A STUDY ON THE IMPACT OF MACROECONOMIC VARIABLES ON NIFTY FMCG AND NIFTY FINANCIAL SERVICE SECTOR OF NSE: AN EMPIRICAL EVIDENCE

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CLISIA RODRIGUES

Seat Number: 09-2022

ABC ID: 886193158352

PRN: 201911325

Under the Supervision of

Prof. GUNTUR ANJANA RAJU

Goa Business School

Commerce Discipline

GOA UNIVERSITY

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DECLARATION BY STUDENT

I hereby declare that the data presented in this Dissertation report entitled, **"A Study on the Impact of Macroeconomic Variables on Nifty FMCG and Nifty Financial Service Sector of NSE: An Empirical Evidence"** is based on the results of investigations carried out by me in the Discipline of Commerce at the Goa Business School, Goa University/College under the Supervision of Prof. Guntur Anjana Raju and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities will not be responsible for the correctness of observations / experimental or other findings given the dissertation.

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CLISIA RODRIGUES

09-2022

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Place: Goa University

COMPLETION CERTIFICATE

This is to certify that the dissertation report **"A Study on the Impact of Macroeconomic Variables on Nifty FMCG and Nifty Financial Service Sector of NSE: An Empirical Evidence"** is a bonafide work carried out by Ms. Clisia Rodrigues under my supervision in partial fulfilment of the requirements for the award of the degree of Masters of Commerce in the Discipline of Commerce at the Goa Business School, Goa University.

Prof. Guntur Anjana Raju

Date: 30/04/2024

Goa Business School ★ Goa University ★

Signature of Dean of the school

Date: 30/04/2024

Place: Goa University

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CONTENTS

LIST OF TABLES

LIST OF ABBREVIATION

ADF	Augmented Dickey-Fuller
FER	Foreign Exchange Reserve
MSM2	Money supply M2
NSE	National Stock Exchange

ABSTRACT

The present study has analysed the impact of Macroeconomic variables namely the Foreign Exchange Reserve (FRR), Inflation (CPI), money supply M2 (MSM2), Import and Export of on the selected companies of Nifty FMCG and Financial Service sector Series. For accomplishing the objective, the monthly time series data for the period of 10 years from 1st January 2013 to 31st October 2023 was analysed through the application of econometric techniques like Unit Root test, correlation, regression and Johansen cointegration test. The results stated that there is a impact of macroeconomic variables i.e. Export, Foreign Exchange Reserve, Import and Inflation (CPI) on Nifty FMCG and Nifty Financial Service sector. Finally, a analysis concluded that there exists long term relationship between Nifty FMCG and Financial Service Index with macroeconomic variables.

Keywords: Macroeconomic variables, Foreign Exchange Reserve, Inflation (CPI), money supply M2 (MSM2), Import and Export and Johansen co-integration test

CHAPTER 1: INTRDUCTION

1.1 Introduction to impact of macroeconomic variables on Nifty FMCG and Nifty Financial Service sector

The stock market is an accurate tool to measure the economic condition of any country. The stock prices often reflect any significant shift in the nation's economy. Any increase or decrease in stock values signals an economic boom or bust. The stock market is sometimes regarded as the economy's heartbeat, reflecting the actual state of the country's finances. In addition to assisting in the valuation of assets based on supply and demand, the stock market guarantees the security of transactions made through stock exchanges. Through the process of disinvestment and reinvestment, which aids in allocating the funds to the most profitable ventures and ultimately results in capital formation, it promotes economic progress. By offering enticing chances to invest in a variety of assets, it encourages people to turn their savings into investments and also creates room for speculation. Despite investing in unproductive assets like gold, silver, etc., these chances encourage people to increase their investments in the business sector.

The National Stock Exchange (NSE)'s Nifty FMCG and Nifty Financial Service Sector Indexes, which reflect the Indian stock market, are important engines of the nation's economic expansion. It becomes critical for investors to understand the variables affecting stock prices and returns in important industries as they look for effective ways to allocate their capital. Macroeconomic variables are among the most influential elements, influencing investor behavior and market sentiment.

In recent years, the Indian economy has seen a dynamic interaction between stock market performance and macroeconomic conditions. Important factors that influence stock prices and returns include foreign exchange reserves, trade dynamics, money supply, and inflation.

The specifics and scope of their influence on industries like financial services and fast-moving consumer goods (FMCG) remain relatively underexplored. One public issue affecting the economy of the developing nations is the insignificance of the financial sector. By facilitating investments and transferring money from investors to depositors, the financial sector is crucial to the advancement and growth of the money supply. Volatility has a major effect on the economic performance of the financial system. In the same way, there are other negative effects of stock market.

1.2 National Stock Exchange (NSE)

The National Stock Exchange, one of the top stock exchanges in India and the eleventh largest in the world, is based in Mumbai, Maharashtra.

The National Stock Exchange was founded in 1992 with the goal of providing an electronic trading system with a fair and transparent securities market for trading in bonds, stocks, and hybrids throughout India. The principal aim was to facilitate equitable access for all investors throughout India by means of an effective communication network.

The NSE was established with the goal of enabling quicker settlement cycles and a book-entry settlement method while also adhering to modern international standards for securities markets. The Companies Act of 1956 allowed for the NSE to be constituted as a tax-paying corporation. The exchange's goal was to give each investor clear access based on their nation. The exchange's automated securities trading, clearing, and settlement services were promoted by banks and financial organizations.

1.3 Macroeconomic Variables

Macroeconomic variables are generally explained as those variables which affect the economy of a country as a whole. These factors are also employed as primary indicators of a

nation's economic health and prevailing tendencies. Macroeconomic factors have a direct impact on the national and international policies that governments formulate. Macroeconomics is the area of economics that focuses on the long-term performance of an economy. Macroeconomic variables are quantifiable elements or markers that shed light on the general state and well-being of an economy at the local, state, or federal levels. Economists, decision-makers, corporations, and investors generally research and evaluate these variables in order to comprehend economic trends, create projections, and develop economic policies. A positive macroeconomic environment helps businesses because it pushes them to the point where they can get the funding they require to keep growing.

Some common macroeconomic variables include:

Foreign exchange reserves: Also referred to as forex reserves, these are assets kept in a variety of foreign currencies by a central bank or other monetary authority. Special Drawing Rights (SDRs), gold, foreign currencies, and occasionally other assets like bonds or treasury bills denominated in other currencies make up these reserves. The main purposes of holding foreign exchange reserves are to control exchange rate fluctuations, maintain local currency stability, and guarantee liquidity in cross-border operations.

Money Supply (M2): M2 is a measure of the money supply that includes all elements of M1 as well as "near money." While near money refers to money market securities, mutual funds, savings accounts, and other time deposits, M1 comprises cash and checking deposits. Although these assets can be swiftly changed into cash or bank deposits, they are less liquid than M1 and are not as appropriate as exchange mediums.

M2= M1+ savings deposits of post office saving banks

Inflation Consumer price index (CPI): Inflation Consumer price index (CPI)is used as proxy for inflation. The average price of goods and services during a given time period is used to calculate the CPI. A consistent rise in the cost of goods and services as measured by

the purchasing power standard, at which the supply of goods and services decreased and the cost of goods increased. Money supply expanded, money's value declined, and people's purchasing power similarly declined.

Export: Products and services created domestically and offered for sale to clients abroad are referred to as exports. An export occurs when a nation sells products or services to overseas markets. Natural resources, manufactured items, agricultural products, intellectual property, and a variety of services like travel or consulting are examples of exported goods and services. Exporting enables nations to increase their trade balance, produce income, and create jobs.

Import: Imports refersto to goods and services that a nation buys from another nation. An import occurs when a nation purchases goods or services from another nation. Products such as consumer items, machinery, technology, and raw resources can all be considered imports. Countries can obtain products, services, and resources through importation that might not be easily accessible within their borders.

1.4 Sectors

1.4.1 Nifty FMCG Sector:

The Nifty FMCG Index is intended to represent the performance and behavior of fast-moving consumer goods, or FMCGs, which are mass-market, non-durable items that are readily available off the shelf. Fifteen FMCG stocks listed on the National Stock Exchange (NSE) make up the Nifty FMCG Index. On September 22, 1999, the NIFTY FMCG index was introduced, with January 1, 1996 as the base date and 1000 as the base value.

Among all the sectors in the Indian economy, the fast-moving consumer goods (FMCG) sector is one of the fastest expanding. Currently occupying the fourth spot, the FMCG sector accounts for 9.29% of the Nifty 50.

Products that are produced, marketed, advertised, and consumed quickly are referred to as consumer packaged products having a high turnover rate. Among the most popular FMCG products include electronics, bottled beverages, chocolates, toothpaste, cosmetics, pharmaceuticals, and personal care items. In India, urban market covers five fifths of the total FMCG consumer income. The semi-urban and rural sectors contribute about 45% of India's total revenue from consumer products **(Danush M, S. Baskaran, 2022).**

The FMCG industry is anticipated to be directly impacted by the government's increased emphasis on employment, infrastructure, health care, and agriculture in the union budget. In comparison to urban areas, the FMCG sector has grown more in rural areas during the past few years. The FMCG industry is expected to reach $220–240 billion in revenue by 2025, with growth of 13–14 percent expected over the following five to ten years **(Shubhangi Anil Patil, Viraj Vijay Jadhav, 2019).**

The FMCG industry benefits from the Goods and Services Tax (GST) since numerous FMCG products, like toothpaste, soap, and hair oil, are now subject to the 18% tax band instead of the previous 23–24 percent tax rate. Additionally, the GST rates on hygiene and food products have been lowered to 12–18% and 0–5%, respectively. Given that many large firms are expanding their operations to include increasingly important warehousing and logistics, GST is projected to revolutionize the logistics industry in the FMCG sector into a contemporary and efficient model.

