IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

RELATIONSHIP BETWEEN ECONOMIC FACTORS AND STOCK MARKET

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Abstract: The stock market reacts differently to various factors like sociological, economic, political, etc. This paper tends to convey relationship between economic factors and the stock market. The various phase of economic cycle and stock market are co-related in the long term. Stock market tends to be more volatile when inflation is elevated. Over study aims to test this relationship using most recent data. Data over the period of 2008 to 2022 has been used for the study to find the relationship between Share market and Economic factors. The study confirms a well-defined long run relationship and economic growth.

Index Terms - Stock Market, Gross Domestic Product, Inflation, Monetary Policy, Fiscal policy, Bank Rates, Budget.

I. INTRODUCTION

In Stock market buying and selling of stocks of companies takes place. Generally, we try to understand market behaviour by group of stocks like Nifty, Sensex, Nifty50. As we know Economics is divided into two broad categories: Microeconomics and Macroeconomics. Microeconomics is the study of individuals decision taken by firm, households, or workers. Macroeconomics is the study of decision taken by country or an economy as whole. Macroeconomic variables like inflation, growth, unemployment, budget etc. affect stock market returns.

Before we proceed, we know that individual stocks are affected by companies' performance or called results. Economic behavior affects stock market. There is no consistent relationship between Economics and Stock market. Different macroeconomic variable act in widely different ways.

II. LITERATURE REVIEW

Various research paper has been studied on economic variables like GDP, Bank rates, inflation, etc. and few prominent studies are Discussed below:

Reddy, D. V. L. (2012) studied the impact of Real GDP, interest, and inflation rates on stock prices of quoted companies. An important finding is that the explanatory variables in the model result in 95.6% influence on stock prices of quoted companies for the period 1997-2006.

Srinivas, P. (2014) investigated the direction of causality between stock market development and economic growth in the Indian context. Using the cointegration and causality tests for the period June 1991 to June 2013, the study confirms a well-defined long-run equilibrium relationship among the stock market development indicators and economic growth in India.

Yaashi, P. (2023) analyzed the long-term dynamic relationship between the GDP and inflation with Sensex and the result shows very clearly there is correlation between the Sensex and GDP along with inflation.

Panda, C. (2008) raised an important question whether interest rates matter for stock market by studying the nature of relationship and direction of causality between interest rates and stock prices in India for the period from April 1996 to June 2006. By using the Johansen Cointegration technique and the vector error correction model, the study has following major findings. There is a long-term relationship between interest rates and stock prices.

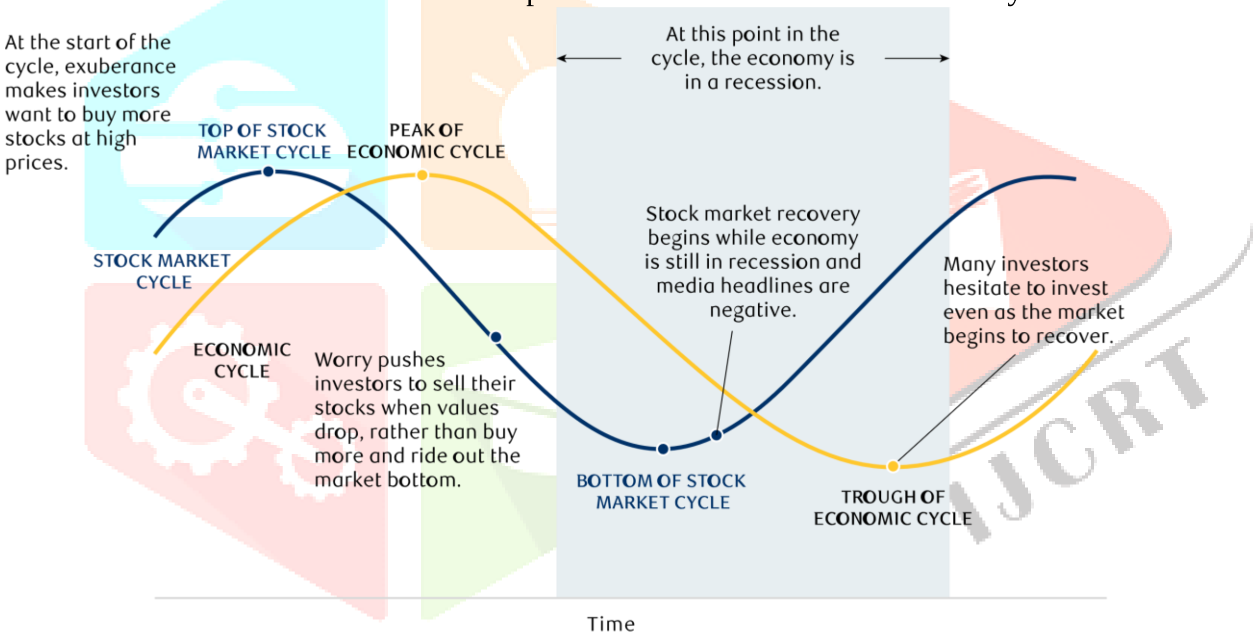
III. DATA AND METHODOLOGY

The Data of this paper is taken for 15 years, from 2008 to 2022. This period is chosen to analyze the relationship between stock market and GDP along with inflation rates. Sensex is used as proxy for stock index. In India because it is a broad-based index, and it has also been accepted widely as market proxy among investors. Inflation as measured by consumer price index tracks the annual percentage change in the cost to average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Lapsers formula is generally used. Sensex data is obtained from www.bseindia.com.

