find that in the short-run interest rate has a statistically insignificant effect on returns for all countries except the Philippines in the crisis period, while except for China, regardless of the crisis, depreciation had a statistically significant negative effect on returns. When the long-run relationship among the variables is considered, for four of the seven countries (India, Malaysia, Philippines, Singapore, and Thailand) while there was cointegration in the pre-crisis period, in the crisis period there was no such relationship, implying that the financial crisis has actually weakened the link between stock prices and economic fundamentals

Wan Mansor Wan Mahmood, Ph.D* and Nazihah Mohd Dinniah In particular, we focus our analysis on the long run equilibrium and short run multivariate causality between these variables. The results indicate the existing of a long run equilibrium relationship between and among variables in only four countries, i.e., Japan, Korea, Hong Kong and Australia. As for short run relationship, all countries except for Hong Kong and Thailand show some interactions. The Hong Kong shows relationship only between exchange rate and stock price while the Thailand reports significant interaction only between output and stock prices. An accurate estimation of the relationship between the economic variables and stock market behaviour enables the investors - both local and foreign to make effective investment decisions. At the same time, for the policy makers, a precise prediction of this type of relationship may help government agencies in designing policies to encourage more capital inflows into the respective countries' capital market

Amit Hedau This paper analyses the macroeconomic factors influencing performance of Indian stock market index NIFTY 50. The study is unique in nature as it employ both, primary and secondary to derive the conclusion. Initially, nine years monthly data of macroeconomic variables are regressed against monthly performance of NIFTY 50 index using logistic regression. In second stage the outcome of regression analysis is ratified with primary data collected through face to face interview of the stock market expert. The secondary data analysis confirm Dow jones index and exchange rate movement are the main determinants of NIFTY 50 index. However, expert opined that other factors like political stability, economic situation in developed and bilateral relations of India with other countries are also important to forecast the NIFTY 50 index movement. This is the first study in Indian context, to combine domestic and international factors to forecast NIFTY 50 index movement.

CHIJUKA Ify Michael This study empirically tests for short-run and long-run connection between exchange rate, inflation rate and market capitalisation. Data for the study were collected from the Nigerian central bank data base. The ex-post facto research design was employed using the time series econometric techniques, to perform the diagnostic tests and inferential analyses of the data. Based on the data analyses, the study revealed positive and insignificant connection between exchange rate and market capitalisation, which implied that the continuous depreciation of the naira to the dollar have positive and inconsequential influence on the Nigerian capital market at both the short run and the long run. The result as well revealed negative and insignificant connection between inflation rate and market capitalisation, which implied that the continuous increase in the rate of inflation would adversely but with inconsequential influence on the Nigerian capital market at both the short run and long run

Agung Pramudito This research aims to empirically test the direct and indirect influence of macroeconomics represented by inflation indicators, gross domestic product, and Bank Indonesia (BI) interest rates as independent variables on stock prices as the dependent variable and financial performance (ROA) as the intervening variable. The population of this research is pharmaceutical companies included in the IDX-IC F211 classification; the sample of this research is companies listed from 2020 to 2021. This research uses path analysis and panel regression on reviews as a test tool to detect the direct and indirect influence of relationships between the independent and dependent variables

Sheridan Titman Firms that substantially increase capital investments subsequently achieve negative bench mark adjusted returns. The negative abnormal capital investment/return relation is shown to be stronger for firms that have greater investment discretion, i.e., firms with higher cash flows and lower debt ratios, and is shown to be