Table 1.1

Top constituents by weightage of FMCG sector companies

Company's Name	**Weight (%)**
ITC Ltd.	32.88
Hindustan Unilever Ltd.	19.14
Nestle India Ltd.	8.86
Tata Consumer Products Ltd.	6.53
Varun Beverages Ltd.	6.36
Britannia Industries Ltd.	5.49
Godrej Consumer Products Ltd.	4.48
Colgate Palmolive (India) Ltd.	3.42
United Spirits Ltd.	3.12
Dabur India Ltd.	2.90

Source: National stock exchange (NSE)

1.4.2 Nifty Financial Service Sector

The Nifty Financial Services Index is the NSE's financial services sector index. Since they generate credit and mobilize saving, India's financial sector, which consists of banking, non-banking financial institutions, and the insurance sector, has a significant impact on the actual economy **(Bhuvaneshwari D, 2021).**

The financial services industry is all about money management, assisting individuals with retirement planning, and ensuring that companies have the capital to expand. For ages, this industry has been the center of the economy. Financial services sector is in the fitst position, which makes up 35.95% of the nifty 50. A significant portion of the Nifty 50, India's benchmark stock market index, is made up of the financial services sector.

An important segment of the Indian stock market is the Nifty Financial Services sector, which is made up of businesses that offer financial products and services such asset management, banking, and insurance. Because it provides the financial infrastructure required for organizations and individuals to manage their finances and assets, its solutions play a crucial role in the financial system. Among the leading companies in the Nifty Financial Services category are ICICI Bank, Bajaj Finserv, State Bank of India, HDFC Bank, and others. Due to its ability to provide a useful indicator of the industry's overall performance, investors and traders closely monitor the Nifty Financial Services sector.

Table 1.2

Top constituents by weightage of Financial Service sector companies

Company's Name	**Weight(%)**
HDFC Bank Ltd.	30.85
ICICI Bank Ltd.	21.75
Axis Bank Ltd.	8.42
State Bank Of India	8.18
Kotak Mahindra Bank Ltd.	7.44
Bajaj Finance Ltd.	5.72
Bajaj Finserv Ltd.	2.53
SBI Life Insurance Company Ltd.	1.92
HDFC Life Insurance Company Ltd.	1.89
Shriram Finance Ltd.	1.86

Source: National stock exchange (NSE)

1.5 Importance of the study

Economic implications as how macroeconomic circumstances affect the performance of two vital sectors, FMCG and Financial Services. Policymakers, investors, and companies looking to make informed choices in the Indian market might discover this information useful.

The study can help investors and fund managers by providing them with knowledge about the relationship between macroeconomic variables and the stock prices of the companies and returns in these sectors. Strategies for asset allocation and portfolio management can benefit from this knowledge.

Gain a better understanding of sector performance and economic trends in India, which will be helpful to policymakers and financial analysts.

1.6 Scope of the study

The present study is aimed to examine the impact of macroeconomic variables on stock prices and stock returns on Nifty FMCG and Nifty Financial Service Sectors. It also looks at the long term relationship between Nifty FMCG and Nifty Financial Service Index. The study centers on the NSE in India, examining the FMCG and Financial Services sectors. The analysis will be performed considering monthly data i.e 1st January 2013 – 31st October 2023.Which includes macroeconomic variables such as Inflation(CPI)-Consumer Price Index, Foreign exchange reserve, M2, Import and Export. Specific companies or indices in the FMCG and Financial Services sectors are the focal points.

1.7 Problem of the study

Due to the impact of macroeconomic factors, investors frequently experience uncertainty while making decisions about their investments in the FMCG and Financial Services sectors. Choosing investments that are not ideal can result from this uncertainty.

Policymakers may find it difficult to create stable and growth-promoting policies for these sectors if they do not have access to detailed data on how macroeconomic variables affect them.

If investors and businesses are unaware of how macroeconomic issues impact the FMCG and financial services industries, inefficient resource allocation may result. Performance in the industry may suffer as a result of inefficient resource allocation.

If businesses in these industries don't have an accurate understanding of how macroeconomic factors can impact their operations, they may be at a competitive disadvantage. This could result in bad decision-making or missed opportunities.

1.8 Statement of the problem

The new economic strategy that was started in India in the early 1990s is centered on improving the financial sector. Consequently, the Indian stock market has pragmatistically transformed from a gloomy to a booming stock market in the global world. Improved market monitoring, trading systems, and the launch of new financial products have raised it to the top of the list of preferences for international investors.

Financial divisions show how important investment is to improving business expansion. The economic sectors are crucial for resource mobilization.

The present study examines the impact of macroeconomic variables on selected companies from FMCG sector and Financial Service sector in NSE.The main aim of identifying the

impact of macroeconomic indicators on selected companies on FMCG sector and Financial Service sector may help the investors make investment decisions and manage risks effectively in the dynamic Indian stock market environment.

1.9 Objectives of the study

1. To analyse the impact of macroeconomic variables on stock prices of companies in Nifty FMCG and Nifty Financial Service Sector Index of NSE.

2. To examine the long term cointegration between macroeconomic variables and stock returns of Nifty FMCG and Nifty Financial Service Sector Index in NSE

1.10 Research Question

1. To what extent do macroeconomic variables impact the stock prices of companies in Nifty FMCG and Nifty Financial Service sector in NSE?
2. Do macroeconomic variables have a long term cointegration with stock returns of the Nifty FMCG index and Nifty Financial Service sector in NSE?

1.11 Research Hypothesis

1. There is no statistically significant impact of macroeconomic variables on stock prices of companies in Nifty FMCG and Nifty Financial Service sector in NSE.
2. There is no long term cointegration between macroeconomic variables and stock returns of the Nifty FMCG index and Nifty Financial Service sector in NSE

1.12 Chapterisation Scheme:

The Chaperisation scheme followed by the study is as follows:

Chapter 1: Introduction to impact of macroeconomic variables on Nifty FMCG and Nifty Financial Service sector

The introductory chapter makes a brief introduction to the topic that is a study on the impact of macroeconomic variables on Nifty FMCG and Financial service sector of NSE: an empirical evidence, importance, scope, objectives and hypothesis.

Chapter 2: Review of Literature

The review of the literature presents the impact of macroeconomic variables on Nifty FMCG and Financial Service sector and the long term cointegration between macroeconomic variables and Nifty FMCG and Nifty Financial Service sector Index.

Chapter 3: Research Methodology

The third chapter deals with the problem of the study, research gap, data sources, data period, descriptive statistics, unit root test, correlation, multiple regression and johansen co-integration test

Chapter 4: Data Analysis and Conclusion

The final chapter summarises the discoveries made during the investigation. Based on the findings, conclusions are being drawn, and relevant suggestions are being made.

CHAPTER 2: REVIEW OF LITERATURE

2.1 Introduction

A review of the literature assesses the effectiveness of a specific collection of work on a given subject of study. It provides background information on the intended study. It is crucial for examining earlier studies to establish the stage for more recent research. It aids in the researcher's ability to identify gaps in their field of study and identify understudied areas for further, successful research. It also permits the discussion of the approaches used in the literature and their connection to the selected approach.

2.2 Impact of macroeconomic variables on stock prices of companies in FMCG and Financial Service Sector

Pethe and Karnik (2000) analysed the attempt to investigate the relationship between other significant macroeconomic factors in India and the impact stock price indices. Employing Indian data from April 1992 to December 1997, the research discovered a causal relationship between IIP and share price indexes (Sensex and S&P CNX Nifty), but not the other way around. Stated differently, it maintains the belief that stock prices are influenced by the status of the economy. With the use of monthly data, Imran Ali, Kashif Ur Rehman, Ayse Kucuk Yilmaz, Muhammad Aslam Khan, and Hasan Afza (2010) investigate the causal association between macroeconomic indicators and stock market prices in Pakistan for the chosen period, from June 1990 to December 2008. The study discovered a co-integration between stock exchange prices and the industrial production index. However, there was no correlation discovered between Pakistani stock exchange values and macroeconomic data. Muhammad Mubashir Hussain and Muhammad Aamir (2012) conducted research to determine whether macroeconomic indicators and stock prices have a long-term relationship or not. The study

showed that macroeconomic factors and stock prices have a long-term relationship. Pramod Kumar Naik and Puja Padhi (2012) investigated the relationship between five macroeconomic indicators and the Indian stock market index. The industrial output index, the wholesale price index, the money supply, the rates of Treasury bills, and exchange rates. It shows that there is a long-run equilibrium link between macroeconomic variables and the stock market index since they are co-integrated. L.K. Tripathi, Arpan Parashar, and Swati Jaiswal (2014) examined the long-term association between a few chosen external macroeconomic indicators and various sectoral indices at the National Stock Exchange (NSE). Using monthly data from April 2005 to March 2013, the study examined the following macroeconomic variables: exchange rate (USD), crude oil prices, foreign institutional investments, current account balance, and foreign exchange reserves. The findings demonstrated the strong link between all macroeconomic factors. Priyanka Aggarwal and Najia Saqib (2017) to investigate the impact of changes in a few key macroeconomic factors affect the Nifty 50 index, which represents the Indian stock market. The study's empirical findings demonstrated that macroeconomic factors have a significant impact on the Indian stock markets. Khalid Ashraf Chisti and Saila Shakeel (2018) conducted research in order to determine the casual relationship, extent of impact, and long-term association between stock market prices (Nifty 50) and Real Gross Domestic Product and Inflation It is discovered that neither the Granger Cause of stock prices nor the Granger Cause of RGDP and Inflation. Bisharat Hussain Chang, Zahida Abro, Qasim Raza Syed, and Muhammad Saeed Meo (2019) studied the dynamic link between stock prices and macroeconomic variables. It was determined that macroeconomic factors are relevant and should be taken into consideration while making investment and/or policy decisions and there is a strong positive correlation between macroeconomic factors and the Indian stock market. P.Radha, N.Gopinathan (2019) A comprehensive investigation of the effects of

