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Impact of Firm Size and Systematic Risk on Stock Returns in Companies of Different Industries

A MASTER THESIS

Submitted by:
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Under the Guidance of
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Master Thesis submitted in partial fulfillment of the requirements for the degree of **Master of Business Administration**

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APPROVAL OF MASTER THESIS

Master Thesis titled by
"**IMPACT OF FIRM SIZE AND SYSTEMATIC RISK ON STOCK RETURNS IN COMPANIES OF DIFFERENT INDUSTRIES"**

by RONA SUSAN VARGHESE
Reg. No: 2**227144** is approved for the award of the degree of Master of Business Administration.

VIVA PANEL:

- *Strengths:*

- The research questions are stated well.
- The findings of the study are more relevant.

- *Improvements:*

- The suggestions should have been very specific to the findings of the study

Name: Ramanatha H. R. **Signature_____**
Date: _____
Place: Bengaluru

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DECLARATION

I RONA SUSAN VARGHESE (Reg. No: 2227144) hereby declare that the Master Thesis, titled "IMPACT OF FIRM SIZE AND SYSTEMATIC RISK ON STOCK RETURNS IN COMPANIES OF DIFFERENT INDUSTRIES" is a record of original research work undertaken by me for the award of the degree of Master of Business Administration. I have completed this study under the supervision of Dr Krishna M C, Associate Professor, School of Business Management

I also declare that this Master Thesis has not been submitted for the award of any degree, diploma, associateship, fellowship or other title. I hereby confirm the originality of the work and that there is no plagiarism in any part of the Master Thesis.

Place: Bengaluru
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CERTIFICATE

This is to certify that the Master Thesis submitted by RONA SUSAN VARGHESE (Reg. No: 2227144) titled "IMPACT OF FIRM SIZE AND SYSTEMATIC RISK ON STOCK RETURNS IN COMPANIES OF DIFFERENT INDUSTRIES" is a record of research work done by him/her during the academic year 2023-24 under my supervision in partial fulfillment for the award of Master of Business Administration.

This master thesis has not been submitted for the award of any degree, diploma, associateship, fellowship or other title. I hereby confirm the originality of the work and that there is no plagiarism in any part of the master thesis.

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ABSTRACT

- ***Purpose*:**

The study explores the relationship between firm size, systematic risk, and stock returns across various industries. The purpose of the study is to analyze how these factors influence stock returns and to provide insights for investors and financial analysts. The theoretical framework is based on the Capital Asset Pricing Model (CAPM) and existing literature on firm size, systematic risk, and stock returns.

- ***Methodology*:**

The research methodology involves quantitative analysis using financial data from companies in different industries. Variables such as firm size, systematic risk, and stock returns are measured and analyzed using statistical techniques and models. The study aims to uncover patterns and relationships that can help in understanding the dynamics of stock returns in diverse industry settings.

- ***Findings*:**

The findings of the study reveal significant correlations between firm size, systematic risk, and stock returns. Larger firms tend to exhibit lower systematic risk and higher stock returns compared to smaller firms. The analysis also highlights industry-specific variations in the impact of firm size and systematic risk on stock returns, suggesting that industry dynamics play a crucial role in shaping investment outcomes.

- ***Originality:***

This study contributes to the existing literature by providing empirical evidence on the relationship between firm size, systematic risk, and stock returns in companies across different industries. The originality of the work lies in its comprehensive analysis of these factors and its implications for investment decision-making.

Keywords:- *Firm Size, Systematic Risk, Stock Returns, Industry Dynamics.*

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CHAPTER ONE
INTRODUCTION

A. Industry Profile

➢ *Automobile Industry*

The automobile industry is a vast and complex network of companies and organizations involved in every aspect of motor-vehicles, from design and development to manufacturing, marketing, sales, and repair. It's one of the world's largest industries, contributing significantly to global economic growth and employment. the automobile industry remains a vital sector, playing a crucial role in:

- Economic growth: It generates trillions of dollars in revenue worldwide and employs millions of people directly and indirectly.
- Technological innovation: The industry drives research and development in various fields, including materials science, electronics, and artificial intelligence.
- Transportation infrastructure: It shapes how people and goods move around the world, impacting social and economic development.

The global automobile industry is massive, with an estimated annual turnover of over $2.7 trillion as of 2023. This figure includes revenue generated from passenger car sales, commercial vehicle sales, aftermarket parts and services, and related activities.

The automobile industry is a complex landscape with a multitude of players, each contributing to different segments and functions such as Toyota, Volkswagen group, General Motors, Ford Motor company etc.

➢ *Manufacturing Industry*

The manufacturing industry is the backbone of modern economies, transforming raw materials into finished goods that impact every aspect of our lives. It's a diverse and dynamic sector, constantly evolving to meet the ever-changing needs of consumers and businesses. At its core, manufacturing involves taking raw materials like wood, metal, or plastics and converting them into usable products using various physical and chemical processes. This can range from simple handcrafting to complex automated assembly lines. The industry plays a crucial role in generating significant revenue and employment opportunities, contributing to national and global economies. Manufacturers constantly improve existing products and develop new ones, driving advancements in materials science, automation, and other fields. The industry provides essential goods for various sectors, from clothing and electronics to vehicles and machinery.

The global manufacturing industry is colossal, with an estimated annual turnover exceeding $15 trillion as of 2023. This encompasses the value of all manufactured goods produced worldwide, representing a significant portion of global GDP.

The manufacturing landscape is vast and diversified, with different players specializing in various segments and major key players like General Electric, Seimens AG, Honeywell International Inc etc.

➢ *Banking Industry*

The banking industry plays a crucial role in modern economies, acting as the backbone for financial transactions and facilitating economic growth. It's a complex web of institutions offering various services to individuals, businesses, and governments. At its core, banks act as intermediaries, channeling funds from those with surplus money (depositors) to those who need it for investments or spending (borrowers). They earn their profits by charging interest on loans and collecting fees for various services. Beyond this core function, banks offer a wide range of services, including payments, wealth management, trade finance, financial advice etc.

The global banking industry is colossal, with an estimated annual revenue exceeding $2.7 trillion as of 2023. The banking landscape is diverse, with various institutions serving different customer segments and regions. Some of the key players include Citigroup, Bank of America, ICBC etc.

➢ *Healthcare Industry*

The healthcare industry encompasses a vast network of individuals and organizations dedicated to promoting and restoring health. It plays a crucial role in individual and societal well-being, constantly evolving to meet changing needs and advancements.

The healthcare industry provides a wide range of services, including:

- Diagnosis and treatment of diseases: through doctors, nurses, specialists, and medical facilities.
- Public health initiatives: focusing on prevention, vaccination, and community health programs.
- Medical research and development: advancing new treatments, technologies, and cures for various diseases.
- Pharmaceutical and medical device manufacturing: producing essential medications and equipment used in healthcare.

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- Insurance and financing: facilitating access to healthcare services through various payment models.

The global healthcare industry is massive, with an estimated annual turnover of over $10 trillion as of 2023.

Many key players of this industry are Johnson &Johnson, Pfizer inc., UnitedHealth Group Incorporated etc.

➢ *Consumer Goods Industry*

The consumer goods industry encompasses the vast array of products we use in our daily lives, from food and beverages to apparel and electronics. It plays a crucial role in global economies, shaping consumer trends and impacting our lives in countless ways.

➢ *Consumer Goods can be Broadly Categorized into two Main Segments:*

- Durable goods: These are products with a longer lifespan, typically lasting several years or more, such as appliances, furniture, and electronics.
- Non-durable goods: These are products consumed quickly and frequently repurchased, such as food, beverages, personal care items, and cleaning products.
- The global consumer goods industry is massive, with an estimated annual turnover exceeding $4.5 trillion as of 2023.
- The key players in the industry are Pepsico inc, Nestle, P&G, Unilever etc.

B. Introduction to the Topic

➢ *Stock Return:*

Investors participate in the stock market with the aim of generating income from their investments. This income, referred to as "stock returns," can be derived from both trading profits and dividends received. Dividends are periodic payments made by companies to shareholders based on their earnings, typically occurring quarterly, half yearly, or annually (Reddy,2016). The expected profit rate is right in line with the risk faced by the investor. The return can be classified into yield and capital gain (loss). Yield is part of stock return that indicates the income gained, while capital gain (loss) is part of return that its rise and fall depend on stock's value which makes investor to gain profit or loss (Tandelilin, 2001).

C. Factors Affecting Stock Return:

- Price to Book Value Ratio (P/B): The P/B ratio compares a company's market price per share to its book value per share. A low P/B ratio suggests that the stock may be undervalued, potentially offering higher returns, while a high P/B ratio may indicate an overvalued stock with lower return prospects.
- Debt Equity Ratio (D/E): The D/E ratio reflects the financial leverage of a company by comparing its total debt to shareholders' equity. A higher D/E ratio indicates higher financial risk, as the company has more debt obligations to fulfill. Higher risk can lead to higher returns, but it also increases the potential for financial distress and volatility.
- Current Ratio (CR): The current ratio assesses a company's liquidity position by comparing its current assets to its current liabilities. A higher current ratio suggests that a company has sufficient short-term assets to cover its obligations. This can provide stability and mitigate the risk of default, potentially influencing stock returns.
- Return on Equity (ROE): ROE measures a company's profitability by assessing its net income relative to shareholders' equity. A higher ROE indicates a more efficient use of shareholders' investments, which may attract investors and positively impact stock returns.
- Firm size: Firm size is a significant factor that influences stock returns due to its impact on market dynamics and investor behavior. Larger firms, with higher market capitalizations, tend to have more stable operations and established market positions, attracting conservative investors seeking consistent returns. Consequently, the stock returns of large-cap companies often exhibit lower volatility. On the other hand, smaller firms with lower market capitalizations may offer higher growth potential but are also subject to higher market risk and volatility. As a result, the stock returns of small-cap companies can fluctuate more significantly. Understanding and considering firm size allows investors to assess the risk-return tradeoff and align their investment strategies accordingly, diversifying their portfolios and potentially maximizing returns based on their risk tolerance and objectives. Investors categorize companies as small, medium, or large based on various criteria such as sales, number of products, capital resources, and total assets (Jogiyanto, 2003). The determination of firm size impacts its value and attractiveness to investors seeking funding opportunities. Large companies typically possess sufficient resources to support their operations and maximize profitability. Consequently, investors tend to prefer investing in companies listed in the NIFTY 50 index, as these companies demonstrate strong financial performance and promising growth prospects. Investing in such companies provides investors with comprehensive information and carries lower investment risks. Considering firm size is crucial in making informed investment decisions and achieving optimal risk-adjusted returns in the stock market.

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- Systemic Risk: The term "systematic risk" describes the risk that is present throughout the whole market or a specific market segment. Systematic risk, which is not limited to a certain stock or industry, but impacts the entire market, is also referred to as undiversifiable risk, volatility risk, or market risk. The market as a whole is subject to systemic risk, which reflects the influence of financial, geopolitical, and economic variables. Different from unsystematic risk, which affects a particular industry or security, is this kind of risk. Most people believe that it is difficult to prevent systematic risk as it is mostly unpredictable. By diversifying their holdings, investors can lessen the effects of systematic risk to some extent.
- Market capitalization: Market capitalization, also known as market cap, refers to the calculation of a company's total value in the market by multiplying its current share price by the total number of outstanding shares. It serves as a crucial metric that provides insights into the size and worth of a company. Market cap is a valuable tool for investors as it helps them assess the potential risks associated with investing in a company's stocks. By understanding a company's market cap, investors can gauge its relative size and make more informed investment decisions.