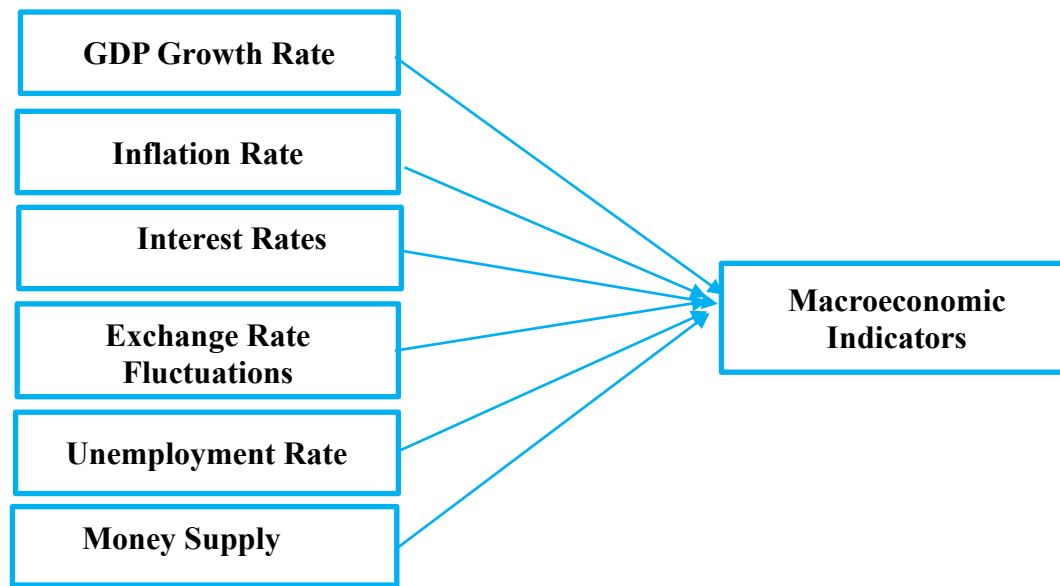
significant only in time periods when hostile takeovers were less prevalent. These observations are consistent with the hypothesis that investors tend to underreact to the empire building implications of increased investment expenditures.

METHODOLOGY

The impact of macroeconomic variables on stock market performance, it draws upon historical data for GDP growth, inflation rates, interest rates, and unemployment rates from established sources. This paper applies statistical, econometric, and machine learning methods-which include regression analysis-to describe patterns and interdependencies. Geographical areas, time horizons, and the specific indices being evaluated all come within its scope, factoring in international economic shocks and geopolitical events. Validation and robustness checks of the models across datasets and horizons guarantee that the results hold and are replicable.

RESEARCH METHODOLOGY

- **Conceptual Model:**



Statement of the Problem

The macroeconomic variables and stock market performance is complex and varies across regions, industries, and time periods. Multiple factors, including investor psychology, geopolitical events, and global conditions, make isolating specific effects challenging. This creates difficulties for investors in predicting market movements and for policymakers in designing effective economic strategies, while offering limited actionable insights for researchers.

Research Gap

Macroeconomic indicators such as GDP, inflation, and interest rate changes characterize these influences, even though the aggregation of all impacts is mostly unaccounted for in individual indicators. Technological change, geopolitical instability, and post-pandemic adjustment shapes market dynamics but are challenging to capture. Most analyses are devoid of cross-sectoral and cross-regional comparison. A comprehensive, updated analysis using diversified markets, multiple indicators, and advanced methodologies is necessary to uncover deeper relationships and offer actionable guidance for investors and policymakers.

Objectives of the Study

- To Analyze the Relationship Between Macroeconomic Indicators and Stock Market Performance.
- To Assess the Impact of Monetary and Fiscal Policies on Market Volatility.
- To Understand the Role of Inflation and Interest Rates in Stock Valuations.
- To Examine the Effect of GDP Growth on Different Stock Market Sectors.
- The Influence of Unemployment Rates on Investor Confidence.

Hypothesis of the Study

H1: Inflation has a highlynegative association with the performance of the stock market as higher business costs and reduced consumer purchasing power negatively affect corporate earnings.



H2: Interest rates have a strong influence on the performance of the stock market, where increased rates result in lower stock prices as higher borrowing costs reduce corporate profits and discourage equity investments.