macroeconomic factors on the Indian stock market. The study's findings indicate that a positive significant relationship exists between macroeconomic determinants and Indian stock market. In a bivariate causality study, Rexford Abaidoo (2019) will empirically investigate the degree to which volatility linked to company performance could be attributed to particular unfavorable macroeconomic conditions. In order to confirm whether there are any significant causal interactions between the volatility of business performance and seven macroeconomic circumstances or variables, the study used the Toda–Yamamoto Wald test technique to Granger causality analysis. This study discovers that there is typically a bidirectional causal link between business performance volatility and macroeconomic and economic policy uncertainty. Areesha Zaheer, Nadia Kiran (2020) to determine how macroeconomic factors affected stock values over the chosen time frame, from January 2001 to December 2016. A variety of statistical and economic methods were employed by the researchers, including the Granger causality test, the unit root test, the correlation matrix, the Johansen co-integration test, and the vector error correction model. It turned out that the factors have a strong link with one another. Jung Wan LEE, Tantatape Brahmasrene (2020) to examine short-run and long-run dynamic relationships between macroeconomic variables and stock prices in Korea. The study found that neither the endogenous variables in the model nor the cointegrating vector became unstable as a result of the global financial crises. Rakesh Kumar Verma and Rohit Bansal (2021) to identify various macroeconomic variables that affect the stock market performance of developed and emerging economies. . It is also looked at and contrasted how these variables affect sectoral and broad market indices. The authors discovered that whereas nations that import oil had a negative link with oil prices, those that export oil had a positive relationship. The macroeconomic factors that affect broad market indices more than sectoral indices are GDP, money supply, and inflation. The remaining variables had sector-specific effects. Saraboji, L.S.(2022) to forecast and analyze the sectoral

indices of the NSE and the stock prices of chosen companies. The macroeconomic variables that the researcher used were trade balance, GDP, IPI (industrial production index), BOP (bills of payment), CPI (consumer price index), EXR (exchange rate), NF (net FII), IR, and WPI (wholesale pricing index). The conclusion is drawn from the macroeconomic factors, which have a moderate effect on the Nifty Pharmaceutical.

2.3 Long term cointegration between macroeconomic variables and stock returns of FMCG and Financial Service Sector Index

According to Brailsford and Vincent J. Hooper's (2001) research, stock returns in emerging economies can be explained by local macroeconomic variables. The study discovered a connection between macroeconomic factors and returns on the equities market. Robert D. Gay, Jr. (2008) used the Box-Jenkins ARIMA model to examine the timeseries link between stock market index prices and the macroeconomic variables of oil price and exchange rate for Brazil, Russia, India, and China (BRIC). The results indicate that there is no statistically significant correlation between the oil price and the respective currency rate in connection to the stock market index prices of any BRIC nation. This could be attributed to the impact of other macroeconomic factors, both domestic and foreign, on stock market returns. Mohammad Bayezid Ali (2011) examine how changes in a few chosen macroeconomic and microeconomic factors affect the returns on stocks at the Dhaka Stock Exchange. It concludes that the industrial output index is negatively impacted by inflation and foreign remittances, as determined by the regression coefficient. The study by Victor Owusu-Nantwi and John K. M. Kuwornu (2011) uses monthly data to examine the relationship between macroeconomic variables and stock market returns during the chosen period, which is January 1992 to December 2008. The study came to the conclusion that cointegration analysis and vector error correction might be used to determine the impact of macroeconomic variables on stock

market returns. Bing Zhu (2012) to research how macroeconomic variables affect the energy sector's return on the Shanghai Stock Exchange (SEE). The results show that the energy sector's stock return in the Shanghai stock market is influenced by the exchange rate, exports, foreign reserve, and unemployment rate. Khalid (2012) Carry out the investigation Evidence from the Karachi stock exchange regarding the long-term relationship between macroeconomic variables and stock return. The researcher considered exchange rates, T-bills, and inflation to be independent variables, and stock return to be the dependent one. The models of co-integration and correlation were applied. There is no statistically significant positive relationship between stock return and independent variables. The majority of changes in stock returns are caused by changes in inflation, with a small amount of changes also resulting from other factors. Muhammad Khalida, Mohsin Altaf, Haroon Hussain, and Muhammad Majid Mehmood Bagram (2012) carried a research on the Long-Term Correlation Between Macroeconomic Variables And Stock Returns. Numerous statistical and econometric approaches, including unit root test statistics, correlation matrices, VAR statistics, descriptive statistics, co-integration, Granger causality tests, and impulse response functions, were employed by the researchers. The conclusion drawn from the data is that most variations in inflation can be explained by itself, with little to no influence from other factors. Zukarnain Zakaria and Sofian Shamsuddin (2012) examined the relationship between five specific macroeconomic volatilities and the volatility of Malaysia's stock market returns. He has included the money supply, interest rates, exchange rates, GDP, and inflation. Regression analysis's outcome demonstrates that the only factor substantially correlated with stock market volatility is money supply volatility. Ahmad A. Al-Majali and Ghazi I. Al-Assaf (2014) to investigate the impact of a number of macroeconomic factors on the performance of the Amman Stock Exchange (ASE), as indicated by the stock price index. It showed that the major macroeconomic variables and the stock market index have an equilibrium relationship

over the long term. The study's conclusions demonstrated that the VECM's rate of adjustment is both considerable and comparatively slow. Muazu Ibrahim and Alhassan Musah (2014) use the vector error correction model (VECM) and the Johansen multivariate cointegration technique to examine the impact of macroeconomic variables on stock market returns. It was discovered that impulse response functions and variance decomposition demonstrate that stocks to the money supply, exchange rate, and inflation among macroeconomic factors not only explain a sizable percentage of the variance error of stock returns, but also have long-lasting consequences. Using the canonical correlation analysis (CCA), Peter Mazuruse (2014) studied the effects of macroeconomic variables on stock returns for the Zimbabwe Stock Exchange. It was discovered that changes in the money supply, currency rate, consumer price index, and treasury bills have the biggest effects on the ZSE's strategy of maximizing stock returns. Wycliffe Nduga Ouma, Peter Muriu (2014) conducted a study on the Impact Of Macroeconomic Variables On Stock Market Returns In Kenya. It was discovered that the money supply, inflation, and currency rates all had an impact on Kenya's stock market performance. Pooja Joshi & A K Giri (2015) used quarterly time series data from 2003:Q4 to 2014:Q4 in order to analyze the relationship between the Indian stock market and the GDP from a sectoral viewpoint. The Ng-Perron unit root test, the ARDL bounds testing strategy, and the VECM method are also used in the study. According to the findings, sectoral GDP and sectoral stock price in India have a cointegrating relationship, as confirmed by the ARDL limits test. Safdar Abbas, Safdar Hussain Tahir, Shahid Raza (2015) to study the relationship between macroeconomic variables and stock market return (KSE-100) Index. The conclusion is that there is a negligible positive correlation between the stock market and exchange rates. Naveen R.S., N. Sivakumar (2016) to study the impact of macro-economic variables on the returns of sectoral indices of NSE in India. It is determined as The study's use of regression models demonstrates how sectoral indexes are significantly impacted by both forex rates and

crude oil prices. Mohsina Habib, Khalid UlIslam (2017) to determine the several macroeconomic factors that affect the returns of Islamic stocks from February 2007 to June 2016. It was shown that the Islamic stock market is significantly impacted by interest rates and exchange rates. Sarika Keswani and Bharti Wadhwa (2018) to investigate the relationship between stock returns and the chosen macroeconomic indicator. The vector error correction model showed that there was a strong and negative short-term link between stock returns and inflation rate. Parminder KAUR, Ravi SINGLA (2021) to assess the impact of institutional investments, foreign direct investment, index of industrial production, interest rate, inflation rate, exchange rate, gold rates and oil prices on the sectoral indices of NSE. Monthly data from January 1, 2009, to December 30, 2019 are used in the study. According to the study's findings, the key variables in the short term are the exchange rate, the wholesale price index, and the index of industrial output; in the long run, the important factors are institutional investment and the index of industrial production. To effectively manage the stock market, the government needs to concentrate on four areas.

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CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

To attain preset research aim, this chapter tells methodology aspect employed in research. Research is the methodical, effective search for fresh, important data on a given subject. It is an evaluation process that uses methodical analysis to find answers for societal problems. It is an investigation into knowledge, which uncovers hidden truths. It explains the several procedures that a researcher usually takes in order to examine the research problem.

3.2 Research Gap

Existing research may have explored the impact of macroeconomic variables on broader market indices but lacks sector-specific analysis for FMCG and Financial Services.

Some studies may focus on a single aspect, such as stock prices, without examining how macroeconomic variables influence returns risk, or investment behavior in these sectors

3.3 Research Design

The Research Design is the strength of character of the research procedure. Collected data and information are already available to evaluate specific facts to render the content critical. The present study is limited to five macroeconomic variables were chosen Foreign Exchange Reserve (FRR), Inflation (CPI), money supply M2 (MSM2), Import, Export as independent variables. The NSE FMCG and NSE Financial Service sector companies as dependent variables.

The research design used for the present study is descriptive as well as exploratory in nature. The first objective targets to describe impact of macroeconomic variables on Nifty FMCG

sector and Nifty Financial Service sector companies. Whereas second objectives strive to know the long term cointegration between macroeconomic variables and stock returns of Nifty FMCG and Nifty Financial Service Sector. The approach for the study throughout is quantitative as secondary time series data has been analysed to reach upon the conclusion.

3.4 Sources of data

Table 3.1 list of the collection of data from different sources

Macroeconomic Variables/ Sectoral Indices	**Sources Of The Data**
Macroeconomic variables	
Inflation (CPI)	Organisation for Economic Co-operation and Development (OECD)
Money supply M2	
Export	EPWRF India Time Series (Economic and Political Weekly Research Foundation India Time Series)
Import	
Foreign exchange reserve	
Sectoral Indices	
Nifty FMCG sector companies	CMIE (Centre for Monitoring Indian Economy)
Nifty Financial Service sector companies	
Nifty FMCG Index returns	
Nifty Financial Service Index returns	

3.5 Sampling method

The study used Purposive sampling as the sample technique for data collection. In the sample selection, the study focused on the companies listed in nifty FMCG sector and nifty Financial service sector. Finally, the sampling unit for the research is 14 companies of FMCG sector and 13 companies for Financial service sector which is listed in the National Stock Exchange of India.