- Market Capitalization = Market Price of Share x Number of Common Share Outstanding

- Market Price of Share: The market price of a share refers to the current price at which a particular stock or security is being traded in the open market. It is the price determined by the interaction of supply and demand in the stock market. The market price of a share can fluctuate throughout the trading day as buyers and sellers engage in transactions.

- Number of Common Share Outstanding: The number of common shares outstanding refers to the total number of shares of common stock issued by a company that are currently held by shareholders. Common shares are the basic ownership units of a corporation and represent a proportional ownership interest in the company.

- Total Assets: Total assets refer to the complete value of all assets owned by an individual or entity. Assets are tangible or intangible items of economic value that are utilized over time to generate benefits for the owner. In the case of businesses, these assets are typically recorded in accounting records and are reflected in the balance sheet. Examples of asset categories include cash, marketable securities, accounts receivable, prepaid expenses, inventory, fixed assets, intangible assets, goodwill, and other assets.

The treatment of assets in terms of their recording at current market values varies depending on the applicable accounting standards. International financial reporting standards often permit assets to be stated at their current market values, while generally accepted accounting principles may be more restrictive in allowing such restatements.

When evaluating their total assets, owners consider the ease with which each asset can be converted into cash. An asset is considered more liquid if it can be quickly sold for cash, whereasan illiquid asset cannot be easily converted. This liquidity concept is also reflected in thepresentation of assets on the balance sheet, with the most liquid assets, such as cash, listed at the top, and less liquid assets, such as fixed assets, listed towards the bottom. This order of liquidity corresponds to the list of asset categories.

Assets are further classified on the balance sheet as either current assets or long-term assets. Current assets, including accounts receivable or marketable securities, are expected to be converted into cash within one year, while long-term assets, such as fixed assets, are anticipated to be liquidated over a period longer than one year.

When a potential acquirer examines the balance sheet of a target company, significant attentionis given to the different types of assets listed. The focus is on assessing whether the stated asset values on the balance sheet align with the actual values, and any discrepancies can impact the acquirer's bid. A lower actual value may lead to a reduced bid, while a higher actual value may generate increased interest from the acquirer, potentially resulting in an increased offer price.

- Sales Turnover: Sales turnover refers to the total revenue generated by a business within a specific period, typically one year. It serves as a valuable metric for monitoring sales performance over time and identifying significant fluctuations in activity levels. The calculation includes both cash and credit sales. Sales turnover can also be analyzed based on various factors such as units sold, geographic region, or subsidiary.

  The actual amount of sales turnover recognized by a business may differ depending on whether itfollows the accrual basis or cash basis of accounting. Under the accrual basis, revenue isrecorded when goods are shipped or services are provided, while the cash basis recognizes revenue when cash is received from customers, which can lead to delayed recognition except for prepayments. While projecting sales turnover based on historical data may be tempting, it is not advisable because revenue can be influenced by unforeseen factors such as competition and changes in economic conditions. Therefore, relying solely on historical trends may not accuratelyreflect future sales performance.

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- Beta Coefficient β: Systematic Risk Index Beta is considered as a systematic risk indicator that expresses the sensitivity of stock returns to market yields. Using this index, you can examine the rate of return on assets versus the overall market return rate. The Beta coefficient is a metric that gauges the level of sensitivity or correlation between a specific security or investment portfolio and the overall market. By comparing the returns of an individual security or portfolio to the returns of the broader market, we can quantify the statistical measure of risk and determine the portion of risk attributable to market movements.
- Historical stock price: Historical stock price refers to the price of a stock on a specific date inthe past. It is a valuable tool used by investors to analyze and make informed decisions about stocks. Investors can obtain historical stock prices from various sources such as online charting software and websites dedicated to providing historical stock price data. By examining the historical stock price data, investors can study patterns, trends, and performance to gain insights into the potential future movements of a stock.
- Dividend per Share (DPS): Dividend per Share refers to the portion of dividends allocated to each outstanding share of a company. By calculating the dividend per share, investors can assess the amount of income they will receive per share from the company. Typically, dividends are disbursed in the form of cash payments to shareholders, although alternative forms of payment may also be employed.
- Influence of Firm size towards Stock Return: The size of a company is determined by the total value of its assets as indicated in its financial statements. A larger company typically possesses greater wealth and has a higher probability of performing well, which may attract investors and result in an increase in the company's stock price. This correlation between company size and performance can serve as a motivating factor for investors to invest in such companies. The total assets of a company can be used as a measureof its size. A company's size is indicative of its ability to effectively utilize its resources. Investors often consider companies with larger resources as more attractive for potential returns on their investments. Therefore, the size of a company can has an impact on stock returns, as investors may expect better performance and profitability from larger companies.

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CHAPTER TWO
LITERATURE REVIEW

- **Abdullahi, I.B., Lawal, W.A., & Etudaiye-Muhtar, O.F. (2011)** conducted a study to investigate the impact of sectoral size (sectoral capitalization) on risk and expected returnin the Nigerian Stock Market. The study utilized monthly data from 2000 to 2004 and employed the Arbitrage Pricing Theory as a multi-factor model. The findings of thestudy, obtained through Ordinary Least Square (OLS) estimation, indicate that neither firm size nor sector size significantly affects firm-specific or sector-specific returns or risks in the Nigerian Stock Market. These results align with previous research conducted in both developed and emerging economies.
- **AL-Qudah, A., & Laham, M. (2013)** examined the relationship between stock returns, systematic risk, and financial leverage in industrial companies listed on the AmmanStock Exchange (ASE). The study analyzed data from 48 industrial companies between January 2000 and December 2009. The findings reveal a statistically significant relationship between stock returns and both systematic risk (measured by beta coefficient) and financial leverage (measured by debt ratio). However, the results differ from studies conducted in more developed stock markets and show inconsistencies with expected relationships. These findings align with research conducted in developing markets. The study contributes to understanding the dynamics of stock returns in the ASEand provides insights for investors and policymakers.
- **Reddy, Y. V., & Narayan, P. (2016)** aimed to analyze the content of 368 research papers published in 63 different journals between 2000 and 2014. The review provides insights into the existing knowledge and trends in stock returns analysis. The findings highlight a significant amount of research work conducted globally on stock returns, yielding positive outcomes. The review emphasizes the focus on predictability and forecasting of stock returns, as well as the volatility and variability of stock returns.These findings contribute to stock exchanges, regulators, governments, and other stakeholders by providing valuable insights into the dynamics of stock returns and their implications for market participants.
- **Natarajan, R., Sivakavitha, S., & Vasani, S.A. (2020)** conducted a study to examine the relationship between stock returns and financial performance of firms listed on the Bombay Stock Exchange (BSE). The analysis of secondary data from 2015 to 2019 revealed a significant positive correlation between stock returns and financial performance. However, the correlation between stock returns and dividend payout ratio was insignificant. The study concluded that improving financial performance leads to higher stock returns for BSE-listed firms. It emphasized the impact of share prices and dividend payout on stock returns, recommending firms to enhance financial performance and adopt an optimal dividend payout policy to maximize returns.
- **Mohanty, P. (2002)** studied the relationship between firm-specific characteristics and cross-sectional variation in stock returns in India. The study used Fama and Macbeth's methodology and found that market capitalization, market leverage, price-to-book value, and earnings-to-price ratio were significantly correlated with stock returns. However, once the size effect was accounted for, other variables did not have additional explanatory power. The study revealed that small firms outperformed large firms, generating an annualized excess return of 70 percent, particularly in the post-1995 period.
- **Sharma, M., & Jain, A. (2020)** aimed to investigate the presence of the Value Anomaly in the Indian Stock Market and examine the behavior of value and growth portfolios. The study utilized historical stock market data for a wide range of Indian companies and employed a portfolio approach based on Price-to-Earnings (P/E) ratios to construct value and growth portfolios. The findings reveal the existence of the Value Anomaly, with value portfolios outperforming growth portfolios in terms of risk-adjusted returns. The study contributes to the understanding of stock returns and provides insights for investors interested in value investing strategies in the Indian Stock Market.
- **Heydari, M., Xiaohu, Z., Lai, K. K., & Yuxi, Z. (2020)** conducted a study to investigate the relationship between systematic risk and stock returns in the Tehran Stock Exchange (TSE). The study focused on 30 companies involved in chemical and detergent production, analyzing financial data from 2012 to 2017. Wavelet analysis and regression analysis were employed to test the research hypotheses. The results revealed a significant association between systematic risk and returns during periods of high volatility and long-term horizons. This highlights the crucial role of systemic risk in determining stock returns in the TSE, particularly in specific periods. The study contributes to the existing literature by providing insights into the dynamics of asset risk and its impact on stock returns in the TSE, emphasizing the importance of considering systemic risk in investment decisions.
- **Handayani, M., Farlian, T., & Ardian. (2019)** investigated the impact of firm size and market risk on the stock return of high reliable Indonesian companies listed on the LQ45 index. The study analyzed data from 2015 to 2017, utilizing panel data regression methods. The findings revealed that firm size significantly influenced the stock return of blue chip companies, while market risk did not exhibit a significant impact on stock returns. These results provide valuable insights for investors in understanding the factors affecting stock returns in the Indonesian market. The study contributes to the existing literature by shedding light on the relationship between firm size, market risk, and stock returns for high reliable companies in Indonesia, highlighting the importance of considering firm size as a factor in investment decisions.
- **Samontaray, D.P. (2010)** conducted research to examine the impact of corporate governance factors on the share price of companies listed in the NIFTY 50 Index in India. The study utilized data from annual reports and actual share prices of fifty sample companies. The analysis revealed a significant relationship between share price and independent variables such as EPS, Sales, Net Fixed Assets, and corporate governance factors. This research contributes to the existing literature by providing insights into the link between corporate governance and share prices in the Indian context, emphasizing the importance of considering corporate governance factors in understanding stock prices.

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- **Adawiyah, N.R., & Setiyawati, H. (2019)** did a quantitative study to investigate the effect of Current Ratio, Return on Equity, and Firm Size on stock returns in the manufacturing sector of the food and beverage industry in Indonesia. The findings indicated that Current Ratio had a negative and insignificant effect on stock returns, while Return on Equity and Firm Size demonstrated a positive and significant influence. The study highlights the importance of Return on Equity and Firm Size as factors influencing stock returns in the Indonesian market, providing valuable insights for investors in this sector.
- **Chandrasekhar, S., & Raja Sekhar, B. M. (2018)** conducted a quantitative study to investigate the impact of systematic risk on equity stocks in the Indian Stock Market. The study analyzed data from a sample of 13 manufacturing companies in the food and
- beverages sub-sector listed on the Indonesia Stock Exchange. The findings revealed that Return on Equity and Firm Size demonstrated a positive and significant influence on stock returns, while Current Ratio had a negative and insignificant effect. These results highlight the importance of considering Return on Equity and Firm Size in understanding stock returns in the Indian market.

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CHAPTER THREE
RESEARCH METHODOLOGY

A. *Problem Statement*

"The study aims to explore the relationship between firm size, systemic risk, and stock returns of companies over different industries over a five-year period. It seeks to determine whether variations in firm size and systemic risk significantly influence stock returns and contribute to a better understanding of stock market dynamics."