H3: GDP Growth positively influences stock market performance, as economic growth boosts corporate profits and investor confidence, driving stock prices higher.

H4: Unemployment is inversely related to stock market performance, with higher unemployment indicating economic distress and weaker stock returns.

Limitations of the Study

Macroeconomic impacts on the stock market faces challenges like incomplete or inconsistent historical data, and difficulty isolating macroeconomic effects from geopolitical, technological, or sentiment-driven factors. Results may be sensitive to specific time frames, making them less applicable to other financial cycles or markets with different structures. Simplified models may fail to capture complex, nonlinear relationships between variables, and delayed impacts from macroeconomic indicators on stock prices may be mismeasured.

ANALYSIS & INTERPRETATION

Reliability Analysis

Measurement tools employed in social research must demonstrate both validity and reliability. The observation score obtained from a measurement tool can be categorized into a valid observation score, a biased observation score, and an error component. The existence of a biased value correlates with validity, while the existence of an error value correlates with reliability. Numerous techniques exist to assess the validity and reliability of a measurement tool. For instance, construct validity is assessed through factor analysis, while internal consistency is evaluated using Cronbach's alpha. This study derives the calculation of Cronbach's alpha from a sample, proposing an estimator for Cronbach's alpha under complex sample designs and nonresponse conditions. The proposed method is evaluated against various existing estimators of Cronbach's alpha within a multivariate normal distribution in a simulation study (Park,2021).

Table-1

Variables	Numbers of Items	Cronbach Alpha
GDP Growth Rate	4	0.786
Inflation Rate	4	0.824
Interest Rates	4	0.841
Exchange Rate Fluctuations	4	0.841
Unemployment Rate	3	0.800
Money Supply	3	0.785
Macroeconomic Indicators	3	0.776

INTERPRETATION

Interest Rates (0.841) & Exchange Rate Fluctuations (0.841): High reliability that Is the measures for these variables are highly consistent.

Inflation Rate (0.824) & Unemployment Rate (0.800): High reliability, indicating strong internal consistency.
GDP Growth Rate (0.786) & Money Supply (0.785): Proper reliability, such that the measures are reliable but could be refined.

Macroeconomic Indicators (0.776): Reliable, but the lowest value in all variables, indicating scope for improvement in measuring consi

Table -2

Hypothesis	Regression Weights	Beta Coefficient	R ²	P- Value
H1	GDP Growth Rate & Macroeconomic Indicators	0.658	0.432	.000
H2	Inflation Rate & Macroeconomic Indicators	0.568	0.323	.000
H3	Interest Rates & Macroeconomic Indicators	0.699	0.489	.000
H4	Exchange Rate Fluctuations & Macroeconomic Indicators	0.619	0.383	.000
H5	Unemployment Rate & Macroeconomic Indicators	0.758	0.575	.000
H6	Money Supply & Macroeconomic Indicators	0.704	0.496	0.00



Unemployment Rate & Macroeconomic Indicators (0.758, 0.575)

There is the highest correlation, which implies that unemployment is strongly correlated with the general macroeconomic performance. It can reflect negatively on economic conditions through an increased unemployment rate.

Money Supply & Macroeconomic Indicators (0.704, 0.496)

A high positive correlation implies that the movement of money supply has a significant effect on the larger economy, perhaps affecting inflation, interest rates, and GDP.

Interest Rates & Macroeconomic Indicators (0.699, 0.489)

High correlation means that interest rates are an important determinant of macroeconomic conditions, influencing investment, inflation, and exchange rates.