3.6 Sample size

For the 1st objective the study focuses on closing price of 14 companies of Nifty FMCG sector and Nifty Financial Service sector. And for the 2nd objective the study has used Nifty FMCG Index returns and Nifty Financial Service Index returns of NSE.

Table 3.2 list of Nifty FMCG sector and Nifty Financial Service sector companies

Nifty FMCG sector companies	Nifty Financial Service sector companies
1) Britannia Industries Ltd	1) Axis Bank Ltd
2) Colgate Palmolive (India) Ltd	2) Bajaj Finance Ltd
3) Dabur India Ltd	3) Bajaj Finserv Ltd
4) Emami ltd	4) Cholamandalam Investment And Finance Company Ltd
5) Godrej Consumer Products Ltd	5) HDFC Bank Ltd
6) Hindustan Unilever Ltd	6) ICICI Bank Ltd
7) ITC Ltd	7) Kotak Mahindra Bank Ltd
8) Marico Ltd	8) LIC Housing Finance Ltd
9) Nestle India Ltd	9) Muthoot Finance Ltd
10) Procter And Gamble Hygiene And Healthy Care Ltd	10) Power Finance Corporation Ltd
11) Radico Khaitan Ltd	11) REC Ltd
12) Tata consumer Products Ltd	12) Shriram Finance Ltd
13) United Breweries Ltd	13) State Bank Of India
14) MC Dowell–N (United Spirit Ltd)	

3.7 Period of the study

The period of the study is of 10 years from 1st January 2013 to 31st October 2023 (monthly)

3.8 Data description

The study uses secondary data for the research. The selected Nifty FMCG sector and Nifty Financial Service sector companies data are collected from website of CMIE (Centre for Monitoring Indian Economy) and the macroeconomic variables data collected from the website of Inflation (CPI) and Money supply M2- Organisation for Economic Co-operation and Development (OECD), Export, Import, Foreign exchange reserve- EPWRF India Time Series (Economic and Political Weekly Research Foundation India Time Series). The purpose of the study the impact of macroeconomic variables on Nifty FMCG sector and Nifty Financial Service sector companies and also to study the long term cointegration between macroeconomic variables and stock returns of Nifty FMCG and Nifty Financial Service Sector.

3.9 Tools and Techniques

a) Descriptive statistics:

Descriptive statistics used to summarize and describe the main features of a dataset, such as measures of central tendency, dispersion, kurtosis, skewness etc.

b) Unit root test:

After descriptive statistics, unit root test used to determine whether a time series variable is stationary or exhibits a unit root, indicating non-stationarity.

c) Correlation:

After unit root test, correlation test is used to measure the strength and direction of the linear relationship between two variables.

d) Multiple regression:

After correlation, regression test is used method that examines the relationship between a dependent variable and two or more independent variables, identifying the extent to which each independent variable contributes to the variation in the dependent variable.

e) Johansen cointegration test:

Johansen cointegration test used to assess the presence of cointegration among multiple time series variables, indicating the long-term equilibrium relationship between them.

CHAPTER 4: DATA ANALYSIS AND CONCLUSIONS

4.1 Empirical AnalysIs

The description of all the econometric techniques and the outcomes expected from the impact of macroeconomic variables on Nifty FMCG sector and Nifty Financial Service sector companies as well as the long term cointegration between macroeconomic variables and stock returns of Nifty FMCG and Nifty Financial Service Sector.

For the purpose of Analysing and Interpreting the data, the tools and techniques employed for the objective 1:Descriptive Statistics, Unit root test, Correlation Matrix, Multiple Regression Model and for objective 2: Johansen Cointegration Test.

4.2 ANALYSIS ON OBJECTIVE 1

4.2.1 Descriptive Statistics

Descriptive statistics describes the temporal characteristics of the data set. The study's data set may be quickly comprehended and understood due to the nature, traits, and properties of the variables that are described by the descriptive statistics. Some common measurements, such as the Jarque-Bera test, kurtosis, skewness, maximum and minimum values, measures of dispersion like standard deviation (or variance), and measures of central tendency (mean) have been employed for the quantitative description. The quantitative Summary Statistics of all the variables' overall trends and patterns are shown in Table 4.1, Table 4.2 and Table 4.3.

Table 4.1: Descriptive Statistics of Nifty FMCG sector

Nifty FMCG companies	Mean	Maximum	Minimum	Standard deviation	Skewness	Kurtosis	Jarque-Bera
Britannia Industries Ltd	0.020483	0.248944	-0.438396	0.081591	-1.009696	9.524894	252.6994 (0.000)
Colgate Palmolive (India) Ltd	0.005612	0.196256	-0.508134	0.075173	-2.061533	18.76421	1438.179 (0.000)
Dabur India Ltd	0.012322	0.177740	-0.108303	0.053562	0.154516	2.928968	0.544625 (0.7616)
Emami ltd	0.005512	0.488222	-0.494120	0.111885	-0.445248	8.417955	163.2974 (0.000)
Godrej Consumer Products Ltd	0.007474	0.238236	-0.470681	0.092694	-1.849269	12.00667	513.4959 (0.000)
Hindustan Unilever Ltd	0.013873	0.250241	-0.114239	0.062414	0.982190	4.616903	35.06296 (0.000)
ITC Ltd	0.005305	0.171861	-0.314739	0.065381	-0.766282	6.614792	83.50050 (0.000)
Marico Ltd	0.009765	0.197909	-0.464924	0.070273	-2.045162	17.92651	1297.462 (0.000)
Nestle India Ltd	0.013865	0.175534	-0.162542	0.057794	0.053476	2.948578	0.076282 (0.9625)
Procter And Gamble Hygiene And Healthy Care Ltd	0.015644	0.187734	-0.091683	0.051984	0.472497	3.193614	5.040205 (0.080)
Radico Khaitan Ltd	0.023169	0.315237	-0.346491	0.118201	-0.029854	3.665612	2.419104 (0.298)
Tata consumer Products Ltd	0.017066	0.265036	-0.181423	0.087305	0.308468	2.886507	2.131402 (0.344)
United Breweries Ltd	0.007763	0.287161	-0.262353	0.084077	0.224028	4.963543	21.97138 (0.000)
MC Dowell–N (United Spirit Ltd)	0.005570	0.272642	-0.801128	0.114347	-2.623833	20.76231	1858.121 (0.000)

Source: Authors compilation using E-views 12.

( ) refers to “p” value

INTERPRETATION

The mean values of Nifty FMCG companies indicates that Radico Khaitan Ltd has a highest average value i.e 0.023169, whereas ITC Ltd has a lowest mean value i.e 0.005305 among all other FMCG companies. Emami ltd has the maximum value i.e 0.488222, whereas MC Dowell–N (United Spirit Ltd) has minimum value i.e -0.801128. The variability in closing prices is measured through Standard deviation. It is observed that Radico Khaitan Ltd , MC Dowell–N (United Spirit Ltd), Emami ltd shows high variation in their closing but Procter And Gamble Hygiene And Healthy Care Ltd shows lowest fluctuations in its stock prices.

Table 4.1 also explains the coefficients of skewness and kurtosis of observations. Skewness of Britannia Industries Ltd, Colgate Palmolive (India) Ltd, Emami ltd, Godrej Consumer Products Ltd, ITC Ltd, Marico Ltd, Radico Khaitan Ltd and MC Dowell–N (United Spirit Ltd) are negative which shows that the distributions are negatively skewed, whereas Dabur India Ltd, Hindustan Unilever Ltd, Nestle india Ltd, Procter And Gamble Hygiene And Healthy Care Ltd, Tata consumer Products Ltd and United Breweries Ltd are positive which shows that the distributions are positively skewed. All the variables except Dabur India Ltd , Nestle India Ltd and Tata consumer Products Ltd has a kurtosis value more than 3 called “leptokurtic” indicating a distribution with heavier tails and a sharper peak than normal distribution. The Jarque-Bera test indicates whether the time series is normally distributed or not. The null hypotheses except in case of Dabur India Ltd, Nestle india Ltd, Procter And Gamble Hygiene And Healthy Care Ltd, Radico Khaitan Ltd and Tata consumer Products Ltd are rejected indicating that the series is not normally distributed.

Table 4.2: Descriptive Statistics of Nifty Financial Service sector

Nifty Financial Service sector	Mean	Maximum	Minimum	Standard deviation	Skewness	Kurtosis	Jarque-Bera
Axis bank	0.008772	0.235679	-0.795893	0.121473	-2.490605	17.65248	1297.333 (0.000)
Bajaj Finance Ltd	0.031706	0.483469	-0.904106	0.143866	-1.987759	17.53439	1229.872 (0.000)
Bajaj Finserv Ltd	0.022041	0.571508	-0.901053	0.142087	-1.788751	17.88280	1269.104 (0.000)
Cholamandalam Investment And Finance Company Ltd	0.024428	0.422507	-0.813630	0.133947	-1.904856	15.40459	912.0997 (0.000)
HDFC Bank Ltd	0.009015	0.217397	-0.449068	0.073164	-1.859251	14.92748	845.4984 (0.000)
ICICI Bank Ltd	0.008561	0.268545	-0.798735	0.114196	-2.720317	21.21340	1957.195 (0.000)
Kotak Mahindra Bank Ltd	0.011437	0.232454	-0.498196	0.082161	-1.673654	13.43416	650.4125 (0.000)
LIC Housing Finance Ltd	0.008540	0.213224	-0.349558	0.098353	-0.589648	3.916470	12.08273 (0.002)
Muthoot Finance Ltd	0.020790	0.488860	-0.303437	0.116988	0.425525	5.400465	35.13529 (0.000)
Power Finance Corporation Ltd	0.008909	0.587979	-0.432699	0.123259	0.574712	6.668094	80.03716 (0.000)
REC Ltd	0.008666	0.343842	-0.495280	0.118974	-0.370936	4.585094	16.59068 (0.000)
Shriram Finance Ltd	0.013864	0.543298	-0.447756	0.117624	0.411824	6.813009	82.42777 (0.000)
State Bank Of India	0.003690	0.383020	-0.881086	0.128838	-2.255094	19.28995	1547.564 (0.000)

Source: Authors compilation using E-views 12.

