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IMPACT OF US MONETARY POLICY ON INDIA'S SENSEX

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ABSTRACT
Interest rates have a significant impact on the cost of borrowing, investment choices, and total profitability, making them an effective economic instrument. Understanding the effects of interest rate fluctuations is crucial for businesses operating in the changing Indian market, in which the Sensex serves as a benchmark index. By shedding light on how these businesses react to and are affected by interest rate fluctuations, this study hopes to improve our understanding of their financial stability and strategic decision-making. This study fills the evidence gap that gives clear picture on how the fall in Federal Reserve interest rate through the period of 4 years has strong impact on profitability of the companies of Sensex. Additionally, the study will assist in spotting possible trends and patterns in the correlation between interest rates and financial performance, offering insightful information to corporate executives, legislators, and investors. We aim to determine the degree to which changes in interest rates impact the financial well-being of these well-known Indian companies by closely analysing three important financial ratios: the fin cost to sales ratio, the debt-to-equity ratio, and the net debt to PBITA ratio, across the period of 2021–2024. The study's approach includes gathering and examining secondary data from the balance sheets, financial statements, and profit and loss accounts of 30 Sensex firms for the timeframe of 2021–2024. We may obtain a thorough grasp of each company's financial health and leverage by computing the previously stated financial ratios. Following that, statistical techniques will be applied to analyse the correlation between different ratios for the above stated time period. Significant inflation has impacted strength and direction of the correlation. The results of this study shows that interest rate fluctuations have a major effect on the Sensex firms' financial performance. Decreased borrowing costs due to cut down interest rates are likely to have an impact on financial ratios and profitability. Businesses that have more debt may be more susceptible to the impacts of changes in interest rates

KEYWORDS: *Federal Reserve Interest Rate, Financial Ratios, Sensex, Profitability, Indian Economy.*

INTRODUCTION

The complex relationship between interest rates and the stock market is frequently misinterpreted. In general, these two factors act in opposition to one another; lowering interest rates tend to stimulate the market, while increasing rates tend to push stock values lower. Interest rate fluctuations in the US have an impact on markets throughout the world.

The yield on US Treasury is also positively impacted by rate hikes, which encourages international investors to withdraw their funds from Indian markets and put them into their own nation. India and other international markets are anticipated to benefit from the US Fed's recent 50 basis point rate drop. Profit booking happened as a result of high valuations even as equities hit all-time highs.

Foreign investment may be drawn to emerging countries if interest rates are maintained until 2026. The market is doing well as the rate-reduction trend begins. India will probably witness an ongoing inflow of foreign cash as investors are lured to the nation's strong economic development, especially because rates are predicted to fall by more than 200 basis points over the next few years. This study tries to provide evidence that interest rate has fallen substantially in the recent years which has impacted the stock performance which can be seen in 30 companies of Sensex in a positive financial performance.

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SCOPE OF THE STUDY

The study will assist in spotting possible trends and patterns in the relationship between interest rates and financial performance, offering insightful information to corporate executives, legislators, and investors. This study tries to covers impact of Federal interest rate in the profitability of 30 Sensex companies through computing 3 financial ratios including the finance cost to sales ratio, the debt-to-equity ratio, and the net debt to PBITA ratio. The study analyses the accounting records for a period of years ranges from 2020 – 2024.

STATEMENT OF THE PROBLEM

The Federal Reserve is cutting down interest rate since 2020 is resulted to reduced borrowing cost. This study tries to assess the performance of the Indian stock market by analysing the profitability of 30 companies of Sensex. Since the interest rate cutdown started in 2000 study needed to cover the period from 2020 to till date. This study fills the evidence gap that gives clear picture on how the fall in interest rate through the period of 4 years (2020 to 2024) has strong impact on profitability of the companies of Sensex.

RESEARCH METHODOLOGY

This study is based on the secondary data collected from various sources. The study's approach includes gathering and examining secondary data from the balance sheets, financial statements, and profit and loss accounts of 30 Sensex firms for the timeframe of 2021–2024. To make sure the data to be more promising, it is taken from annual report of each company for each year from the period 2020 to 2024. Also, secondary data were taken from academic research, websites and journals.