B. *Research Gap*

The literature reviews identify significant gaps for further research: the existing researches are mainly focused on stock returns of different countries and only very few researches talk about Indian stock exchanges. And also, mostly the firm sizes in the existing researches talks about total sales and total assets and no where they are talking about market capitalization as it is one of the important factors in measuring firm size. In order to calculate the systematic risk most of the researches use PER ratio, EPS, NPM etc. and nowhere mentioning about the volatility of the stock. In addition to that dividend yield is another factor which is added in my research which talks about how much company pays out in dividends over the course of the year. Many researches measure profitability in terms on return on assets and return on equity and none of the researches talks directly about net income.

C. *Scope of the study*

The study aimed to investigate the impact of firm size and systematic risk on the stock returns of companies in five different industries. Systematic risk is the risk that cannot be diversified away by investing in a variety of assets, and it is often measured by a company's beta. The study used data from companies in five different industries to test the hypothesis that firm size and systematic risk have a significant relationship with stock returns or not.

D. *Objectives*

- To study the impact of firm's size on the stock return of the companies in different industries.
- To study the impact of systematic risk on the stock return of the companies in different companies.
- To study the factors that influence on stock return of companies.

E. *Research Questions*

- How does firm size, as measured by total assets, sales turnover, and market capitalization, influence the stock returns companies in different industries in the current market environment?
- To what extent does systematic risk, as quantified by the beta coefficient, impact the stock returns of companies in different industries during the study period?
- What are the specific factors that exert influence on the stock returns of companies within the industries, and how do these factors interact with firm size and systemic risk?
- Are there any significant relationships or patterns in the data that demonstrate the influence of firm size and systematic risk on stock returns, and how can these relationships be quantified?
- How do the findings of this study contribute to the understanding of stock market dynamics and assist investors in making more informed investment decisions in the context of different companies?

F. *Dependent and independent variable*

➢ *Dependent Variable:*

- *Stock Return*

Stock return = (P1-P0) + Dividend/P0
where P1= stock price at the end of the year
P0 =stock price at the end of the previous year
Dividend per Share= dividend per share during the year

➢ *Independent Variables:*

- Firm size (Total asset, sales turnover, market capitalization)
- Systemic risk (Beta)
- Dividend yield
- Profitability (Return on Assets)

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G. Research Model

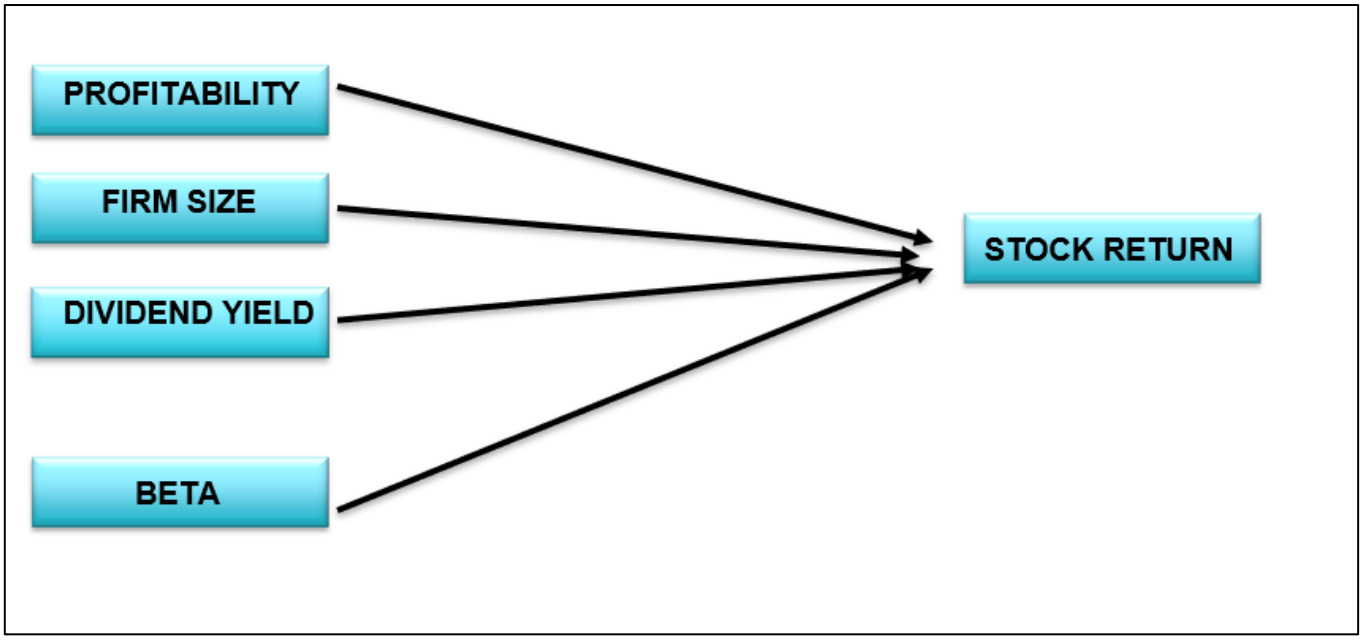

Fig 1: Research Model

H. Hypothesis

- H0: There is no significant relationship between firm size, systemic risk on stock return of companies over different industries.
- H1: There is a significant relationship between firm size, systemic risk on stock return of companies over different industries.

I. Data Collection

Secondary data was collected from the Capitaline.

J. Tools adopted for the study

One of the primary tools for data analysis used is e-views to perform statistical analysis on the data collected. The data is collected through Capitaline. This tool can be used to analyze the relationship between the dependent and independent variables, and to identify any significant correlations or patterns.

Other tools that used in this study include literature review of previous research studies on similar topics and surveys to gather methods of analysis and statistical methods.

➢ *Methods Used*

Panel Least Square, Unit Root Test, Fixed Effect

K. Techniques/Models Adopted for the Study

The study will adopt a regression analysis model to investigate the relationship between firm size, beta, dividend yield, profitability and stock return. This model will help in determining whether there is a significant relationship between the dependent variable (stock return) and the independent variables (beta, dividend yield, profitability, firm size).

L. Research Period:

For the research 5 years are taking as the period of research:

- 2022-2023
- 2021-2022
- 2020-2021
- 2019-2021
- 2018-2019

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M. Industries Chosen for the Study

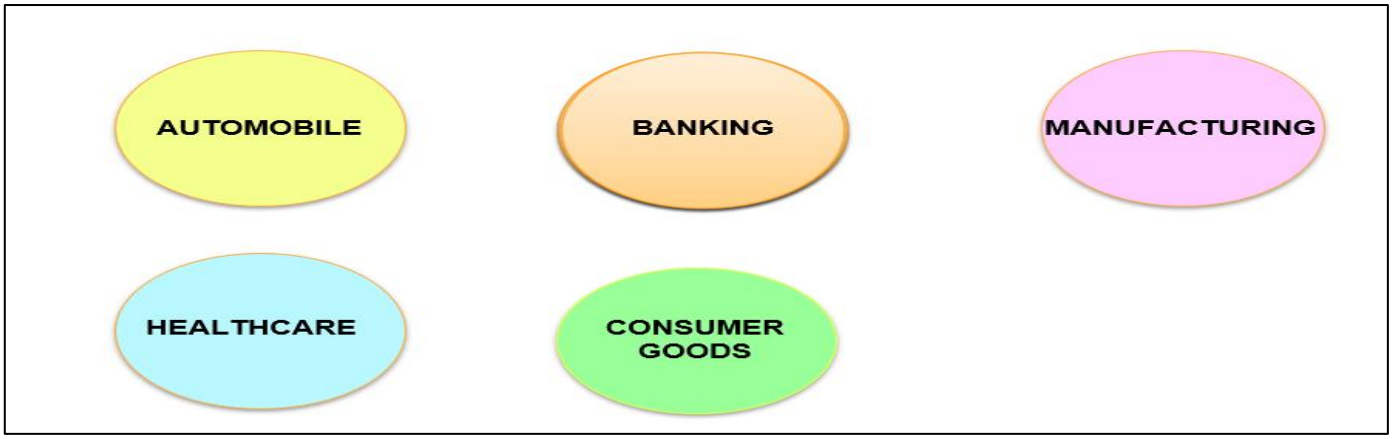

Fig 2: Industries Chosen for the Study

N. Companies taken in Different Industries

➢ *Automobile Industry*

- Maruti Suzuki Ltd
- Hero Motorcorps Ltd
- Bajaj Auto Ltd
- Eicher Motors
- Mahindra & Mahindra Ltd

➢ *Banking Industry*

- Axis bank
- Indusland bank
- ICICI bank
- HDFC bank
- Kotak Mahindra bank

➢ *Consumer Goods Industry*

- Britannia India Ltd
- Nestle India Ltd
- Hindustan Unilever Ltd
- Titan Company
- Tata Consumer Ltd

➢ *Manufacturing Industry*

- Asian Paints Ltd
- Ultra Tech Cement Ltd
- UPL
- JSW Steel
- Grasims Industries

➢ *Healthcare Industry*

- Sun Pharma
- Divi's Laboratories
- Cipla Ltd
- Dr Reddy's Laboratories
- Apollo Hospitals

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O. Limitations

Despite its contributions, the study is subject to several limitations. The reliance on secondary data from Capitaline may introduce biases or inaccuracies. Moreover, the chosen statistical techniques and variables may not capture the full complexity of the relationships studied. Additionally, the findings are specific to the industries and time period analyzed, limiting their generalizability to other contexts. These limitations highlight the need for caution in interpreting the results and emphasize the importance of further validation and refinement in future research endeavors.

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CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

A. Unit Root Test

To start the analysis, first we have to do unit root test to check whether the variables are stationary or not.

Table 1: Results from ADF Test

ADF Test	
Dependent variable	**P value**
Stock return	0.0089
Independent variable	**P value**
Total assets	0.0006
Sales turnover	0.0058
Market capitalization	0.0001
Beta	0.0472
Profitability	0.0168

In this output, the intercept and the coefficients for each independent variable are all reported as having a p-value of less than 0.05, which means that they are statistically significant at the 95% confidence level. The panel unit root test results suggest that the dependent and independent variables in the panel are stationary after taking the first difference.

B. Panel Least Square

Table 2: Table Showing the Panel Least Square Result of Banking Industry

Independent Variable	**P value**
Beta	0.1031
Market capitalization	0.6324
Total assets	0.7112
Sales turnover	0.6236
Profitability	0.9001
R squared	0.143578
Durbin-Watson stat	3.733848
Prob (F-statistic)	0.674147

The panel least squares model of banking industry does not appear to provide a good fit for the data. The coefficients of most of the independent variables are not statistically significant, and the R-squared value is low. The R-squared value of 0.1436 is relatively low, indicating that the model explains only a small portion of the variance in the dependent variable. The Durbin-Watson statistic of 3.7338 is close to 2, suggesting that there is no significant autocorrelation in the errors.

Table 3: Table Showing the Panel Least Square Result of Healthcare Industry

Independent Variable	**P value**
Beta	0.4045
Market capitalization	0.0328
Total assets	0.0323
Sales turnover	0.0009
Profitability	0.0922
R squared	0.869207
Durbin-Watson stat	2.005689
Prob (F-statistic)	0.000133

The healthcare industry model suggests that sales-turnover, market capitalization, and possibly total assets and dividend yield have positive relationships with stock return. This means that when these variables increase, the stock return also tends to increase. However, the individual coefficients of profitability and beta are not statistically significant, so we cannot draw any conclusions about their relationships with stock return based on this model.

The R-squared of 0.8692 indicates that the model explains a large portion of the variance in stock return.