( ) refers to “p” value

INTERPRETATION

The mean values of all the Nifty Financial Service companies indicates that Bajaj Finance Ltd has a highest average value, whereas State Bank Of India has a lowest mean value among all other Financial Service companies. Power Finance Corporation Ltd has the maximum value, whereas Bajaj Finance Ltd has minimum value. The variability in closing prices is measured through Standard deviation. It is observed that Bajaj Finance Ltd, Bajaj Finserv Ltd, Cholamandalam Investment And Finance Company Ltd shows high variation in their closing but HDFC Bank Ltd and Kotak Mahindra Bank Ltd, LIC Housing Finance Ltd shows lowest fluctuations in its stock prices.

Table 4.2 also explains the coefficients of skewness and kurtosis of observations. Skewness of Axis bank, Bajaj Finance Ltd, Bajaj Finserv Ltd, Cholamandalam Investment And Finance Company Ltd, HDFC Bank Ltd, ICICI Bank Ltd, Kotak Mahindra Bank Ltd, REC Ltd and State Bank Of India are negative which shows that the distributions are negatively skewed, whereas Muthoot Finance Ltd, Power Finance Corporation Ltd and Shriram Finance Ltd are positive which shows that the distributions are positively skewed. All the variables has a kurtosis value is more than 3 called “leptokurtic” indicating a distribution with heavier tails and a sharper peak than normal distribution. The Jarque-Bera test indicates whether the time series is normally distributed or not. The null hypothesis are rejected indicating that the series is not normally distributed.

Table 4.3: Descriptive Statistics of Macroeconomic Variables

Macroeconomic variables	Mean	Maximum	Minimum	Standard deviation	Skewness	Kurtosis	Jarque-Bera
Export	0.013470	0.826019	-0.505892	0.130765	1.449020	14.55659	768.9141 (0.000)
Foreign Exchange Reserve	0.008733	0.081176	-0.054081	0.019153	-0.027860	4.730465	16.23708 (0.000)
Import	0.012257	0.335257	-0.442172	0.107237	-0.028491	5.053179	22.85178 (0.000)
Inflation (CPI)	0.006170	0.636364	-0.500000	0.164755	0.657241	4.905662	29.03014 (0.000)
M2	0.009490	0.183629	-0.224352	0.033329	-1.348923	25.72127	2835.812 (0.000)

Source: Authors compilation using E-views 12.

( ) refers to “p” value

INTERPRETATION

In macroeconomic variables the mean values of all the variables indicates that Export has a highest average value whereas, Inflation (CPI) has a lowest mean value. Table 4.3 also explains the coefficients of skewness and kurtosis of observations. Skewness of Foreign Exchange Reserve, Import and M2 are negatively skewed whereas Export and Inflation (CPI) are positively skewed. All the variables has a kurtosis value is more than 3 called “leptokurtic” indicating a distribution with heavier tails and a sharper peak than normal distribution.

4.2.2.Unit Root Test

In order to assess the validity of the results of classical regression and to make meaningful inferences about a trend in time series analyses i.e. to ascertain whether the trend in a time series is deterministic or stochastic in nature- stationarity of data series is essential. It displays the integration order. The most popular Augmented Dickey-Fuller (ADF) test is used to analyze the chosen variables in order to ascertain if they are stationary at first difference or at level.

Table 4.4: Unit root test of Nifty FMCG companies

Null Hypothesis: Nifty FMCG sector series have unit root						
Nifty FMCG sector companies	**t-statistics**	**Test Critical Values**			**Prob.***	**Decision**
		1% level	**5% level**	**10% level**		
Britannia Industries Ltd	-10.31927	-3.481623	-2.883930	-2.578788	0.0000	Reject
Colgate Palmolive (India) Ltd	-11.09969	-3.481623	-2.883930	-2.578788	0.0000	Reject
Dabur India Ltd	-12.22319	-3.481623	-2.883930	-2.578788	0.0000	Reject
Emami ltd	-11.42667	-3.481623	-2.883930	-2.578788	0.0000	Reject
Godrej Consumer Products Ltd	-11.56150	-3.481623	-2.883930	-2.578788	0.0000	Reject
Hindustan Unilever Ltd	-11.98255	-3.481623	-2.883930	-2.578788	0.0000	Reject
ITC Ltd	-11.93936	-3.481623	-2.883930	-2.578788	0.0000	Reject
Marico Ltd	-11.16138	-3.481623	-2.883930	-2.578788	0.0000	Reject
Nestle india Ltd	-12.64147	-3.481623	-2.883930	-2.578788	0.0000	Reject
Procter And Gamble Hygiene And Healthy Care Ltd	-11.38291	-3.481623	-2.883930	-2.578788	0.0000	Reject
Radico Khaitan Ltd	-10.47935	-3.481623	-2.883930	-2.578788	0.0000	Reject
Tata consumer Products Ltd	-12.12416	-3.481623	-2.883930	-2.578788	0.0000	Reject
United Breweries Ltd	-12.14419	-3.481623	-2.883930	-2.578788	0.0000	Reject
MC Dowell–N (United Spirit Ltd)	-10.76835	-3.481623	-2.883930	-2.578788	0.0000	Reject

Source: Authors compilation using E-views 12.

INTERPRETATION

The above data of Nifty FMCG sector were tested for unit root and the null hypothesis for the above test is that Nifty FMCG sector series series has a unit root. The results shows that the values of T- statistics of all the variables is more than the critical values at 1%, 5% and 10% significance level. The P- values are also 0.000 in all the cases therefore the null hypothesis that unit root exist in data is rejected and alternate hypothesis is accepted concluding that the series is stationary at level.

Table 4.5: Unit root test of Nifty Financial Service sector companies

Null Hypothesis:Nifty Financial Service sector series have unit root						
Nifty Financial Service sector companies	**t-statistics**	**Test Critical Values**			**Prob.***	**Decision**
		1% level	**5% level**	**10% level**		
Axis bank	-11.74015	-3.481623	-2.883930	-2.578788	0.0000	Reject
Bajaj Finance Ltd	-11.19660	-3.481623	-2.883930	-2.578788	0.0000	Reject
Bajaj Finserv Ltd	-11.46984	-3.481623	-2.883930	-2.578788	0.0000	Reject
Cholamandalam Investment And Finance Company Ltd	-11.18587	-3.481623	-2.883930	-2.578788	0.0000	Reject
HDFC Bank Ltd	-12.04465	-3.481623	-2.883930	-2.578788	0.0000	Reject
ICICI Bank Ltd	-12.72939	-3.481623	-2.883930	-2.578788	0.0000	Reject
Kotak Mahindra Bank Ltd	-10.44121	-3.481623	-2.883930	-2.578788	0.0000	Reject
LIC Housing Finance Ltd	-10.57962	-3.481623	-2.883930	-2.578788	0.0000	Reject
Muthoot Finance Ltd	-12.58799	-3.481623	-2.883930	-2.578788	0.0000	Reject
Power Finance Corporation Ltd	-11.87336	-3.481623	-2.883930	-2.578788	0.0000	Reject
REC Ltd	-10.98377	-3.481623	-2.883930	-2.578788	0.0000	Reject
Shriram Finance Ltd	-13.36500	-3.481623	-2.883930	-2.578788	0.0000	Reject
State Bank Of India	-11.28993	-3.481623	-2.883930	-2.578788	0.0000	Reject

Source: Authors compilation using E-views 12.

INTERPRETATION

The above data of Nifty Financial Service sector were tested for unit root and the null hypothesis for the above test is that Nifty Financial Service sector series series has a unit root. The results shows that the values of T- statistics of all the variables is more than the critical values at 1%, 5% and 10% significance level. The P- values are also 0.000 in all the cases therefore the null hypothesis that unit root exist in data is rejected and alternate hypothesis is accepted concluding that the series is stationary at level.

Table 4.6: Unit root test of macroeconomic variables

Null Hypothesis: Macroeconomic Variables series have unit root						
Macroeconomic Variables	**t-statistics**	**Test Critical Values**			**Prob.***	**Decision**
		1% level	**5% level**	**10% level**		
Export	-12.11687	-3.482035	-2.884109	-2.578884	0.0000	Reject
Foreign Exchange Reserve	-11.53953	-3.481623	-2.883930	-2.578788	0.0000	Reject
Import	-15.84936	-3.481623	-2.883930	-2.578788	0.0000	Reject
Inflation (CPI)	-9.461005	-3.482035	-2.884109	-2.578884	0.0000	Reject
M2	-8.826424	-3.482879	-2.884477	-2.579080	0.0000	Reject

Source: Authors compilation using E-views 12.

INTERPRETATION

The above data of macroeconomic variables were tested for unit root and the null hypothesis for the above test is that the macroeconomic variables series has a unit root. The results shows that the values of T- statistics of all the variables is more than the critical values at 1%, 5% and 10% significance level. The P- values are also 0.000 in all the cases therefore the null hypothesis that unit root exist in data is rejected and alternate hypothesis is accepted concluding that the series is stationary at level.

4.2.3 Correlation Matrix

A correlation is a statistical method for determining the degree to which two or more variables move together. The range of a correlation coefficient is -1 to +1. When two variables move in the same direction i.e when they rise or decrease together—they are said to be positively correlated. Conversely, when two variables move in the opposite direction i.e. when they are negatively correlated. Perfectly negatively correlated variables have a correlation coefficient of -1, perfectly positively connected variables have a correlation coefficient of +1, and no relationship exists between the two variables when the correlation coefficient is zero.