GDP Growth Rate & Macroeconomic Indicators (0.658, 0.432)

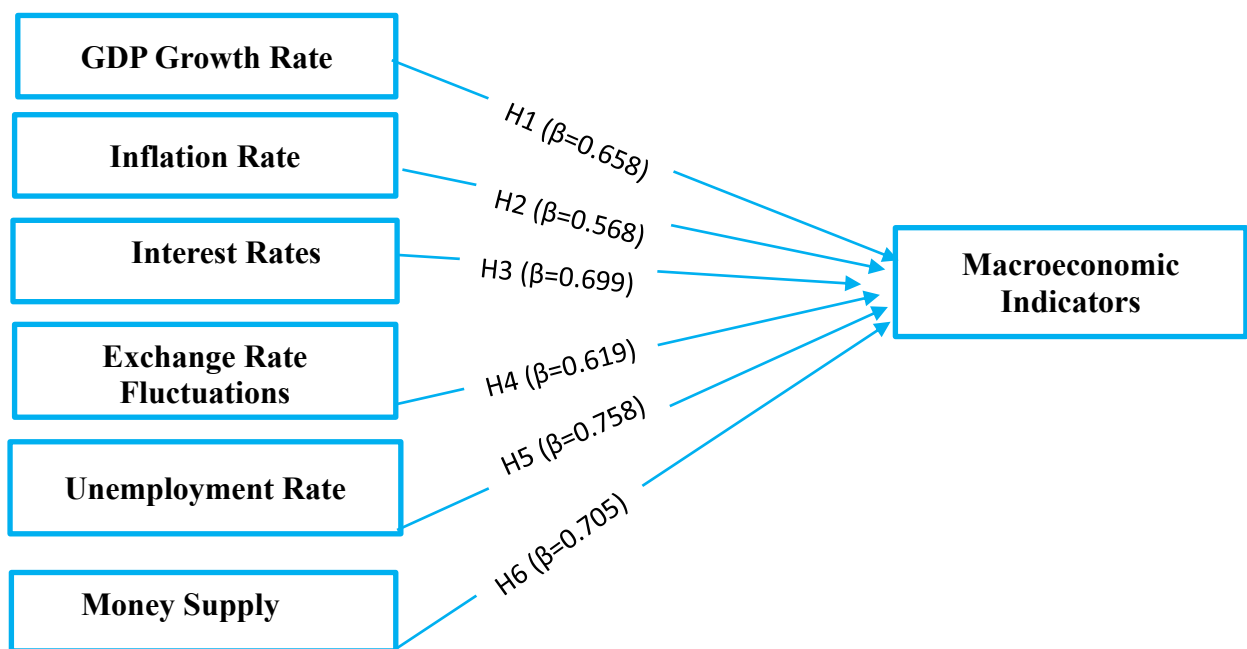
There is a moderately strong relationship that signifies that economic growth is heavily determined by macroeconomic policies and conditions.

Exchange Rate Fluctuations & Macroeconomic Indicators (0.619, 0.383)

There is a moderate correlation that implies that movement in the exchange rate has an impact on the overall economy, influencing trade balance, inflation, and investment flows.

Inflation Rate & Macroeconomic Indicators (0.568, 0.323)

Although still strong, this is the lowest correlation of the indicators listed. Inflation does affect the economy, but perhaps other variables would have a stronger influence



CONCLUSION

The analysis identifies that macroeconomic measures have a diverse role to play in determining the performance of stock markets. Prime determinants like the unemployment rate, money supply, and interest rates have very strong correlations with market movements, reflecting the immediate influence of the labor market scenario and monetary policy on investor morale and corporate profitability. An increasing unemployment rate generally reflects reduced consumer spending and possible decreases in corporate profits, which weaken the market performance. Higher money supply, on the other hand, lifts liquidity to spur stronger stock prices, and movements in interest rates directly macroeconomic factors' effect on share performance for a few seconds influence borrowing cost and investment.

In addition, GDP growth is a key indicator of general economic well-being and investor sentiment, typically manifesting in positive market trends. While the inflation rate has a relatively weaker relationship, its impact is



entangled with other factors, and both high inflation and deflation can bring about considerable market volatility. Exchange rate movements further complicate the picture, particularly in internationally integrated economies, by affecting trade balances and capital flows.

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