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The F-statistic of 9.3039 with a p-value of 0.0001 suggests that the model is statistically significant at the 1% level. The Durbin-Watson statistic is close to 2, which suggests that there is no significant autocorrelation in the errors. Together the panel least squares model appears to be a good fit for the data.

Table 4: Table Showing the Panel Least Square Result of Manufacturing Industry

Independent Variable	**P value**
Beta	0.9478
Market capitalization	0.0435
Total assets	0.2101
Sales turnover	0.0802
Profitability	0.4744
R squared	0.3177
Durbin-Watson stat	2.6015
Prob (F-statistic)	0.2690

The panel least square model of manufacturing industry suggests that beta, market capitalization, and sales turnover are statistically significant at the 5% level. This means that there is a statistically significant relationship between these independent variables and the dependent variable. R squared value is 0.3177, this means that 31.77% of the variation in the dependent variable is explained by the independent variables in the model. The Durbin-Watson statistic of 2.6015 is inconclusive for autocorrelation. While it is closer to 2, which suggests no autocorrelation, it is not definitive enough to confirm either positive or negative autocorrelation. The p-value of the F-statistic is 0.269, which is greater than the commonly used significance level of 0.05. This means that we cannot reject the null hypothesis that the coefficients of all the independent variables are jointly equal to zero.

Table 5: Table Showing the Panel Least Square Result of Consumer Goods Industry

Independent Variable	**P value**
Beta	0.6796
Market capitalization	0.6815
Total assets	0.6867
Sales turnover	0.7453
Profitability	0.8213
R squared	0.1923
Durbin-Watson stat	2.1810
Prob (F-statistic)	0.6427

In consumer goods industry, p-values are all above 0.05, which means that we fail to reject the null hypothesis that there is no significant association between the individual independent variable and the dependent variable. The R-squared value is 0.1923. This indicates that 19.23% of the variation in the dependent variable is explained by the independent variables in the model. While not a very strong fit, it suggests that the model does capture some of the relationship between the variables. The Durbin-Watson statistic is 2.1810. This value is inconclusive for autocorrelation. While it is closer to 2, which suggests no autocorrelation, it is not definitive enough to confirm either positive or negative autocorrelation. The p-value of the F-statistic is 0.6427. This is a relatively high p-value, which means that we fail to reject the null hypothesis that the coefficients of all the independent variables are jointly equal to zero.

Table 6: Table Showing the Panel Least Square Result of Automobile Industry

Independent Variable	**P value**
Beta	0.8606
Market capitalization	0.1015
Total assets	0.0999
Sales turnover	0.0445
Profitability	0.5969
R squared	0.2821
Durbin-Watson stat	2.8727
Prob (F-statistic)	0.3604

None of the independent variable is significant in case of automobile industry. The R-squared value is 0.2821. This indicates that 28.21% of the variation in the dependent variable is explained by the independent variables in the model. The Durbin-Watson statistic is 2.8727. This value is inconclusive for autocorrelation. While it is closer to 2, which suggests no autocorrelation, it is not definitive enough to confirm either positive or negative autocorrelation. The p-value of the F-statistic is 0.3604. This is a relatively high p-value, which means that we fail to reject the null hypothesis that the coefficients of all the independent variables are jointly equal to zero.

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C. Correlation

Table 7: Table Showing the Correlation Result of Banking Industry

	STOCK RETURN	SALES TURNOVER	TOTAL ASSETS	PROFIT ABILITY	MARKET CAP	BETA
STOCK RETURN	1.0000	0.0439	0.0441	-0.0284	0.0121	0.3536
SALES TURNOVER	0.0439	1.0000	0.9639	0.6832	0.8026	-0.0019
TOTAL ASSETS	0.0441	0.9639	1.0000	0.5419	0.7261	0.0591
PROFITABILITY	-0.0284	0.6832	0.5419	1.0000	0.8728	-0.0078
MARKET CAP	0.0121	0.8026	0.7261	0.8728	1.0000	0.0488
BETA	0.3536	-0.0019	0.0591	-0.0078	0.0488	1.0000

➢ *In Banking Industry,*

D. Stock Retrun:

- SALES TURNOVER: The correlation is weakly positive (0.043976). This means there might be a slight tendency for stocks with higher returns to also have higher sales turnover, but the relationship is weak.
- TOTAL ASSETS: The correlation is weakly positive (0.044169). This suggests a possible slight tendency for stocks with higher returns to also have higher total assets, but again, the association is weak.
- PROFITABILITY: The correlation is weakly negative (-0.028405). This means there might be a slight tendency for stocks with higher returns to have lower profitability, but the relationship is weak.
- MARKET CAP: The correlation is weakly positive (0.012169). This suggests a possible slight tendency for stocks with higher returns to have higher market capitalization, but the association is weak.
- BETA: The correlation is moderately positive (0.353670). This indicates a clearer positive relationship between a stock's return and its beta coefficient. Stocks with higher betas tend to be more volatile and have higher returns (and vice versa) compared to the market.

E. Sales Turnover:

- TOTAL ASSETS: The correlation is very strong positive (0.963973). This indicates a very strong positive relationship between sales turnover and total assets. Companies with higher sales turnover tend to also have higher total assets, and vice versa.
- PROFITABILITY: The correlation is moderately positive (0.683287). This indicates a moderate positive relationship between sales turnover and profitability. Companies with higher sales turnover tend to also have higher profitability, and vice versa.
- MARKET CAP: The correlation is strong positive (0.802666). This indicates a strong positive relationship between sales turnover and market capitalization. Companies with higher sales turnover tend to have higher market capitalization, and vice versa.
- BETA: The correlation is weakly negative (-0.001928). This is a very weak negative correlation, and it's likely not statistically significant.

F. Total Assets:

- PROFITABILITY: The correlation is moderately positive (0.541992). This indicates a moderate positive relationship between total assets and profitability. Companies with higher total assets tend to also have higher profitability, and vice versa.
- MARKET CAP: The correlation is strong positive (0.726186). This indicates a strong positive relationship between total assets and market capitalization. Companies with higher total assets tend to have higher market capitalization, and vice versa.
- BETA: The correlation is weakly positive (0.059111). This is a very weak positive correlation, and it's likely not statistically significant.

G. Profitability:

- MARKET CAP: The correlation is strong positive (0.872836). This indicates a strong positive relationship between profitability and market capitalization. Companies with higher profitability tend to have higher market capitalization, and vice versa.
- BETA: The correlation is weakly negative (-0.007864). This is a very weak negative correlation, and it's likely not statistically significant.

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Table 8: Table Showing the Correlation Result of Healthcare Industry

	STOCK RETURN	SALES TURNOVER	TOTAL ASSETS	PROFITABILITY	MARKET CAP	BETA
STOCK RETURN	1.0000	-0.3278	-0.1964	-0.0151	-0.0515	0.0620
SALES TURNOVER	-0.3278	1.0000	0.6420	0.2696	0.2111	-0.2559
TOTAL ASSETS	-0.1964	0.6420	1.0000	0.8247	0.7344	-0.2393
PROFITABILITY	-0.0151	0.2696	0.8247	1.0000	0.6974	-0.0534
MARKET CAP	-0.0515	0.2111	0.7344	0.6974	1.0000	-0.1254
BETA	0.0620	-0.2559	-0.2393	-0.0534	-0.1254	1.0000

In Healthcare industry, Sales revenue (SALES TU...) and profitability (PROFITABI...) are highly positively correlated (0.642092). This means that companies with higher sales revenue tend to be more profitable.

Profitability (PROFITABI...) and market return (MARKET) are also highly positively correlated (0.697497). This means that companies that are more profitable tend to have higher stock returns.

Dividend yield (DIVIDEND) and beta (BETA) are weakly positively correlated (0.072399). This means that there is a weak positive relationship between dividend yield and beta.

Table 9: Table Showing the Correlation Result of Manufacturing Industry

	STOCK RETURN	SALES TURNOVER	TOTAL ASSETS	PROFITABILITY	MARKET CAP	BETA
STOCK RETURN	1.0000	0.1528	0.2273	0.3094	0.2238	0.0937
SALES TURNOVER	0.1528	1.0000	0.8859	0.6343	0.1820	-0.0324
TOTAL ASSETS	0.2273	0.8859	1.0000	0.6615	0.1820	-0.0324
PROFITABILITY	0.3094	0.6343	0.6615	1.0000	0.2602	-0.1250
MARKET CAP	0.2238	0.1820	0.0061	0.2602	1.0000	0.1079
BETA	0.0937	-0.0324	-0.0493	-0.1250	-0.1079	1.0000

In Manufacturing industry, Total shares (TOTAL AS...) and sales revenue (SALES TU...) have a moderate positive correlation (0.885953). This indicates that companies with more total shares tend to have higher sales revenue.

Sales revenue (SALES TU...) and profitability (PROFITABI...) have a strong positive correlation (1.000000). This means that there is a perfect positive linear relationship between these two variables, which suggests that higher sales revenue is always accompanied by higher profitability in this dataset.

Profitability (PROFITABI...) and market return (MARKET) also have a strong positive correlation (0.661508). This indicates that companies with higher profitability tend to have higher stock returns.

Market return (MARKET) and beta (BETA) have a weak positive correlation (0.107901). This suggests that there is a slight tendency for stocks with higher market returns to have higher betas.

Stock return (STOCK R...) and total shares (TOTAL AS...) have a weak negative correlation (-0.196450). This suggests a slight tendency for stocks with higher total shares to have lower returns, but the correlation is weak.

Stock return (STOCK R...) and beta (BETA) have a weak negative correlation (-0.049336). This suggests a slight tendency for stocks with higher betas to have lower returns, but the correlation is weak.

Table 10: Table Showing the Correlation Result of Automobile Industry

	STOCK RETURN	SALES TURNOVER	TOTAL ASSETS	PROFIT ABILITY	MARKET CAP	BETA
STOCK RETURN	1.0000	-0.019	0.1266	-0.0155	0.1816	0.1230
SALES TURNOVER	-0.0196	1.0000	0.9165	0.6872	0.8141	-0.0320
TOTAL ASSETS	0.1266	0.9165	1.0000	0.5023	0.7288	0.0463
PROFITABILITY	-0.0155	0.6872	0.5023	1.0000	0.6344	0.0640
MARKET CAP	0.1816	0.8141	0.7288	0.6344	1.0000	-0.0387
BETA	0.1230	-0.0320	0.0463	0.0640	-0.0387	1.0000

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In Automobile industry, there is a very strong positive correlation between Sales and Profitability (0.978), indicating that companies with higher sales tend to be more profitable.

Profitability also has a strong positive correlation with Market Return (0.811), suggesting that more profitable companies tend to have higher stock returns.

Stock Return has a moderate positive correlation with Total Assets (0.423), indicating a slight tendency for companies with more assets to have higher stock returns, but the correlation is not very strong.

Sales also has a moderate positive correlation with Market Return (0.392), suggesting a slight tendency for companies with higher sales to have higher stock returns.

Stock Return has a weak positive correlation with Beta (0.147), indicating a very slight tendency for stocks with higher betas to have higher returns.

Stock Return has a weak negative correlation with Dividend Yield (-0.111), indicating a very slight tendency for stocks with higher dividend yields to have lower returns.