Table 4.7: Correlation Matrix of Macroeconomic Variables and Nifty FMCG sector companies

	Export	Foreign Exchange Reserve	Import	Inflation (CPI)	M2
Britannia Industries Ltd	-0.02985	0.07497	-0.01685	0.06791	0.05893
Colgate Palmolive (India) Ltd	-0.11139	-0.10690	0.01335	-0.05409	0.05830
Dabur India Ltd	-0.07949	-0.14011	0.06546	0.04552	-0.07326
Emami ltd	-0.08379	-0.20450	-0.00523	0.03962	-0.01833
Godrej Consumer Products Ltd	0.18272	-0.14770	0.09626	0.02245	0.01112
Hindustan Unilever Ltd	-0.08070	-0.05607	0.11102	-0.03194	-0.01319
ITC Ltd	0.05344	-0.31269	0.10761	-0.05050	0.01979
Marico Ltd	0.08216	-0.06996	0.07850	0.05535	0.05332
Nestle india Ltd	-0.03321	-0.24188	0.03177	0.09648	0.09843
Procter And Gamble Hygiene And Healthy Care Ltd	-0.05501	-0.11343	-0.06412	0.08399	0.09848
Radico Khaitan Ltd	0.09590	-0.04635	0.13459	0.21851	0.02609
Tata consumer Products Ltd	-0.01964	-0.14178	0.13430	0.10227	0.04486
United Breweries Ltd	0.04335	-0.11088	0.07470	-0.00649	-0.04934
MC Dowell–N (United Spirit Ltd)	0.05133	-0.13002	0.05308	-0.04784	0.01016

Source: Authors compilation using E-views 12.

INTERPRETATION

The outcome of the correlation matrix exhibiting the strength and association among the selected macroeconomic variables and Nifty FMCG sector companies has been reported in the Table 7.A correlation coefficient close to 1 indicates a strong correlation and coefficient close to 0 indicates no correlation. From the derived results it can be seen that Export have a negative association with the Britannia Industries Ltd, Colgate Palmolive (India) Ltd, Dabur India Ltd, Emami ltd, Hindustan Unilever Ltd, Nestle india Ltd, Procter And Gamble Hygiene And Healthy Care Ltd, Tata consumer Products Ltd which means that if Export increase, the stock returns of the companies tend to decrease whereas there is a positive association on Godrej Consumer Products Ltd, ITC Ltd, Marico Ltd, Radico Khaitan Ltd, United Breweries Ltd and MC Dowell–N (United Spirit Ltd) which means that if Export increase, the stock returns of the companies also increases. In case of Foreign Exchange Reserve have a negative association in all Nifty FMCG companies except Britannia Industries Ltd have a positive association. In case of Import have positive association in all FMCG companies except Britannia Industries Ltd, Emami ltd, Procter And Gamble Hygiene And Healthy Care Ltd has a negative association. In case of Inflation (CPI) has a negative association in Colgate Palmolive (India) Ltd, Hindustan Unilever Ltd, ITC Ltd, United Breweries Ltd and MC Dowell–N (United Spirit Ltd) whereas Britannia Industries Ltd, Dabur India Ltd, Emami ltd, Godrej Consumer Products Ltd, Marico Ltd, Nestle india Ltd, Procter And Gamble Hygiene And Healthy Care Ltd, Radico Khaitan Ltd, Tata consumer Products Ltd has a positive association. In case of M2 have positive association in all FMCG companies except Dabur India Ltd, Emami ltd, Hindustan Unilever Ltd and United Breweries Ltd have a negative association.

Table 4.8: Correlation Matrix of Macroeconomic Variables and Nifty Financial Service sector companies

	Export	Foreign Exchange Reserve	Import	Inflation (CPI)	M2
Axis bank	-0.12482	-0.21049	-0.04848	0.07086	0.02949
Bajaj Finance Ltd	-0.05900	-0.13566	-0.01473	0.17954	-0.02274
Bajaj Finserv Ltd	-0.03870	-0.00497	-0.00283	0.10894	0.04370
Cholamandalam Investment And Finance Company Ltd	0.03917	-0.11302	0.07466	0.08605	0.01617
HDFC Bank Ltd	-0.08377	-0.16791	-0.02311	0.10924	0.02168
ICICI Bank Ltd	-0.12618	-0.26308	0.07687	-0.07767	-0.07826
Kotak Mahindra Bank Ltd	-0.16261	-0.04851	-0.02271	0.10575	0.02873
LIC Housing Finance Ltd	-0.14630	-0.29719	-0.02343	-0.01404	0.05571
Muthoot Finance Ltd	-0.06258	0.07629	-0.09711	0.10730	0.08388
Power Finance Corporation Ltd	-0.17020	-0.13949	-0.05377	0.14103	-0.05435
REC Ltd	-0.12819	-0.07117	-0.05664	0.07312	-0.04766
Shriram Finance Ltd	-0.01974	-0.21156	0.01029	0.10238	0.12587
State Bank Of India	-0.05785	-0.18167	0.01315	0.17988	-0.02415

Source: Authors compilation using E-views 12.

INTERPRETATION

The outcome of the correlation matrix exhibiting the strength and association among the selected macroeconomic variables and Nifty Financial Service sector companies has been reported in the Table 8. A correlation coefficient close to 1 indicates a strong correlation and coefficient close to 0 indicates no correlation.From the derived results it can be seen that Export has a negative association of all the Nifty Financial Service sector companies except Cholamandalam Investment And Finance Company Ltd has a positive association which means that if Export increase, the stock returns of the companies tend to decrease. In case of Foreign Exchange Reserve has a negative association with all the companies except Muthoot Finance Ltd has positive association. In case of Import has a negative association in all

companies except Cholamandalam Investment And Finance Company Ltd, ICICI Bank Ltd, Shriram Finance Ltd and State Bank Of India has a positive association. In case of Inflation (CPI) all companies are positively association except ICICI Bank Ltd and LIC Housing Finance Ltd are negative association. In case of M2 has a positive association with Axis bank, Bajaj Finserv Ltd, Cholamandalam Investment And Finance Company Ltd, HDFC Bank Ltd, Kotak Mahindra Bank Ltd, LIC Housing Finance Ltd, Muthoot Finance Ltd and Shriram Finance Ltd whereas Bajaj Finance Ltd, ICICI Bank Ltd, Power Finance Corporation Ltd, REC Ltd and State Bank of India has negative correlation.

4.2.4 Multiple Regression Model

A multiple regression model is a statistical method for examining the relationship between two or more independent variables and a dependent variable . It expands on the idea of simple linear regression, which examines the relationship between one independent and one dependent variable, to include situations in which the result could be influenced by several predictors.

In a multiple regression model, the independent variables, also known as predictor variables or features, and an error term are projected to combine linearly to produce the dependent variable, also known as the response variable.

Table 4.9: Multiple regression model results of macroeconomic variables and Nifty FMCG sector companies

Dependent variable	Independent variable	Coefficient	Prob*	R-squared	Durbin Watson Stat
Britannia Industries Ltd	C	0.016271	0.0513	0.015379	1.876660
	Export	-0.035484	0.6384		
	Foreign Exchange Reserve	0.316695	0.4067		
	Import	0.013785	0.8782		
	Inflation (CPI)	0.032586	0.4666		
	M2	0.163819	0.4740		
Colgate Palmolive (India) Ltd	C	0.008045	0.2844	0.049463	1.886823
	Export	-0.136990	0.0467*		
	Foreign Exchange Reserve	-0.447380	0.1963		
	Import	0.098724	0.2268		
	Inflation (CPI)	-0.022968	0.5707		
	M2	0.237108	0.2844		
Dabur India Ltd	C	0.016372	0.0025	0.057256	2.068626
	Export	-0.085320	0.0803		
	Foreign Exchange Reserve	-0.395444	0.1081		
	Import	0.104201	0.0732		
	Inflation (CPI)	0.022071	0.4428		
	M2	-0.090727	0.5370		
Emami ltd	C	0.016466	0.1403	0.056866	1.881317
	Export	-0.132846	0.1912		
	Foreign Exchange Reserve	-1.217763	0.0186*		
	Import	0.091977	0.4467		
	Inflation (CPI)	0.030411	0.6125		
	M2	0.016324	0.9576		
Godrej Consumer Products Ltd	C	0.012782	0.1672	0.055205	2.000438
	Export	0.150739	0.0745		
	Foreign Exchange Reserve	-0.664013	0.1193		
	Import	-0.034258	0.7323		
	Inflation (CPI)	0.009917	0.8420		
	M2	-0.124408	0.6250		
Hindustan Unilever Ltd	C	0.014993	0.0169	0.056264	1.991049
	Export	-0.129169	0.0237*		
	Foreign Exchange Reserve	-0.189731	0.5067		
	Import	0.163210	0.0166*		
	Inflation (CPI)	-0.002852	0.9321		

	M2	0.030866	0.8569		
ITC Ltd	C	-0.013846	0.0298	0.109651	2.030032
	Export	-0.020726	0.7186		
	Foreign Exchange Reserve	-1.059313	0.0004*		
	Import	0.068883	0.3159		
	Inflation (CPI)	-0.018845	0.5804		
	M2	0.027419	0.8749		
Marico Ltd	C	0.010407	0.1462	0.016127	1.952005
	Export	0.019192	0.7678		
	Foreign Exchange Reserve	-0.234866	0.4746		
	Import	0.034026	0.6606		
	Inflation (CPI)	0.023664	0.5391		
	M2	0.061953	0.7530		
Nestle India Ltd	C	0.018397	0.0014	0.087058	2.071891
	Export	-0.065762	0.2029		
	Foreign Exchange Reserve	-0.732396	0.0055*		
	Import	0.056869	0.3549		
	Inflation (CPI)	0.032662	0.2853		
	M2	0.195045	0.2124		
Procter And Gamble Hygiene And Healthy Care Ltd	C	0.017147	0.0013	0.037046	1.905714
	Export	-0.028595	0.5479		
	Foreign Exchange Reserve	-0.317905	0.1872		
	Import	-0.017875	0.7525		
	Inflation (CPI)	0.021973	0.4360		
	M2	0.183543	0.2040		
Radico Khaitan Ltd	C	0.022566	0.0544	0.072848	1.924615
	Export	-0.007573	0.9431		
	Foreign Exchange Reserve	-0.214895	0.6885		
	Import	0.177101	0.1630		
	Inflation (CPI)	0.167091	0.0088*		
	M2	-0.065336	0.8389		
Tata consumer Products Ltd	C	0.020213	0.0200	0.075123	2.148388
	Export	-0.146843	0.0625		
	Foreign Exchange Reserve	-0.632148	0.1116		
	Import	0.221427	0.0189*		
	Inflation (CPI)	0.064095	0.1685		
	M2	0.130805	0.5813		
United Breweries Ltd	C	0.012632	0.1395	0.021055	2.015866
	Export	0.003304	0.9660		
	Foreign Exchange Reserve	-0.471116	0.2304		
	Import	0.060421	0.5137		
	Inflation (CPI)	0.001748	0.9697		

	M2	-0.163452	0.4869		
MC Dowell–N (United Spirit Ltd)	C	0.011766	0.3103	0.021731	1.820380
	Export	0.024907	0.8133		
	Foreign Exchange Reserve	-0.764480	0.1528		
	Import	0.0225649	0.8383		
	Inflation (CPI)	-0.033798	0.5886		
	M2	0.004156	0.9896		

Source: Authors compilation using E-views 12.