1. GROSS DOMESTIC PRODUCT (G. D. P.)

Generally, not always, share market falls slow economic growth and rise in fast economic growth. GDP is very important factor in measuring economic growth. GDP is the value of final goods and services produced in the country in a financial year. The stock market and the economy have never had a reliable relationship. We know economy and stock market are two different aspects, but they move in same direction over the long term. Stock market indicates before actual changes takes place in the economy. Share market always moves up when the economy is rising, when economy reaches close to its peak, stock market starts falling. In the recession stock market begins recovery before economy starts to recover. The below picture shows the relationship between stock market and economy, we discussed above-

Relationship between Stock Market and Economy



Source: https://www.rbcgam.com/_assets/images/infographics/how-the-two-cycles-are-related.svg

Secondary Data: Growth rate and Sensex		
Year	Growth rate %	Sensex
2022	7.00%	62245.43
2021	9.05%	52516.76
2020	-5.83%	42273.87
2019	3.87%	38989.65
2018	6.45%	36443.98
2017	6.80%	29824.62
2016	8.26%	29094.61
2015	8.00%	30024.74
2014	7.41%	22467.21
2013	6.39%	20203.66
2012	5.46%	19811.14
2011	5.24%	21108.64
2010	8.50%	17793.01
2009	7.86%	17735.7
2008	3.09%	21206.77

Data Source: India GDP 1960-2023. www.macrotrends.net. Retrieved 2023-08-15.

Interpretation: The above table shows that the sensex rises in good economic growth and sensex does not performs well, when growth rate falls.

2. MONETARY POLICY

The Monetary policy is the tool through which central bank of the country controls the money supply by controlling the interest rates. Reserve bank of India (RBI) is India's central bank. To maintain balance between market and economy RBI settles the interest rates. When RBI hikes interest rate, loan rates become high, and corporates and household cannot borrow at these high rates, these results economy slowdowns. When RBI drops interest rates, borrowing becomes cheap for corporates and household and it results increase in expenditure and increase in prices of goods and services, leads to inflation. Some of the rates of RBI are as follows:

- Repo Rate (RR): The rate at which banks borrow from RBI is called Repo Rate. If RR is high, borrowing is high, leads to slow economic growth. Share Market goes down if RBI increases the RR, because it slows down economic growth.
- Reverse Repo Rate (RRR): The rate at which RBI borrow from banks is called Reverse repo rate. Increase in RRR is not good for the economy as it slows down money supply.
- Cash Reserve Ratio (CRR): CRR is the percentage of deposits that every bank must need to maintain with RBI. IF CRR increases, money supply goes down, which further slows down economy. Share Market does not like slow economy.
- Statutory Liquidity ratio (SLR): Every bank must need to maintain percentage of deposits in liquid asset like Cash, gold, RBI approved securities, with them is called SLR. If RBI increases SLR, less money available to banks to lend and it will reduce money supply.

3. FISCAL POLICY

The fiscal policy is another tool through which government influences demand in the economy by managing tax rates and government expenditure. Increase in taxes causes less money in hands, it tends to decrease in demand and tax rate cuts encourage individuals to work, save and invest. The expenditure on public works like healthcare, security, Emergency services, education, infrastructure, pension, etc. is called public expenditure. Public expenditure saves money income, in other words it increases per capita income which is result of economic growth.

4. INFLATION

Increase in general prices of goods and services is called Inflation. A high level of inflation is not good for share market because it leads to slow economic growth. Monetary and fiscal policy work towards reducing inflation to a manageable level. In India, inflation is measured by two methods:

- Wholesale Price Index (WPI): WPI measures prices at the wholesale level.
- Consumer Price Index (CPI): The CPI measures price change at the consumer level.

Secondary Data: Showing relationship Between Sensex and Inflation			
Year	Inflation	Change %	Sensex
2022	6.70%	1.57%	62245.43
2021	5.13%	-1.49%	52516.76
2020	6.62%	2.89%	42273.87
2019	3.73%	-0.21%	38989.65
2018	3.94%	0.61%	36443.98
2017	3.33%	-1.62%	29824.62
2016	4.95%	0.04%	29094.61
2015	4.91%	-1.76%	30024.74
2014	6.67%	-3.35%	22467.21
2013	10.02%	0.54%	20203.66
2012	9.48%	0.57%	19811.14
2011	8.91%	-3.08%	21108.64
2010	11.99%	1.11%	17793.01
2009	10.88%	2.53%	17735.7
2008	8.35%	1.98%	21206.77

Data Source:
India Inflation Rate 1960-2023. www.macrotrends.net. Retrieved 2023-08-15.

Interpretation: The above table shows the negative relationship between Sensex and inflation. High inflation is not good market. The inflation rate is consistently increasing till 2103 and after it has been decreasing gradually till 2019. Sensex has been increasing here.

5. BUDGET

A Budget is financial plan of revenue and expenses of a country for a financial year presented on February 1 each year by finance minister. It is a statement of estimated receipts and expenditure of a government for an upcoming financial year. Tax rates, policies, subsidies, deficit targets, economic reforms are major highlights of budget. Therefore, budget play's important role in economy and it influence share market. Let as assume, the finance minister raised duties on FMCG (Fast moving consumer goods), so the prices increased. Increased prices lowered demand, and hence the profitability of FMCG company's investors may want to sell shares of FMCG companies. If they sell shares, share market falls.

IV. CONCLUSION

In This Paper, we tried to understand economic behavior on stock market that how it reacts to these behaviors. The stock market takes cues from the health of the economy. How the stock and economy interact can help investors to manage their investment as per the scenario. We understood that the stock market is also an important indicator of the economy as we learned that Stock market indicates before actual changes takes place in the economy. Some of the leading indicators can help investors to forecast the stock market behavior. GDP positively correlated with stock market and interest rate, unemployment data, inflation, etc. are negatively correlated with the stock market. Economy and stock market tend to move in one direction, in long run. Conclusively, an investor should take economic factors in consideration.

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