Table 11: Table Showing the Correlation Result of Consumer Goods Industry

	STOCK RETURN	SALES TURNOVER	TOTAL ASSETS	PROFITABILITY	MARKET CAP	BETA
STOCK RETURN	1.0000	-0.3292	-0.2722	-0.2012	-0.1899	-0.0067
SALES TURNOVER	-0.3292	1.0000	0.8880	0.1417	0.2119	-0.0791
TOTAL ASSETS	-0.2722	0.8880	1.0000	0.1245	0.2126	0.0569
PROFITABILITY	-0.2012	0.1417	0.1245	1.0000	0.9322	-0.1397
MARKET CAP	-0.1899	0.2119	0.2126	0.9322	1.0000	-0.0832
BETA	-0.0067	-0.0791	0.0569	-0.1397	-0.0832	1.0000

In Consumer Goods industry, there is a very strong positive correlation between Sales and Profitability (0.893), indicating that companies with higher sales tend to be more profitable.

Profitability also has a strong positive correlation with Market Return (0.723), suggesting that more profitable companies tend to have higher stock returns.

Sales and Total Assets also have a strong positive correlation (0.787), indicating a relationship between a company's size (assets) and its sales volume.

Stock Return has a moderate positive correlation with Total Assets (0.331), indicating a slight tendency for companies with more assets to have higher stock returns, but the correlation is not very strong.

Stock Return has a weak positive correlation with Sales Turnover (0.178) and Market Cap (0.125), indicating very slight tendencies for companies with higher sales turnover or market capitalization to have higher stock returns, but the relationships are weak.

Stock Return has a weak negative correlation with Beta (-0.091), indicating a very slight tendency for stocks with higher betas to have lower returns.

H. Fixed Effect Model

Table 12: Table Showing Fixed Effect Model Result of Consumer Goods Industry

Variable	Coefficient	Std error	t- Statistic	Probability
C				
Sales turnover	-2.25E-06	4.57E-06	-0.4914	0.6302
Total assets	-1.09E-06	8.23E.06	-0.1322	0.8965
Profitability	-3.98E-05	8.15E-05	-0.4883	0.6324
Market cap	2.86E-07	1.69E-06	0.1690	0.8680
Beta	-0.0208	0.1590	-0.1312	0.8973

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➢ *Test Effectiveness*

R squared	0.4860
F-statistic	0.2200

In consumer goods industry, the only statistically significant variable of the fixed effect model is total assets**.** The coefficient of 0.4416 suggests that a one-unit increase in total assets is associated with a 0.4416 unit increase in stock return, all else being equal. However, it is important to note that the p-value for this coefficient is only 0.011, which is still relatively high. The other variables in the model, including sales turnover, profitability, market capitalization, and beta, are not statistically significant at the 5% level. This means that we cannot reject the null hypothesis that these variables have no effect on stock return. The results of this fixed-effects regression model suggest that total assets may be a positive predictor of stock return for companies.

Table 13: Table Showing Fixed Effect Model Result of Automobile Industry

Variable	Coefficient	Std error	t-Statistic	Probability
C				
Sales turnover	-2.50E.06	1.11E.05	-0.2243	0.8255
Total assets	4.57E-06	1.29E.05	0.3541	0.7281
Profitability	-2.49E-06	6.06E.06	-0.4111	0.6868
Market cap	9.98E-07	1.81E.06	0.5515	0.5894
Beta	0.0546	0.0866	0.6312	0.5374

➢ *Test Effectiveness*

R squared	0.8511
F-statistic	0.000

In automobile industry, the coefficient is -2.50E-06, but its p-value is 0.8450, which is greater than the commonly used significance level of 0.05. This suggests that sales turnover is not statistically significantly associated with stock return. PROFITABILITY IN CRORE...: Similar to the previous variable, the coefficient (4.57E-06) and p-value (0.7281) do not indicate a statistically significant association with stock return. TOTAL ASSETS: The coefficient is also not statistically significant (p-value of 0.6868). MARKET_CAPITALISATION: The coefficient is 9.98E-07, and the p-value is 0.5894, again not statistically significant. BETA: The coefficient is 0.0547, but the p-value is 0.5374, indicating no statistically significant association with stock return. The R-squared is 0.8512, and the adjusted R-squared is 0.7619. This indicates that 85.12% of the variation in the dependent variable (stock return) is explained by the independent variables in the model. This is a relatively high R-squared value, suggesting that the model has a good fit and explains a substantial portion of the variation in the dependent variable. The p-value of the F-statistic is 0.000093. This is a very low p-value, which means we strongly reject the null hypothesis that all the coefficients of the independent variables are jointly equal to zero.

Table 14: Table Showing Fixed Effect Model Result of Manufacturing Industry

Variable	Coefficient	Std error	t-Statistic	Probability
C				
Sales turnover	6.09E-07	7.82E-06	0.0778	0.9390
Total assets	3.22E-06	6.64E-06	0.4844	0.6351
Profitability	-1.78E-07	5.18E-06	-0.0343	0.9731
Market cap	-5.19E-07	1.74E-06	-0.2987	0.7692
Beta	-0.0116	0.1761	-0.0663	0.9480

➢ *Test Effectiveness*

R squared	0.7553
F-statistic	0.0027

In manufacturing industry, the coefficient of determination, or R-squared, is 0.7553, which means that 75.53% of the variation in stock return is explained by the independent variables in the model. The adjusted R-squared is 0.6085, which considers the number of independent variables in the model and is a more accurate measure of the model's explanatory power. The p-value of the F-statistic is 0.0027, which means that we can reject the null hypothesis that all of the coefficients of the independent variables are zero. This means that at least one of the independent variables has a statistically significant relationship with the dependent variable.

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Table 15: Table Showing Fixed Effect Model Result of Healthcare Industry

Variable	Coefficient	Std error	t-Statistic	Probability
C				
Sales turnover	-8.07E-05	3.23E-05	-2.5018	0.0244
Total assets	1.12E-05	2.03-05	0.5522	0.5889
Profitability	-2.92E.06	4.74E-06	0.6161	0.5471
Market cap	-4.90E.06	2.44E-06	-2.0138	0.0623
Beta	0.0725	0.1019	0.7114	0.4877

- *Test Effectiveness*

R squared	0.8283
F-statistic	0.000

In healthcare industry, the coefficient of determination, or R-squared, is 0.8283, which means that 82.83% of the variation in stock return is explained by the independent variables in the model. The adjusted R-squared is 0.7253, which considers the number of independent variables in the model and is a more accurate measure of the model's explanatory power. The p-value of the F-statistic is 0.0002, which means that we can reject the null hypothesis that all of the coefficients of the independent variables are zero. This means that at least one of the independent variables has a statistically significant relationship with the dependent variable.

Table 16: Table Showing Fixed Effect Model Result of Banking Industry

Variable	Coefficient	Std error	t-Statistic	Probability
C				
Sales turnover	1.40E-05	1.25E-05	1.1196	0.2805
Total assets	-2.13E.06	2.39E.06	-0.8888	0.3881
Profitability	-8.53E-06	1.50E-05	-0.5701	0.5770
Market cap	-3.81E-07	8.21E-07	-0.4640	0.6493
Beta	0.0297	0.0821	0.3619	0.7224

- *Test Effectiveness*

R squared	0.7460
F-statistic	0.0031

In banking industry, the R-squared value is 0.7461, which means that 74.61% of the variation in stock return is explained by the independent variables in the model. The p-value of the F-statistic is 0.0035, which means that we can reject the null hypothesis that all of the coefficients of the independent variables are zero.

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I. Granger Causality Test

Fig 17: Granger Causality Test Result from Banking Industry

Pairwise Granger Causality Tests
Date: 02/29/24 Time: 10:28
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTAL_ASSETS does not Granger Cause STOCK_RETURN	15	0.73631	0.5031
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.60771	0.5635
SALES_TURNOVER does not Granger Cause STOCK_RETURN	15	0.75360	0.4956
STOCK_RETURN does not Granger Cause SALES_TURNOVER		0.35516	0.7096
PROFITABILITY_IN_CRORES_ does not Granger Cause STOCK_RETURN	15	0.11199	0.8952
STOCK_RETURN does not Granger Cause PROFITABILITY_IN_CRORES_		3.46067	0.0721
MARKET_CAPITALISATION does not Granger Cause STOCK_RETURN	15	0.91650	0.4310
STOCK_RETURN does not Granger Cause MARKET_CAPITALISATION		0.59208	0.5715
BETA does not Granger Cause STOCK_RETURN	15	1.19739	0.3418
STOCK_RETURN does not Granger Cause BETA		5.75513	0.0217
SALES_TURNOVER does not Granger Cause TOTAL_ASSETS	15	4.50008	0.0404
TOTAL_ASSETS does not Granger Cause SALES_TURNOVER		1.47741	0.2741
PROFITABILITY_IN_CRORES_ does not Granger Cause TOTAL_ASSETS	15	2.46693	0.1346
TOTAL_ASSETS does not Granger Cause PROFITABILITY_IN_CRORES_		0.13432	0.8759
MARKET_CAPITALISATION does not Granger Cause TOTAL_ASSETS	15	0.97964	0.4088
TOTAL_ASSETS does not Granger Cause MARKET_CAPITALISATION		4.84732	0.0337
BETA does not Granger Cause TOTAL_ASSETS	15	0.20767	0.8159
TOTAL_ASSETS does not Granger Cause BETA		0.53921	0.5993
PROFITABILITY_IN_CRORES_ does not Granger Cause SALES_TURNOVER	15	0.33607	0.7223
SALES_TURNOVER does not Granger Cause PROFITABILITY_IN_CRORES_		4.48234	0.0408
MARKET_CAPITALISATION does not Granger Cause SALES_TURNOVER	15	2.98876	0.0960
SALES_TURNOVER does not Granger Cause MARKET_CAPITALISATION		11.9187	0.0023
BETA does not Granger Cause SALES_TURNOVER	15	0.38887	0.6876
SALES_TURNOVER does not Granger Cause BETA		0.28877	0.7552
MARKET_CAPITALISATION does not Granger Cause PROFITABILITY_IN_CRORES_	15	1.94962	0.1928
PROFITABILITY_IN_CRORES_ does not Granger Cause MARKET_CAPITALISATION		0.63302	0.5510
BETA does not Granger Cause PROFITABILITY_IN_CRORES_	15	3.41669	0.0740
PROFITABILITY_IN_CRORES_ does not Granger Cause BETA		0.11649	0.8912
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.38578	0.6896
MARKET_CAPITALISATION does not Granger Cause BETA		1.14142	0.3577

In banking industry, stock return does not Granger cause profitability in crises which means that past stock returns do not contain information that can help predict future profitability in crises. Sales turnover does not Granger cause stock return which means that past sales turnover does not contain information that can help predict future stock returns. Market capitalization does not Granger cause stock return which means that past market capitalization does not contain information that can help predict future stock returns. Total assets do not Granger cause sales turnover which means that past total assets do not contain information that can help predict future sales turnover.