INTERPRETATION

The Table 9 shows the generated coefficients of the constant, Export, Foreign Exchange Reserve, Import, Inflation (CPI), M2 for all Nifty FMCG sector companies. The regression results Britannia Industries Ltd indicates that Export, Foreign Exchange Reserve, Import, Inflation (CPI), and M2 has no significant influence on the stock market returns as their p-values are more than 0.05 significance level. R-Squared value indicates that 1.54 % of the variation in stock returns is explained by the factors considered in this study implying that remaining 98.46% of the variation in the returns is caused by the variables outside the preview of this study. The value of Durbin Watson statistics is lies between 1 and 2 i.e. 1.876660 so there does not exist a problem of autocorrelation. In case of Colgate Palmolive (India) Ltd indicates that Export has a significant influence on the stock market returns as their p-values are less than 0.05 significance level. A 1% change in Export would lead to -0.136990% change in the returns in this industry. The results revealed Export will move the returns of in opposite direction. R-Squared value indicates that 4.94 % of the variation in stock returns is explained by the factors considered in this study. The value of Durbin Watson statistics is lies between 1 and 2 i.e. 1.886823 so there does not exist a problem of autocorrelation. In case of Dabur India Ltd indicates that the independent variables has no significant influence on the stockmarket returns as their p-values are more than 0.05 significance level. In case of Emami ltd Indicates that Foreign Exchange Reserve has a

significant influence on the stock market returns as their p-values are less than 0.05 significance level. The value of Durbin Watson statistics is lies between 1 and 2 i.e. 1.881317so there does not exist a problem of autocorrelation. In case of Godrej Consumer Products Ltd indicates that the independent variables has no significant influence on the stock market returns as their p-values are more than 0.05 significance level. In case of Hindustan Unilever Ltd indicates that Export and Import has a significant influence on the stock market returns as their p-values are less than 0.05 significance level. In case of ITC Ltd indicates that Foreign Exchange Reserve has a significant influence on the stock market returns. In case of Marico Ltd indicates that Export, Foreign Exchange Reserve, Import, Inflation (CPI), and M2 has no significant influence on the stock market returns as their p-values are more than 0.05 significance level. In case of Nestle india Ltd Foreign Exchange Reserve has a significant influence on the stock market returns as their p-values are less than 0.05 significance level. In case of Procter And Gamble Hygiene And Healthy Care Ltd indicates that Export, Foreign Exchange Reserve, Import, Inflation (CPI), and M2 has no significant influence on the stock market returns. In case of Radico Khaitan Ltd indicates that Inflation (CPI) has a significant influence on the stock market returns. In case of Tata consumer Products Ltd indicates that Import has a significant influence on the stock market returns. In case of United Breweries Ltd indicates that Export, Foreign Exchange Reserve, Import, Inflation (CPI), and M2 has no significant influence on the stock market returns. In case of MC Dowell–N (United Spirit Ltd) indicates that Export, Foreign Exchange Reserve, Import, Inflation (CPI), and M2 has no significant influence on the stock market returns as their p-values are more than 0.05 significance level. R-Squared value indicates that 2.17 % of the variation in stock returns. The value of Durbin Watson statistics is lies between 1 and 2 i.e. 1.820380 so there does not exist a problem of autocorrelation.

Table 4.10: Multiple regression model results of macroeconomic variables and Nifty Financial Service sector companies

Dependent variable	Independent variable	Coefficient	Prob*	R-squared	Durbin Watson Stat
Axis bank	C	0.019771	0.1001	0.074331	2.056075
	Export	-0.185248	0.0909		
	Foreign Exchange Reserve	-1.377407	0.0134*		
	Import	0.073559	0.5713		
	Inflation (CPI)	0.051027	0.4298		
	M2	0.243207	0.4616		
Bajaj Finance Ltd	C	0.040937	0.0048	0.057555	1.940037
	Export	-0.117769	0.3665		
	Foreign Exchange Reserve	-1.017533	0.1235		
	Import	0.089794	0.5631		
	Inflation (CPI)	0.162289	0.0370*		
	M2	-0.090660	0.8182		
Bajaj Finserv Ltd	C	0.020154	0.1636	0.017662	2.036047
	Export	-0.099800	0.4476		
	Foreign Exchange Reserve	-0.037662	0.9547		
	Import	0.075983	0.6274		
	Inflation (CPI)	0.095308	0.2218		
	M2	0.215082	0.5888		
Cholamandalam Investment And Finance Company Ltd	C	0.029526	0.0306	0.026263	2.046679
	Export	-0.032622	0.7912		
	Foreign Exchange Reserve	-0.758040	0.2246		
	Import	0.121988	0.4069		
	Inflation (CPI)	0.075275	0.3035		
	M2	0.000094	0.9998		
HDFC Bank Ltd	C	0.014114	0.0545	0.052821	2.066014
	Export	-0.085114	0.2012		
	Foreign Exchange Reserve	-0.653448	0.0531		
	Import	0.047357	0.5498		
	Inflation (CPI)	0.048988	0.2143		
	M2	0.091792	0.6481		
ICICI Bank Ltd	C	0.024089	0.0281	0.135583	2.255373
	Export	-0.261968	0.0090*		
	Foreign Exchange Reserve	-1.605774	0.0016*		
	Import	0.276374	0.0205*		
	Inflation (CPI)	-0.037471	0.5231		
	M2	-0.119436	0.6904		
Kotak Mahindra Bank Ltd	C	0.012375	0.1305	0.061082	1.837334
	Export	-0.184427	0.0141*		

	Foreign Exchange Reserve	-0.236039	0.5292		
	Import	0.124483	0.1610		
	Inflation (CPI)	0.057768	0.1904		
	M2	0.181771	0.4193		
LIC Housing Finance Ltd	C	0.020669	0.0288	0.134587	1.857420
	Export	-0.204684	0.0177*		
	Foreign Exchange Reserve	-1.574887	0.0004*		
	Import	0.108600	0.2865		
	Inflation (CPI)	-0.009393	0.8525		
	M2	0.327506	0.2063		
Muthoot Finance Ltd	C	0.014657	0.2143	0.033929	2.188028
	Export	-0.032754	0.7600		
	Foreign Exchange Reserve	0.445448	0.4112		
	Import	-0.085563	0.5034		
	Inflation (CPI)	0.066794	0.2940		
	M2	0.349929	0.2822		
Power Finance Corporation Ltd	C	0.018557	0.1269	0.079588	2.103038
	Export	-0.238552	0.0320*		
	Foreign Exchange Reserve	-0.939101	0.0935		
	Import	0.136608	0.2995		
	Inflation (CPI)	0.114558	0.0813		
	M2	-0.064838	0.8460		
REC Ltd	C	0.014353	0.2326	0.030202	1.906666
	Export	-0.150484	0.1699		
	Foreign Exchange Reserve	-0.477327	0.3876		
	Import	0.062747	0.6300		
	Inflation (CPI)	0.057911	0.3716		
	M2	-0.065084	0.8440		
Shriram Finance Ltd	C	0.020816	0.0741	0.074323	2.312935
	Export	-0.096545	0.3609		
	Foreign Exchange Reserve	-1.303479	0.0156*		
	Import	0.059828	0.6344		
	Inflation (CPI)	0.066166	0.2908		
	M2	0.483622	0.1319		
State Bank Of India	C	0.014381	0.2574	0.077052	2.048643
	Export	-0.136550	0.2379		
	Foreign Exchange Reserve	-1.217367	0.0384*		
	Import	0.136425	0.3222		
	Inflation (CPI)	0.148372	0.0315*		
	M2	-0.085151	0.8075		

Source: Authors compilation using E-views 12.

INTERPRETATION

The Table 10 shows the generated coefficients of the constant, Export, Foreign Exchange Reserve, Import, Inflation (CPI), M2 for all Nifty Financial Service sector companies. The regression results Axis bank indicates that Foreign Exchange Reserve has significant influence on the stock market returns as their p-values are less than 0.05 significance level. R-Squared value indicates that 7.443 % of the variation in stock returns is explained by the factors considered in this study implying that remaining 92.567% of the variation in the returns is caused by the variables outside the preview of this study. In case of Bajaj Finance Ltd indicates that Inflation (CPI) has a significant influence on the stock market returns as their p-values are less than 0.05 significance level. The value of Durbin Watson statistics is lies between 1 and 2 i.e. 1.940037so there does not exist a problem of autocorrelation. In case of Bajaj Finserv Ltd indicates that Export, Foreign Exchange Reserve, Import, Inflation (CPI), and M2 has no significant influence on the stock market returns as their p-values are more than 0.05 significance level. In case of Cholamandalam Investment And Finance Company Ltd that the independent variables has no significant influence on the stock market returns as their p-values are more than 0.05 significance level. In case of HDFC Bank Ltd has no significant influence on the stock market returns as their p-values are more than 0.05 significance level. In case of ICICI Bank Ltd indicates that Export and Foreign Exchange Reserve has significant influence on the stock market returns. In case of Kotak Mahindra Bank Ltd indicates that Export has significant influence on the stock market returns. In case of LIC Housing Finance Ltd Export and Foreign Exchange Reserve has significant influence on the stock market returns. In case of Muthoot Finance Ltd has no significant impact on any dependent variables. In case of Power Finance Corporation Ltd indicates that Export has significant influence on the stock market returns. In case of REC Ltd has no significant impact on any dependent variables. The value of Durbin Watson statistics is lies between 1

and 2 i.e. 1.906666 so there does not exist a problem of autocorrelation. In case of Shriram Finance Ltd indicates Foreign Exchange Reserve has significant influence on the stock market returns as their p-values are less than 0.05 significance level. In case of State Bank Of India Inflation (CPI) and Foreign Exchange Reserve has significant influence on the stock market returns as their p-values are less than 0.05 significance level.