OBJECTIVES OF THE STUDY

1) To assess the impact of inflation on the profitability of 30 companies of Sensex.
2) To identify three financial ratio – fincost to sales, debt to equity and net debt to PBITA to identify which is more sensitive to inflation.
3) To analyse the variations across different sectors of Sensex due to the impact of inflation

HYPOTHESIS OF THE STUDY

H_0: There is no significant difference in the Net Debt to PBITA ratio across the years 2020 to 2024 for the 30 companies.
H_1: There is significant difference in the Net Debt to PBITA ratio across the years 2020 to 2024 for the 30 companies.
H_0: There is no significant difference in the Debt-Equity ratio across the years 2020 to 2024 for the 30 companies.
H_1: There is significant difference in the Debt - Equity ratio across the years 2020 to 2024 for the 30 companies.
H_0: There is no significant difference in the Fin cost to Sales ratio across the years 2020 to 2024 for the 30 companies.
H_1: There is significant difference in the Fin cost to Sales ratio across the years 2020 to 2024 for the 30 companies.

LITERATURE REVIEW

G. Sudha, V. Sornaganesh and M. Thangajesu Sathish (2020)[1] in a study titled ‘’Impact Of Indian Stock Market Due To Crisis In March 2020’’ aims to find the impact of covid-19, oil war,Yes bank moratorium and Indian Currency plunge on Indian Stock Market. The study shows that Sensex closed 20% below the peak point reached during covid-19 which invited new users to share market. The global crude oil market is facing a severe crisis due to a COVID-19 pandemic and a price war between Saudi Arabia and Russia which led to a significant decline in oil prices, prompting the MCX to set a minimum price of 1 euro per 100 barrels of crude oil to prevent negative pricing. Yes Bank's financial crisis led the RBI to impose a moratorium, limiting withdrawals and freezing loans. This impacted not only depositors and borrowers but also the stock market and fintech companies that relied on Yes Bank's payment services. This study also shows that Indian rupee weakened due to global economic uncertainty and domestic factors like the COVID-19 pandemic and manufacturing slowdown. This negatively impacted the Indian stock market, banking and financial stocks. Additionally, downgrades by Fitch Ratings further dampened investor sentiment.

Pramod Kumar Patjoshi (2020)[2] in the study titled ‘’ Impact of Inflation on Major Financial Ratios’’ tries to analyse the balance sheet and profit and loss a/c of companies to investigate the impact of inflation. Data of 42 manufacturing companies of 7 industrial sector have been collected to analyse the purchasing power from a period

2004-05 to 2008-09. The study found that there id significant difference between the inflation and liquidity, profitability and activity ratios.

Pramod Kumar Patjoshi (2019)[3] in the study titled '' IMPACT OF INFLATION ON MAJOR STAKEHOLDERS'' aims to study the effect of inflation on various stakeholders. The secondary data from financial statements of 42 manufacturing companies which includes 7 industrial sectors for the time period od 5 years from 2004-05 to 2008-09. Purchasing power method and financial ratio analysis has been taken. The study found that inflation has affected stakeholders where customers and government are the gainers; suppliers, employees and financial institutions are the losers in real situations; Shareholders became both gainers and losers. **S.JAMUNA (2016)[4]** in the study titled '' INFLATION AND ITS IMPACT ON INDIAN ECONOMY'' aims to analyse how the inflation in Indian economy affect the growth rate from the year 1999 to 2011. This study relies on secondary data collected from World Economic Outlook .To study the relationshio of inflation and growth Karl Pearson Correlation Coefficient is used. The study found that the main reasons for decrease in the economic growth is because of inflation , fall in rupee value and government policies .

Saurabh Mani ,Ashish Dhar Mishra (2014)[5] in the study titled '' Impact of Inflation on the Performance of the Indian Economy'' aims to analyse the effect of inflation rate on the performance of agricultural, industry and service growth. The study collected both primary and secondary data and by analysing the data the study found that the GDP is affected by inflation rate and interdependent to each other.