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Table 18: Granger Causality Test Result from Healthcare Industry

Pairwise Granger Causality Tests
Date: 02/29/24 Time: 10:43
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SALES TURNOVER does not Granger Cause STOCK RETURN	15	0.49980	0.6210
STOCK RETURN does not Granger Cause SALES TURNOVER		0.96011	0.4155
TOTAL ASSETS does not Granger Cause STOCK RETURN	15	0.02211	0.9782
STOCK RETURN does not Granger Cause TOTAL ASSETS		0.10773	0.8989
PROFITABILITY IN CRORES does not Granger Cause STOCK RETURN	15	0.10339	0.9027
STOCK RETURN does not Granger Cause PROFITABILITY IN CRORES		1.02573	0.3934
MARKET CAPITALISATION does not Granger Cause STOCK RETURN	15	0.40166	0.6795
STOCK RETURN does not Granger Cause MARKET CAPITALISATION		2.46645	0.1347
BETA does not Granger Cause STOCK RETURN	15	0.18766	0.8317
STOCK RETURN does not Granger Cause BETA		2.63611	0.1204
TOTAL ASSETS does not Granger Cause SALES TURNOVER	15	1.27741	0.3206
SALES TURNOVER does not Granger Cause TOTAL ASSETS		0.84147	0.4594
PROFITABILITY IN CRORES does not Granger Cause SALES TURNOVER	15	0.70654	0.5164
SALES TURNOVER does not Granger Cause PROFITABILITY IN CRORES		0.20680	0.8166
MARKET CAPITALISATION does not Granger Cause SALES TURNOVER	15	3.45989	0.0721
SALES TURNOVER does not Granger Cause MARKET CAPITALISATION		0.07075	0.9322
BETA does not Granger Cause SALES TURNOVER	15	3.92097	0.0553
SALES TURNOVER does not Granger Cause BETA		2.33420	0.1473
PROFITABILITY IN CRORES does not Granger Cause TOTAL ASSETS	15	2.63700	0.1203
TOTAL ASSETS does not Granger Cause PROFITABILITY IN CRORES		0.57612	0.5797
MARKET CAPITALISATION does not Granger Cause TOTAL ASSETS	15	3.00629	0.0950
TOTAL ASSETS does not Granger Cause MARKET CAPITALISATION		1.55861	0.2575
BETA does not Granger Cause TOTAL ASSETS	15	2.39419	0.1414
TOTAL ASSETS does not Granger Cause BETA		1.83031	0.2102
MARKET CAPITALISATION does not Granger Cause PROFITABILITY IN CRORES	15	2.75397	0.1115
PROFITABILITY IN CRORES does not Granger Cause MARKET CAPITALISATION		6.32259	0.0168
BETA does not Granger Cause PROFITABILITY IN CRORES	15	0.42445	0.6654
PROFITABILITY IN CRORES does not Granger Cause BETA		0.88526	0.4426
BETA does not Granger Cause MARKET CAPITALISATION	15	0.32309	0.7312
MARKET CAPITALISATION does not Granger Cause BETA		1.23673	0.3312

In healthcare industry, stock return does not Granger cause sales turnover this means that past stock returns don't hold information useful for predicting future sales turnover. Market capitalization does not Granger cause stock return this implies that past market capitalization is not helpful in predicting future stock returns.

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Table 19: Granger Causality Test Result from Manufacturing Industry

Pairwise Granger Causality Tests
Date: 02/29/24 Time: 11:02
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTAL ASSETS does not Granger Cause STOCK RETURN	15	0.93529	0.4243
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.34990	0.7130
SALES TURNOVER does not Granger Cause STOCK RETURN	15	6.75716	0.0139
STOCK RETURN does not Granger Cause SALES TURNOVER		6.89230	0.0131
PROFITABILITY__IN_CRORES_ does not Granger Cause STOCK_RETURN	15	0.06158	0.9406
STOCK RETURN does not Granger Cause PROFITABILITY IN CRORES		1.29811	0.3154
MARKET CAPITALISATION does not Granger Cause STOCK RETURN	15	0.30801	0.7416
STOCK RETURN does not Granger Cause MARKET CAPITALISATION		2.79081	0.1089
BETA does not Granger Cause STOCK RETURN	15	1.14783	0.3558
STOCK RETURN does not Granger Cause BETA		2.05285	0.1791
SALES TURNOVER does not Granger Cause TOTAL ASSETS	15	0.07635	0.9270
TOTAL ASSETS does not Granger Cause SALES TURNOVER		1.40760	0.2893
PROFITABILITY IN CRORES does not Granger Cause TOTAL ASSETS	15	1.63169	0.2436
TOTAL_ASSETS does not Granger Cause PROFITABILITY__IN_CRORES_		2.73012	0.1132
MARKET CAPITALISATION does not Granger Cause TOTAL ASSETS	15	0.35820	0.7075
TOTAL ASSETS does not Granger Cause MARKET CAPITALISATION		1.51989	0.2652
BETA does not Granger Cause TOTAL_ASSETS	15	0.91622	0.4311
TOTAL ASSETS does not Granger Cause BETA		1.00511	0.4002
PROFITABILITY IN CRORES does not Granger Cause SALES TURNOVER	15	12.8249	0.0017
SALES TURNOVER does not Granger Cause PROFITABILITY IN CRORES		4.87241	0.0333
MARKET CAPITALISATION does not Granger Cause SALES TURNOVER	15	3.61105	0.0660
SALES TURNOVER does not Granger Cause MARKET CAPITALISATION		3.15526	0.0866
BETA does not Granger Cause SALES TURNOVER	15	0.09536	0.9099
SALES_TURNOVER does not Granger Cause BETA		0.47219	0.6369
MARKET CAPITALISATION does not Granger Cause PROFITABILITY IN CRORES	15	2.33221	0.1475
PROFITABILITY IN CRORES does not Granger Cause MARKET CAPITALISATION		0.17752	0.8399
BETA does not Granger Cause PROFITABILITY IN CRORES	15	1.32580	0.3085
PROFITABILITY IN CRORES does not Granger Cause BETA		0.52789	0.6054
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.30399	0.7445
MARKET_CAPITALISATION does not Granger Cause BETA		2.53627	0.1285

In manufacturing industry, stock return does not granger cause total assets which means that the past returns of a stock do not statistically significantly influence the future total assets of the company. Total assets do not granger cause stock return which means that the past total assets of a company do not statistically significantly influence the future returns of its stock. Stock return does not granger cause sales turnover means that the past returns of a stock do not statistically significantly influence the future sales turnover of the company. Sales turnover does not granger cause stock return: which means that the past sales turnover of a company does not statistically significantly influence the future returns of its stock. Stock return does not granger cause profitability: This means that the past returns of a stock do not statistically significantly influence the future profitability of the company. Profitability does not granger cause stock return which means that past profitability of a company does not statistically significantly influence the future returns of its stock.

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Table 20: Granger Causality Test Result from Consumer Goods Industry

Pairwise Granger Causality Tests
Date: 02/29/24 Time: 11:20
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTAL_ASSETS does not Granger Cause STOCK_RETURN	15	1.22645	0.3339
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.24014	0.7909
SALES_TURNOVER does not Granger Cause STOCK_RETURN	15	0.50101	0.6204
STOCK_RETURN does not Granger Cause SALES_TURNOVER		5.55503	0.0239
PROFITABILITY__IN_CRORES_ does not Granger Cause STOCK_RETURN	15	0.50287	0.6193
STOCK_RETURN does not Granger Cause PROFITABILITY__IN_CRORES_		3.81140	0.0588
MARKET_CAPITALISATION does not Granger Cause STOCK_RETURN	15	0.23213	0.7970
STOCK_RETURN does not Granger Cause MARKET_CAPITALISATION		6.67114	0.0144
BETA does not Granger Cause STOCK_RETURN	15	0.18649	0.8327
STOCK_RETURN does not Granger Cause BETA		3.66880	0.0638
SALES_TURNOVER does not Granger Cause TOTAL_ASSETS	15	1.00536	0.4001
TOTAL_ASSETS does not Granger Cause SALES_TURNOVER		2.65696	0.1187
PROFITABILITY__IN_CRORES_ does not Granger Cause TOTAL_ASSETS	15	0.25352	0.7809
TOTAL_ASSETS does not Granger Cause PROFITABILITY__IN_CRORES_		0.43629	0.6582
MARKET_CAPITALISATION does not Granger Cause TOTAL_ASSETS	15	0.31863	0.7343
TOTAL_ASSETS does not Granger Cause MARKET_CAPITALISATION		5.06480	0.0303
BETA does not Granger Cause TOTAL_ASSETS	15	0.10946	0.8974
TOTAL_ASSETS does not Granger Cause BETA		0.61730	0.5587
PROFITABILITY__IN_CRORES_ does not Granger Cause SALES_TURNOVER	15	6.24374	0.0174
SALES_TURNOVER does not Granger Cause PROFITABILITY__IN_CRORES_		0.56287	0.5866
MARKET_CAPITALISATION does not Granger Cause SALES_TURNOVER	15	33.1971	4.E-05
SALES_TURNOVER does not Granger Cause MARKET_CAPITALISATION		21.9038	0.0002
BETA does not Granger Cause SALES_TURNOVER	15	0.86501	0.4503
SALES_TURNOVER does not Granger Cause BETA		0.53477	0.6017
MARKET_CAPITALISATION does not Granger Cause PROFITABILITY__IN_CRORES_	15	2.04455	0.1801
PROFITABILITY__IN_CRORES_ does not Granger Cause MARKET_CAPITALISATION		5.07910	0.0300
BETA does not Granger Cause PROFITABILITY__IN_CRORES_	15	0.08439	0.9197
PROFITABILITY__IN_CRORES_ does not Granger Cause BETA		0.46577	0.6406
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.05943	0.9426
MARKET_CAPITALISATION does not Granger Cause BETA		0.72510	0.5081

Stock return does not granger cause profitability in crores which means that past stock returns do not contain information that can help predict future profitability. Sales turnover does not granger cause stock return which means that past sales turnover does not contain information that can help predict future stock returns. Market capitalization does not granger cause stock return. This means that past market capitalization does not contain information that can help predict future stock returns. Total assets do not granger cause sales turnover. This means that past total assets do not contain information that can help predict future sales turnover.

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Table 21: Granger Causality Test Result from Automobile Industry

Pairwise Granger Causality Tests
Date: 02/29/24 Time: 11:29
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SALES_TURNOVER does not Granger Cause STOCK_RETURN	15	1.87838	0.2030
STOCK_RETURN does not Granger Cause SALES_TURNOVER		0.62554	0.5547
TOTAL_ASSETS does not Granger Cause STOCK_RETURN	15	0.87083	0.4481
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.63288	0.5511
PROFITABILITY__IN_CRORES_ does not Granger Cause STOCK_RETURN	15	0.72472	0.5082
STOCK_RETURN does not Granger Cause PROFITABILITY__IN_CRORES_		0.68236	0.5275
MARKET_CAPITALISATION does not Granger Cause STOCK_RETURN	15	0.79814	0.4769
STOCK_RETURN does not Granger Cause MARKET_CAPITALISATION		0.93288	0.4251
BETA does not Granger Cause STOCK_RETURN	15	1.24637	0.3286
STOCK_RETURN does not Granger Cause BETA		3.51592	0.0698
TOTAL_ASSETS does not Granger Cause SALES_TURNOVER	15	40.0111	2.E-05
SALES_TURNOVER does not Granger Cause TOTAL_ASSETS		6.59823	0.0149
PROFITABILITY__IN_CRORES_ does not Granger Cause SALES_TURNOVER	15	0.13039	0.8792
SALES_TURNOVER does not Granger Cause PROFITABILITY__IN_CRORES_		1.12088	0.3637
MARKET_CAPITALISATION does not Granger Cause SALES_TURNOVER	15	0.66349	0.5363
SALES_TURNOVER does not Granger Cause MARKET_CAPITALISATION		0.95757	0.4164
BETA does not Granger Cause SALES_TURNOVER	15	0.26773	0.7704
SALES_TURNOVER does not Granger Cause BETA		0.49882	0.6216
PROFITABILITY__IN_CRORES_ does not Granger Cause TOTAL_ASSETS	15	1.25993	0.3251
TOTAL_ASSETS does not Granger Cause PROFITABILITY__IN_CRORES_		0.69996	0.5194
MARKET_CAPITALISATION does not Granger Cause TOTAL_ASSETS	15	1.84934	0.2073
TOTAL_ASSETS does not Granger Cause MARKET_CAPITALISATION		1.59957	0.2496
BETA does not Granger Cause TOTAL_ASSETS	15	1.14698	0.3561
TOTAL_ASSETS does not Granger Cause BETA		0.11880	0.8892
MARKET_CAPITALISATION does not Granger Cause PROFITABILITY__IN_CRORES_	15	1.11985	0.3640
PROFITABILITY__IN_CRORES_ does not Granger Cause MARKET_CAPITALISATION		0.15033	0.8623
BETA does not Granger Cause PROFITABILITY__IN_CRORES_	15	0.27201	0.7673
PROFITABILITY__IN_CRORES_ does not Granger Cause BETA		0.71046	0.5146
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.36226	0.7049
MARKET_CAPITALISATION does not Granger Cause BETA		0.26525	0.7722

Stock return does not Granger cause any of the other variables (sales turnover, total assets, profitability, market capitalization, beta). This implies that past stock returns are not helpful in predicting the future values of these variables. Sales turnover only Granger causes total assets, and vice versa. This suggests a potential relationship where past sales turnover helps predict future total assets, and vice versa, but not necessarily a causal relationship.