4.3 ANALYSIS ON OBJECTIVE 2

4.3.1 Unit root test

Table 4.11: Unit root test of Nifty FMCG Sector Index, Nifty Financial Service Index

Particulars	**t-statistics**	**Test Critical Values**			**Prob.***	**Decision**
		1% level	**5% level**	**10% level**		
Nifty FMCG Sector Index	-9.769479	-3.482035	-2.884109	-2.578884	0.0000	Reject
Nifty Financial Service Index	-11.46397	-3.481623	-2.883930	-2.578788	0.0000	Reject

Source: Authors compilation using E-views 12.

INTERPRETATION

The above data of Nifty FMCG Sector Index and Nifty Financial Service Index were tested for unit root and the null hypothesis for the above test is that the series series has a unit root. The results shows that the values of T- statistics of all the variables is more than the critical values at 1%, 5% and 10% significance level. The P- values are also 0.000 in all the cases therefore the null hypothesis that unit root exist in data is rejected and alternate hypothesis is accepted concluding that the series is stationary at level.

4.3.2 Johansen Co-Integration Test

Johansen's cointegration test is a statistical method for figuring out whether or not a group of time series variables have cointegrating relationships . When non-stationary variables move together over the long term despite showing short-term volatility, this is referred to as cointegration.

Table 4.12: Johansen Cointegration test of Nifty FMCG Index

Null Hypothesis	Eigen Value	Trace Statistic	Critical value 5% (p-value)	Max-Eigen Statistic	Critical value 5% (p-value)
None*	0.371648	212.0635	95.75366 (0.0000)	58.08179	40.07757 (0.0002)
At most 1*	0.301831	153.9817	69.81889 (0.0000)	44.91168	33.87687 (0.0017)
At most 2*	0.279384	109.0701	47.85613 (0.0000)	40.95616	27.58434 (0.0006)
At most 3*	0.208574	68.11390	29.79707 (0.0000)	29.23982	21.13162 (0.0029)
At most 4*	0.152417	38.87408	15.49471 (0.0000)	20.67078	14.26460 (0.0043)
At most 5*	0.135519	18.20330	3.841465 (0.0000)	18.20330	3.841465 (0.0000)

Source: Authors compilation using E-views 12.

( ) refers to “p” value

Ho: “There is no long term cointegration between Nifty FMCG Index and selected macroeconomic variables”

INTERPRETATION

The result of Johansen’s cointegration test has been reported in table 13, both trace and max statistics are used for the analysis. The result of no cointegration are rejected as the trace statistics is greater than critical values in all the cases cointegrating equations. With consideration of Max Eigen Value statistics, the result of no cointegration are rejected as the

maximum eigen statistic is greater than the critical values in all the cases cointegrating equations. In all the cases p value is less than 0.05 which means there exists long term relationship between Nifty FMCG Index and macroeconomic variables.

Table 4.13: Johansen Cointegration test of Nifty Financial Service Index

Null Hypothesis	Eigen Value	Trace Statistic	Critical value 5% (p-value)	Max-Eigen Statistic	Critical value 5% (p-value)
None*	0.356576	214.6835	95.75366 (0.0000)	55.11889	40.07757 (0.0005)
At most 1*	0.343568	159.5646	69.81889 (0.0000)	52.61709	33.87687 (0.0001)
At most 2*	0.285133	106.9476	47.85613 (0.0000)	41.95732	27.58434 (0.0004)
At most 3*	0.215606	64.99024	29.79707 (0.0000)	30.35549	21.13162 (0.0019)
At most 4*	0.145059	34.63475	15.49471 (0.0000)	19.59037	14.26460 (0.0065)
At most 5*	0.113394	15.04439	3.841465 (0.0001)	15.04439	3.841465 (0.0001)

Source: Authors compilation using E-views 12.

( ) refers to “p” value

Ho: “There is no long term cointegration between Nifty Financial Service Index and selected macroeconomic variables”

INTERPRETATION

The result of Johansen’s cointegration test has been reported in table 13, both trace and max statistics are used for the analysis. The result of no cointegration are rejected as the trace statistics is greater than critical values in all the cases cointegrating equations. With consideration of Max Eigen Value statistics, the result of no cointegration are rejected as the maximum eigen statistic is greater than the critical values in all the cases cointegrating

equations. In all the cases p value is less than 0.05 which means there exists long term relationship between Nifty Financial Service Index and macroeconomic variables.

4.4 Major Findings

The study on macroeconomic variables and select companies of Nifty FMCG sector and Nifty Financial Service sector of NSE summarizes the Mean, Standard Deviation, Skewness, Kurtosis, Jarque-Bera test and Probability are executed in this study. In Nifty FMCG sector is that Average monthly closing prices in Emami ltd were found to be maximum followed by MC Dowell–N (United Spirit Ltd) was minimum whereas in Nifty Financial Service sector Power Finance Corporation Ltd were found to be maximum followed by Bajaj Finance Ltd was minimum. The null hypotheses of all cases except in case of Dabur India Ltd, Nestle india Ltd, Procter And Gamble Hygiene And Healthy Care Ltd, Radico Khaitan Ltd and Tata consumer Products Ltd are rejected indicating that the series is not normally distributed.

The stationarity test for selected companies and macroeconomic variables from Nifty FMCG and Financial Service sector are stationarity in the level form. All are found to be stationary at level. Hence all the selected variables are stationary.

In Nifty FMCG sector companies with macroeconomic variables has a significant impact as the p-values are less than 0.05 significance level, such as Colgate Palmolive (India) ltd has impact on Export, Emami ltd has impact on Foreign exchange reserve, Hindustan unilever ltd has impact on Export and Import, ITC ltd has impact on Foreign exchange reserve, Nestle India ltd has impact on Foreign exchange reserve, Radico Khaitan ltd has impact on Inflation (CPI) and Tata consumer products ltd has impact on import. In Nifty Financial Service sector companies with macroeconomic variables has a significant impact as the p-values are less

than 0.05 significance level, such as Axis bank has impact on Foreign exchange reserve, Bajaj finance ltd has impact on Inflation (CPI), ICICI ltd has impact on Export and Foreign exchange reserve, Kotak mahindra bank ltd has impact on Export, LIC housing finance ltd has impact on Export and Foreign exchange reserve, Power finance corporation ltd has impact on Export, Shriram finance ltd has impact on Foreign exchange reserve and State bank of india has impact on Foreign exchange reserve and Inflation (CPI).

To check the long term cointegration in Nifty FMCG sector Index and Nifty Financial Service sector Index Johansen cointegration test is used where Cointegration results have demonstrated a strong long term relationship between Nifty FMCG Index and macroeconomic variables, and Nifty Financial Service Index and macroeconomic variables.

4.5 Conclusion of the study

This proposed study has attempted to analyse the impact of macroeconomic variables and selected macroeconomic variables. The study mainly focused sectors: Nifty FMCG sector and Nifty Financial Service sector and 5 macroeconomic variables i.e Foreign Exchange Reserve (FRR), Inflation (CPI), money supply M2 (MSM2), Import and Export.

The present study analyzed the impact of macroeconomic variables on the selected NSE sector i.e. Nifty FMCG sector and Nifty Financial Service sector for a time span of 10 years from 1st January 2013 to 31st October 2023.

All other select companies from Nifty FMCG sector and Nifty Financial Service sector are having some fluctuations while comparing with macroeconomic variables, and so it gives a piece of empirical evidence for the investor's policymakers, stockholders to invest in the companies which are having low variations to earn good returns. However, policymakers

shall be acquainted with the effects of economic indicators in stock index prices and educate the investors to make efficient and effective investment decisions. Therefore, policymakers, shareholders, and investors should capitalize in two or more sectors as this study found each sector and firm has diverse risk levels.

4.6 Scope for further studies

1. This study has focused on only two sectors of NSE i.e. Nifty FMCG sector and Nifty Financial Service; there are other sectors also on which study can be take place. Every sector has its own importance and contribution in an Indian economy
2. This study has focused on the period of the study from 1st Janauary 2013 to 31st October 2023 for further studies can be done by taking long period.
3. This study has focused on only five macroeconomic variables i.e Inflation (CPI), Foreign Exchange Reserve, M2, Import, Export so further studies can be done by taking other macroeconomic variables.

4.7 Limitation of the study

The study is restricted to only two sectors i.e Nifty FMCG sector and Nifty Financial Service sector and five macroeconomic variables. Period of the study is limited to 10 years from 1st January 2013 to 31st October 2023 based on availability of data. Some companies are dropped because of unavailability of the data. From Nifty FMCG sector i.e Varun beverages because it is listed on NSE on 08-11-2016. And from Nifty Financial Service sector i.e. HDFC Asset Mgmt. Co. Ltd. which is listed on 06-08-2018, HDFC Life Insurance Co. Ltd.- 17-11-2017, ICICI Lombard General Insurance Co. Ltd.- 27-09-2017, ICICI Prudential Life Insurance Co. Ltd.- 29-09-2016, SBI Cards & Payment Services Ltd.- 16-03-2020, SBI Life Insurance Co. Ltd.- 03-10-2017.

One of the limitations of the research is that only five macroeconomics variables were used more variables could be used.

4.8 Suggestions

This study has focused on only two sectors of NSE i.e. Nifty FMCG sector and Nifty Financial Service sector so suggestion for further studies can be done by taking into consideration of companies of all the sectors from NSE. And longer period can be taken for the study.

This study has focused on only five macroeconomic variables i.e Inflation (CPI), Foreign Exchange Reserve, M2, Import, Export so further studies can be done by taking other macroeconomic variables.

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