D. V. Lokeswar Reddy (2012)[6] in the study titled '' IMPACT OF INFLATION AND GDP ON STOCK MARKET RETURNS IN INDIA'' aims to study the relationship between stock market returns with respect to inflation, GDP and interest rates. Secondary data have been collected on information regarding inflation, GDP, Stock market returns and interest rates would be collected from the websites of the Ministry of finance, economic survey of India, BSE India and RBI. The study found that the findings suggest that RDGP was the most important variable influencing stock prices.

THEORETICAL ASPECTS OF THE STUDY

FEDERAL FUND RATE

The interest rate that banks charge one another for short-term loans is known as the federal funds rate. It is a fundamental component of American monetary policy and a major force behind economic activity. The federal funds rate target range is determined by the Federal Open Market Committee (FOMC), which is the Federal Reserve System's governing body. The FOMC's decisions on the federal funds rate are one of the few significant market indicators, and they have a significant impact on the economy. For example, on September 18, 2024, the Federal Reserve reduced its key fed funds rate by 50 basis points to a range of 4.75% to 5%.

One of the most significant interest rates in the US economy is the federal funds rate. This is because it affects financial and monetary circumstances, which in turn affect important facets of the overall economy, such as inflation, growth, and employment. Since lenders frequently base their rates on the prime lending rate, the rate also indirectly affects short-term interest rates on a variety of products, including credit cards, auto and house loans, and more. Banks charge their most creditworthy borrowers the prime rate, which is also impacted by the federal funds rate.

U.S INTEREST RATE AND THE WORLD ECONOMY

Every economic decision made by the US has an instant impact on international markets as it has the biggest economy in the world. Fundamentally, rising interest rates and currency appreciation go hand in hand. The U.S. dollar is widely utilized as a gauge of present and future economic growth in many regions of the world. Changes in U.S. interest rates have a direct impact on the value of U.S. Treasury Bonds, and the Treasury yield curve in the US reacts quickly to shifts in domestic interest rates. Global rates are determined in accordance with changes in the yield curve.

Since Treasury bonds are seen as a risk-free investment, any other security must provide a greater return in order to stay appealing. Additionally, emerging markets will face significant pressure to maintain their appeal as interest rates are predicted to rise, which will cause international investors to lodge their money in the United States. In the end, this may impact exports, currency rates, and job levels in emerging countries.

U.S INTEREST RATE AND THE INDIAN ECONOMY

The Indian economy may be significantly impacted by the Fed's rate drop. A weaker dollar might result from a lower interest rate environment in the US, which could benefit the Indian Rupee. Lower domestic interest rates

might result from the RBI having greater leeway to relax its monetary policy due to lower US interest rates. This can therefore increase India's economic growth by encouraging borrowing, investment, and consumption.

Additionally, lower interest rates in the environment in the US might draw foreign investment with India, as investors look for higher returns. Increased capital inflows may result from this, strengthening the Rupee and increasing domestic liquidity. However, it's necessary to keep in mind that the impact of Fed rate cuts on the Indian economy may be influenced by multiple variables, including economic conditions worldwide, geopolitical risks, as well domestic economic policies.

RATIO ANALYSIS

Examining a company's income statement and balance sheet to determine its profitability, liquidity, and operational effectiveness is known as ratio analysis. It is a method of examining a range of financial information about a business rather than focusing on just one indicator. A key component of basic equity analysis is ratio analysis.

Investors and other business professionals can forecast a company's financial health and possible future development by examining a variety of measures. These can be used to assess how a firm has performed over time or how it stacks up against other companies in its sector.

In order for a business to make decisions, there is sometimes an overwhelming quantity of data and information available. A business could combine multiple numbers to best utilize its data. Through a technique known as ratio analysis, a business may better understand how it is doing over time, in comparison to its competitors, and in relation to its own objectives. Ratio analysis is typically rooted strongly with financial metrics, however ratio analysis may also be performed using non-financial data.

FINANCE COST TO SALES RATIO

Calculation method:Financial Costs / Net Sales Revenues = Financial Cost to Sales Ratio

This ratio shows what portion of sales income is utilized to pay for financial expenses (mosty interest) by provid ing information about the proportion of financial costs (expenses) in sales revenue. The amount of debt and the interest rate on credit determine this ratio's value. Excessive financial costs relative to sales revenues are indicated by high ratio values.