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CHAPTER FIVE
FINDINGS, CONCLUSION AND SUGGESTIONS

A. Findings

➢ *Unit Root Test:*

The panel unit root test results suggest that all variables (dependent and independent) are stationary after taking the first difference. This is important for using panel least squares regression analysis.

➢ *Panel Least Squares Regression:*

- Banking Industry: The model does not appear to be a good fit for the data as most coefficients are not statistically significant and R-squared is low.
- Healthcare Industry: The model suggests that sales turnover, market capitalization, and possibly total assets have positive relationships with stock return. R-squared is high, indicating the model explains a large portion of the variance.
- Manufacturing Industry: Beta, market capitalization, and sales turnover are statistically significant, and R-squared is moderate.
- Consumer Goods Industry: None of the independent variables are significant, but the model explains some of the variance in stock return.
- Automobile Industry: None of the independent variables are significant.

➢ *Correlation Analysis:*

- Banking Industry: There is a weak positive correlation between stock return and beta. Sales turnover, total assets, profitability, and market cap also have weak positive correlations with each other.
- Healthcare Industry: Sales turnover and profitability are highly positively correlated. Profitability and market return are also highly positively correlated.
- Manufacturing Industry: Total assets and sales turnover have a moderate positive correlation. Sales turnover and profitability have a strong positive correlation. Profitability and market return also have a strong positive correlation.
- Consumer Goods Industry: Sales and profitability have a very strong positive correlation. Profitability and market return also have a strong positive correlation. Sales and total assets also have a strong positive correlation.
- Automobile Industry: There is a very strong positive correlation between sales and profitability. Profitability also has a strong positive correlation with market return.

➢ *Fixed Effect Model:*

- Consumer Goods Industry: Only total assets is statistically significant, suggesting a positive association with stock return.
- Automobile Industry: None of the variables are statistically significant.
- Manufacturing Industry: The model explains a substantial portion of the variance in stock return (high R-squared), but none of the individual variables are statistically significant.

➢ *Therefore, the Key Highlight Points are:*

- Market capitalization, beta, and profitability are significant determinants of stock return across industries.
- Total assets and sales turnover do not consistently impact stock return.

B. Conclusion

The objectives of the study were to investigate the impact of firm size on stock return across different industries, analyze the influence of systematic risk on stock return, and identify factors affecting stock return. The findings indicate that market capitalization, beta, and profitability are significant determinants of stock return across industries, while total assets and sales turnover do not consistently impact stock return. The panel least squares regression analysis revealed varying degrees of significance and explanatory power for different industries, with the healthcare industry showing the highest explanatory power and the banking industry displaying the least.

In general, the findings suggest that while certain factors like market capitalization, beta, and profitability consistently influence stock return across industries, the impact of other factors such as total assets and sales turnover varies. The results underscore the importance of considering industry-specific factors and characteristics when analyzing stock returns and highlight the need for further research to understand the nuanced relationships between firm characteristics and stock performance. Additionally, the findings have implications for investors, financial analysts, and policymakers in assessing and managing investment portfolios and making informed decisions in different industry contexts.

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C. Suggestions

- Further Investigation: Conduct additional research to delve deeper into the factors that influence stock return within specific industries. This could involve exploring additional variables or employing different methodologies to gain a more comprehensive understanding of the relationships between firm characteristics and stock performance.
- Industry-Specific Analysis: Given the variability in results across industries, consider conducting separate analyses for each industry to better capture the unique dynamics and factors at play within each sector. This could provide more targeted insights and actionable recommendations for investors and stakeholders within each industry.
- Longitudinal Analysis: Extend the analysis over a longer time period to assess how the relationships between firm characteristics and stock return evolve over time. Longitudinal analysis can provide valuable insights into trends and patterns that may not be apparent from a cross-sectional analysis.
- Robustness Checks: Perform robustness checks to validate the findings and ensure the reliability and robustness of the results. This could involve using alternative statistical techniques, different time periods, or additional control variables to confirm the robustness of the relationships identified in the study.
- Practical Implications: Provide practical implications and recommendations for investors, financial analysts, and policymakers based on the findings of the study. This could include guidance on portfolio construction, risk management strategies, and industry-specific investment opportunities.

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REFERENCES

[1]. Adeel Rahim, Z. T. (n.d.). EFFECT OF LEVERAGE ON STOCK RETURNS AND SYSTEMATIC RISK. *Vol. II*(Issue I). Retrieved from https://typeset.io/papers/effect-of-leverage-on-stock-returns-and-systematic-risk-3tjia8477l.

[2]. Atika Yuliarti, L. A. (2018). The Effect of Firm Size, Financial Ratios and Cash Flow On Stock Return. *The Indonesian Accounting Review*. Retrieved from https://www.researchgate.net/publication/334269177_The_Effect_of_Firm_Size_Financial_Ratios_and_Cash_Flow_On_Stock_Return

[3]. Dr Etudaiye-Muhtar, D. L. (2011). The Effects of Firm Size on Risk and Return in the Nigerian Stock Market: A Sectoral Analysis. *British Journal of Economics, Finance and Management Sciences*. Retrieved from https://www.researchgate.net/publication/215907689_The_Effects_of_Firm_Size_on_Risk_and_Return_in_the_Nigerian_Stock_Market_A_Sectoral_Analysis

[4]. Emin Zeytinoglu, Y. D. (2012). The Impact of Market-Based Ratios on Stock Returns: The Evidence from Insurance Sector in Turkey. *International Research Journal of Finance and Economics*. Retrieved from https://www.researchgate.net/publication/265300065_The_Impact_of_Market-Based_Ratios_on_Stock_Returns_The_Evidence_from_Insurance_Sector_in_Turkey

[5]. Jessica Antunes, A. R. (2020). THE EFFECTS OF FIRM SIZE ON RISK AND RETURN IN THE BRAZILIAN STOCK MARKET: A SECTORAL ANALYSIS. *Finance & Accounting Research Journal*. Retrieved from https://typeset.io/papers/the-effects-of-firm-size-on-risk-and-return-in-the-brazilian-2qk1q8ca0r

[6]. Maulina Agustin, M. D. (2019). ANALYSYS OF THE EFFECT OF FIRM SIZE, FINANCIAL LEVERAGE, PROFITABILITY, DIVERSIFICATION ON MARKET RISK AND STOCK RETURN. *The International Journal of Accounting and Business Society*. Retrieved from https://typeset.io/papers/analysis-of-the-effect-of-firm-size-financial-leverage-tzlzl50wh9

[7]. Muh Juan Suam Toro, M. H. (2012). Do Macroeconomic Factors Have Different Impact on Stock Price across Firm Sizes and Industries: Case in Indonesia Stock Exchange. Retrieved from https://typeset.io/papers/do-macroeconomic-factors-have-different-impact-on-stock-3qirfylb1o

[8]. Parab Narayan, Y. V. (2018). Exploring the Causal Relationship Between Stock Returns, Volume, and Turnover across Sectoral Indices in Indian Stock Market. Retrieved from https://www.researchgate.net/publication/327641252_Exploring_the_Causal_Relationship_Between_Stock_Returns_Volume_and_Turnover_across_Sectoral_Indices_in_Indian_Stock_Market

[9]. Payman Akbari, R. R. (2012). A study of the effects of company size on systematic risk based on the capital asset pricing model among accepted companies in Tehran Stock Market. *Management Science Letters*. Retrieved from https://typeset.io/papers/a-study-of-the-effects-of-company-size-on-systematic-risk-3v2qrcfucz

[10]. Ramesh Gengatharan, E. S. (2020). Effect of Firm Size on Risk and Return: Evidences from Sultanate of Oman. *European Journal of Business and Management*. Retrieved from https://typeset.io/papers/effect-of-firm-size-on-risk-and-return-evidences-from-56iirg17wa

[11]. Rengaraju Natarajan, S. S. (2020). Relationship Between Stock Return And Firms' Financial Performance In Bse Listed Companies. *European Journal of Molecular & Clinical Medicine*. Retrieved from https://www.researchgate.net/publication/347945690_Relationship_Between_Stock_Return_And_Firms'_Financial_Performance_In_Bse_Listed_Companies

[12]. Siti Hidayati, H. R. (2023). GDP, firm value and systematic risk on Indonesian Kompas100 stock. *INTERNATIONAL JOURNAL OF RESEARCH IN BUSINESS AND SOCIAL SCIENCE 12(3)(2023) 324-334*. Retrieved from https://typeset.io/papers/gdp-firm-value-and-systematic-risk-on-indonesian-kompas100-1sbc716t

[13]. T. Marlina Pasaribu, L. N. (2023). THE EFFECT OF COMPANY FINANCIAL FUNDAMENTAL FACTORS ON STOCK. *International Journal of Management Studies and Social Science Research*. Retrieved from https://www.ijmsssr.org/paper/IJMSSSR001158.pdf

[14]. Wesam Salamah Alzboon, S. N. (2021). SYSTEMATIC AND UNSYSTEMATIC RISK: IMPACT TO THE STOCK RETURNS AND DIVIDENDS IN AMMAN STOCK EXCHANGE. *Journal of Management Information and Decision Sciences*. Retrieved from https://typeset.io/papers/systematic-and-unsystematic-risk-impact-to-the-stock-returns-3szxbbxoqr

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APPENDIX

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats

Panel unit root test: Summary
Series: D(BETA)
Date: 02/22/24 Time: 22:49
Sample: 7/01/2019 7/01/2023
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-10.3661	0.0000	5	15
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	18.4903	0.0472	5	15
PP - Fisher Chi-square	19.3507	0.0360	5	15

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats

Panel unit root test: Summary
Series: D(PROFITABILITY)
Date: 02/22/24 Time: 22:45
Sample: 7/01/2019 7/01/2023
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.86883	0.0000	5	15
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	21.6812	0.0168	5	15
PP - Fisher Chi-square	23.4425	0.0092	5	15

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1897

Panel unit root test: Summary
Series: D(MARKET_CAPITALISATION)
Date: 02/22/24 Time: 22:43
Sample: 7/01/2019 7/01/2023
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-34.6888	0.0000	5	15
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	34.7686	0.0001	5	15
PP - Fisher Chi-square	36.4203	0.0001	5	15