How to interpret: When evaluating how the ratio's value has changed over time (over a few periods), a rise in the ratio's value is interpreted negatively and as indicating a greater negative impact of financial expenses on sales revenues, while a fall in the ratio's value is interpreted as indicating a less negative impact of financial expenses on sales revenues.

DEBT TO EQUITY RATIO

Calculation Method: Debt/Equity = Total Shareholders' Equity /Total Liabilities

A company's debt to equity ratio is shown by the D/E ratio. It is computed as the total debt of a business divided by the total equity held by shareholders. Keep in mind that a greater D/E ratio indicates that the business could find it more difficult to pay its debts. The D/E ratio is computed by dividing a company's total liabilities by its shareholder equity and is used to assess a company's financial leverage. In corporate finance, the D/E ratio is a crucial measure. It gauges the extent to which a business is using debt rather than its own resources to fund its activities. The debt-to-equity ratio is a specific kind of gearing ratio.

How to interpret: A debt-to-equity ratio of about 2 or 2.5 is typically seen as good, however this varies by business. A high D/E ratio suggests the company is financing development largely through debt, which can boost returns for shareholders but also rises financial risk. A low D/E ratio indicates that a business is depending more on equity funding, which lowers financial risk but may also restrict prospects for expansion. Factors unique to each organization and sector affect the ideal D/E ratio. For long-term sustainable growth, a balanced strategy that takes into account both debt and equity financing is frequently best.

NET DEBT TO PBITA RATIO

Calculation method: Net Debt to EBITDA = Total Debt – Cash & Equivalents/EBITDA

When net debt and EBITDA are maintained constant, the net debt-to-EBITDA ratio indicates how many years it would take a business to repay its debt. Although net debt deducts cash and cash equivalents, the standard ratio does not. Otherwise, it is comparable to the debt/EBITDA ratio.

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How to interpret: Net debt-to-EBITDA ratios below three are generally seen as acceptable. The likelihood that the company will effectively pay off and refinance its debt increases with a lower ratio. A low net debt to EBITDA ratio suggests that a business is doing well financially, whereas a high ratio might suggest that the business is having trouble making its debt payments. Generally speaking, a ratio greater than four or five is seen as alarming.

DATA ANALYSIS AND INTERPRETATION

1)H_0: There is no significant difference in the Net Debt to PBITA ratio across the years 2020 to 2024 for the 30 companies.

H_1: There is significant difference in the Net Debt to PBITA ratio across the years 2020 to 2024 for the 30 companies.

Correlation Coefficient of Net Debt to PBITA ratio for the year 2020 to 2024

	2020	2021	2022	2023	2024
2020	1				
2021	0.68246	1			
2022	0.683747	0.990491	1		
2023	0.682084	0.974955	0.985871	1	
2024	0.678287	0.959417	0.965607	0.991383	1

From the correlation table given above, most of the values are closer to 1, indicating a moderate to strong positive correlation between the Net Debt to PBITA ratios for different years. This suggests that the company's leverage position and its ability to service debt relative to its operating income have been somewhat correlated over the period 2020-2024.

2)H_0: There is no significant difference in the Debt-Equity ratio across the years 2020 to 2024 for the 30 companies.

H_1: There is significant difference in the Debt - Equity ratio across the years 2020 to 2024 for the 30 companies.

Correlation Coefficient of Debt-Equity ratio for the year 2020 to 2024

	2020	2021	2022	2023	2024
2020	1				
2021	0.994869	1			
2022	0.994343	0.997311	1		
2023	0.993399	0.993404	0.997611	1	
2024	0.990754	0.992088	0.994563	0.997749	1

The high correlation coefficients (ranging from 0.990754 to 1) indicate a strong positive relationship between the returns in different years. This suggests that the Debt to equity tend to move in the same direction, possibly due to stable underlying factors. The correlation matrix for the Debt-Equity ratio from 2020 to 2024 indicates a strong positive correlation between the ratios for different years. This suggests that the company's leverage position has been relatively stable over this period.

3)H_0: There is no significant difference in the Fin cost to Sales ratio across the years 2020 to 2024 for the 30 companies.

H_1: There is significant difference in the Fin cost to Sales ratio across the years 2020 to 2024 for the 30 companies.

Correlation Coefficient of Fin cost to Sales ratio for the year 2020 to 2024

	2020	2021	2022	2023	2024
2020	1				
2021	0.993029	1			
2022	0.992624	0.994571	1		
2023	0.994749	0.989472	0.997027	1	
2024	0.989614	0.99191	0.995904	0.994656	1

From the table give above, it is clear that the provided correlation matrix shows the relationship between the Fin cost to Sales ratios for different years from 2020 to 2024. Most of the values are very close to 1, indicating a strong positive correlation between the Fin cost to Sales ratios for different years. This suggests that the company's financial cost relative to its sales has been relatively stable over the period 2020-2024.

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FINDINGS

- The Fed is trying to strike a balance between the necessity of keeping inflation under control and the possibility of an economic downturn.
- Interest rate fluctuations have a major effect on the Sensex firms' financial performance
- Reduction in the Fed Reserve Rate lead to increased foreign investment in emerging markets like India, where the potential for higher returns is perceived to be greater.
- The crucial step taken by Fed Reserve encouraged companies to invest in expansion and growth, which can positively impact their stock prices.
- A rate cut lead to lower borrowing costs for Indian companies.
- The overall health of the Indian economy, including GDP growth, inflation, and corporate earnings also plays a crucial role in the profitability.
- There is a moderate to strong positive correlation between the Net Debt to PBITA ratios for different years. This suggests that the company's leverage position and its ability to service debt relative to its operating income have been somewhat correlated over the period 2020-2024.
- There is a strong positive correlation between the Debt to Equity ratios for different years. This suggests that the company's leverage position has been relatively stable over this period.
- There is a strong positive correlation between the Fin cost to Sales ratios for different years. This suggests that the company's financial cost relative to its sales has been relatively stable over the period 2020-2024.

SUGGESTIONS

- ✓ A Fed rate cut can be a positive catalyst for the Sensex, it's essential to consider the broader economic context and the specific dynamics of the Indian market.
- ✓ It is the responsibility of the investors or business to explore the long-term implications of Fed rate cuts on the Sensex, considering factors like economic growth, inflation, and financial stability.
- ✓ The further Fed rate drop will have a little effect on India, according to the country's Chief Economic Advisor (CEA). So, companies should take decision keeping that in mind.
- ✓ Analysing the impact of Fed rate cuts on specific sectors of the Sensex, such as IT, banking, and manufacturing can help to grasp an insight on a particular sector.
- ✓ Investors should conduct thorough research and consult with financial advisors to make informed investment decisions.
- ✓ Though lowering interest rates, the Fed encourages economic development by lowering the cost of borrowing and investing. Low interest rates make borrowing more accessible, which may persuade buyers to make big purchases. However, when interest rates are too low and it can lead to excessive growth and also inflation.

CONCLUSION

This research provides valuable insights into the complex relationship between Fed rate cuts and the Sensex by discovering the substantial effect of Fed rate cut downs on the Indian stock market by examining historical data from accounting books. This study shows that banking sector could benefit more from this rate cut. The findings indicate that a reduction in the Federal Reserve's interest rate have a beneficial effect on the Sensex, particularly through an increase in the amount of foreign investment. However, the degree of these impacts and the timing of their occurrence might vary depending on a number of circumstances, including the conditions of the global economy, the policies of the local economy, and the attitude of investors. The economy may benefit temporarily from the Fed's rate drop. It is crucial to keep an eye on possible hazards and the changing economic environment. Even though this study offers insightful information, it's critical to recognize its limits. Overall, for emerging countries like India, the Fed's dovish posture and rate cuts are encouraging. India will probably witness a steady influx of foreign cash as investors are lured to the nation's strong economic development, especially because rates are predicted to fall by more than 200 basis points over the next two years.

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