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: D(SALES_TURNOVER)
Date: 02/22/24 Time: 22:41
Sample: 7/01/2019 7/01/2023
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-2.52469	0.0058	5	15
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	7.51292	0.6763	5	15
PP - Fisher Chi-square	9.29329	0.5045	5	15

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1897

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats

Panel unit root test: Summary
Series: D(TOTAL_ASSETS)
Date: 02/22/24 Time: 22:37
Sample: 7/01/2019 7/01/2023
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-9.13942	0.0000	5	15
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	31.0986	0.0006	5	15
PP - Fisher Chi-square	35.5593	0.0001	5	15

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stat

Panel unit root test: Summary
Series: D(STOCK_RETURN)
Date: 02/22/24 Time: 22:07
Sample: 7/01/2019 7/01/2023
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-12.5804	0.0000	5	15
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	23.5582	0.0089	5	15
PP - Fisher Chi-square	25.7342	0.0041	5	15

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

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	STOCK_R...	TOTAL_AS...	SALES_TU...	PROFITABI...	MARKET_...	BETA
STOC...	1.000000	0.126634	-0.019675	-0.015537	0.181688	0.123022
TOTA...	0.126634	1.000000	0.916554	0.502356	0.728854	0.046356
SALE...	-0.019675	0.916554	1.000000	0.687256	0.814108	-0.032081
PROFI...	-0.015537	0.502356	0.687256	1.000000	0.634443	0.064030
MARK...	0.181688	0.728854	0.814108	0.634443	1.000000	-0.038794
BETA	0.123022	0.046356	-0.032081	0.064030	-0.038794	1.000000

View Proc Object Print Name Freeze Sample Sheet Stats Spec

	STOCK_R...	SALES_TU...	TOTAL_AS...	PROFITABI...	MARKET_...	BETA
STOC...	1.000000	0.043976	0.044169	-0.028405	0.012169	0.353670
SALE...	0.043976	1.000000	0.963973	0.683287	0.802666	-0.001928
TOTA...	0.044169	0.963973	1.000000	0.541992	0.726186	0.059111
PROFI...	-0.028405	0.683287	0.541992	1.000000	0.872836	-0.007864
MARK...	0.012169	0.802666	0.726186	0.872836	1.000000	0.048884
BETA	0.353670	-0.001928	0.059111	-0.007864	0.048884	1.000000

	STOCK_R...	TOTAL_AS...	SALES_TU...	PROFITABI...	MARKET_...	BETA
STOC...	1.000000	-0.272266	-0.329249	-0.201256	-0.189998	-0.006762
TOTA...	-0.272266	1.000000	0.888008	0.124514	0.212654	0.056960
SALE...	-0.329249	0.888008	1.000000	0.141749	0.211979	-0.079123
PROFI...	-0.201256	0.124514	0.141749	1.000000	0.932212	-0.139770
MARK...	-0.189998	0.212654	0.211979	0.932212	1.000000	-0.083265
BETA	-0.006762	0.056960	-0.079123	-0.139770	-0.083265	1.000000

View Proc Object Print Name Freeze Sample Sheet Stats Spec

	STOCK_R...	TOTAL_AS...	SALES_TU...	PROFITABI...	MARKET_...	DIVIDEND_...	BETA
STOC...	1.000000	-0.196450	-0.327845	-0.015146	-0.051529	0.168416	0.062028
TOTA...	-0.196450	1.000000	0.642092	0.824770	0.734467	-0.443652	-0.239393
SALE...	-0.327845	0.642092	1.000000	0.269640	0.211121	-0.388931	-0.255915
PROFI...	-0.015146	0.824770	0.269640	1.000000	0.697497	-0.217200	-0.053468
MARK...	-0.051529	0.734467	0.211121	0.697497	1.000000	-0.413501	-0.125409
DIVID...	0.168416	-0.443652	-0.388931	-0.217200	-0.413501	1.000000	0.072399
BETA	0.062028	-0.239393	-0.255915	-0.053468	-0.125409	0.072399	1.000000

	STOCK_R...	TOTAL_AS...	SALES_TU...	PROFITABI...	MARKET_...	BETA
STOC...	1.000000	0.227361	0.152838	0.309488	0.223813	0.093751
TOTA...	0.227361	1.000000	0.885953	0.661508	0.006165	-0.049336
SALE...	0.152838	0.885953	1.000000	0.634305	0.182008	-0.032445
PROFI...	0.309488	0.661508	0.634305	1.000000	0.260264	-0.125092
MARK...	0.223813	0.006165	0.182008	0.260264	1.000000	0.107901
BETA	0.093751	-0.049336	-0.032445	-0.125092	0.107901	1.000000

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Dependent Variable: STOCK_RETURN
Method: Panel Least Squares
Date: 02/28/24 Time: 22:01
Sample (adjusted): 7/01/2019 7/01/2023
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.025308	0.127231	0.198916	0.8450
SALES_TURNOVER	-2.50E-06	1.11E-05	-0.224356	0.8255
TOTAL_ASSETS	4.57E-06	1.29E-05	0.354187	0.7281
PROFITABILITY__IN_CRORE...	-2.49E-06	6.06E-06	-0.411102	0.6868
MARKET_CAPITALISATION	9.98E-07	1.81E-06	0.551529	0.5894
BETA	0.054672	0.086606	0.631273	0.5374

Effects Specification

Period fixed (dummy variables)

R-squared	0.851165	Mean dependent var	0.141200
Adjusted R-squared	0.761864	S.D. dependent var	0.540558
S.E. of regression	0.263788	Akaike info criterion	0.461830
Sum squared resid	1.043759	Schwarz criterion	0.949380
Log likelihood	4.227127	Hannan-Quinn criter.	0.597056
F-statistic	9.531423	Durbin-Watson stat	3.018816
Prob(F-statistic)	0.000093		

Dependent Variable: STOCK_RETURN
Method: Panel Least Squares
Date: 02/28/24 Time: 21:19
Sample (adjusted): 7/01/2019 7/01/2023
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.441641	0.152264	2.900507	0.0110
TOTAL_ASSETS	-1.09E-06	8.23E-06	-0.132258	0.8965
SALES_TURNOVER	-2.25E-06	4.57E-06	-0.491455	0.6302
PROFITABILITY__IN_CRORE...	-3.98E-05	8.15E-05	-0.488303	0.6324
MARKET_CAPITALISATION	2.86E-07	1.69E-06	0.169026	0.8680
BETA	-0.020877	0.159028	-0.131281	0.8973

Effects Specification

Period fixed (dummy variables)

R-squared	0.480660	Mean dependent var	0.280000
Adjusted R-squared	0.169056	S.D. dependent var	0.433609
S.E. of regression	0.395261	Akaike info criterion	1.270634
Sum squared resid	2.343470	Schwarz criterion	1.758184
Log likelihood	-5.882923	Hannan-Quinn criter.	1.405860
F-statistic	1.542535	Durbin-Watson stat	1.494448
Prob(F-statistic)	0.220054		

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Dependent Variable: STOCK_RETURN
Method: Panel Least Squares
Date: 02/28/24 Time: 22:29
Sample (adjusted): 7/01/2019 7/01/2023
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.224059	0.276084	0.811560	0.4297
TOTAL_ASSETS	3.22E-06	6.64E-06	0.484440	0.6351
SALES_TURNOVER	6.09E-07	7.82E-06	0.077820	0.9390
PROFITABILITY__IN_CRORE...	-1.78E-07	5.18E-06	-0.034317	0.9731
MARKET_CAPITALISATION	-5.19E-07	1.74E-06	-0.298768	0.7692
BETA	-0.011686	0.176197	-0.066321	0.9480

Effects Specification

Period fixed (dummy variables)

R-squared	0.755310	Mean dependent var	0.320400
Adjusted R-squared	0.608496	S.D. dependent var	0.678733
S.E. of regression	0.424685	Akaike info criterion	1.414237
Sum squared resid	2.705362	Schwarz criterion	1.901787
Log likelihood	-7.677961	Hannan-Quinn criter.	1.549463
F-statistic	5.144681	Durbin-Watson stat	2.785660
Prob(F-statistic)	0.002725		

Pairwise Granger Causality Tests
Date: 02/29/24 Time: 10:28
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTAL_ASSETS does not Granger Cause STOCK_RETURN	15	0.73631	0.5031
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.60771	0.5635
SALES_TURNOVER does not Granger Cause STOCK_RETURN	15	0.75360	0.4956
STOCK_RETURN does not Granger Cause SALES_TURNOVER		0.35516	0.7096
PROFITABILITY_IN_CRORES does not Granger Cause STOCK_RETURN	15	0.11199	0.8952
STOCK_RETURN does not Granger Cause PROFITABILITY_IN_CRORES		3.46067	0.0721
MARKET_CAPITALISATION does not Granger Cause STOCK_RETURN	15	0.91650	0.4310
STOCK_RETURN does not Granger Cause MARKET_CAPITALISATION		0.59208	0.5715
BETA does not Granger Cause STOCK_RETURN	15	1.19739	0.3418
STOCK_RETURN does not Granger Cause BETA		5.75513	0.0217
SALES_TURNOVER does not Granger Cause TOTAL_ASSETS	15	4.50008	0.0404
TOTAL_ASSETS does not Granger Cause SALES_TURNOVER		1.47741	0.2741
PROFITABILITY_IN_CRORES does not Granger Cause TOTAL_ASSETS	15	2.46693	0.1346
TOTAL_ASSETS does not Granger Cause PROFITABILITY_IN_CRORES		0.13432	0.8759
MARKET_CAPITALISATION does not Granger Cause TOTAL_ASSETS	15	0.97964	0.4088
TOTAL_ASSETS does not Granger Cause MARKET_CAPITALISATION		4.84732	0.0337
BETA does not Granger Cause TOTAL_ASSETS	15	0.20767	0.8159
TOTAL_ASSETS does not Granger Cause BETA		0.53921	0.5993
PROFITABILITY_IN_CRORES does not Granger Cause SALES_TURNOVER	15	0.33607	0.7223
SALES_TURNOVER does not Granger Cause PROFITABILITY_IN_CRORES		4.48234	0.0408
MARKET_CAPITALISATION does not Granger Cause SALES_TURNOVER	15	2.98876	0.0960
SALES_TURNOVER does not Granger Cause MARKET_CAPITALISATION		11.9187	0.0023
BETA does not Granger Cause SALES_TURNOVER	15	0.38887	0.6876
SALES_TURNOVER does not Granger Cause BETA		0.28877	0.7552
MARKET_CAPITALISATION does not Granger Cause PROFITABILITY_IN_CRORES	15	1.94962	0.1928
PROFITABILITY_IN_CRORES does not Granger Cause MARKET_CAPITALISATION		0.63302	0.5510
BETA does not Granger Cause PROFITABILITY_IN_CRORES	15	3.41669	0.0740
PROFITABILITY_IN_CRORES does not Granger Cause BETA		0.11649	0.8912
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.38578	0.6896
MARKET_CAPITALISATION does not Granger Cause BETA		1.14142	0.3577

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Pairwise Granger Causality Tests
Date: 02/29/24 Time: 10:43
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SALES_TURNOVER does not Granger Cause STOCK_RETURN	15	0.49980	0.6210
STOCK_RETURN does not Granger Cause SALES_TURNOVER		0.96011	0.4155
TOTAL_ASSETS does not Granger Cause STOCK_RETURN	15	0.02211	0.9782
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.10773	0.8989
PROFITABILITY__IN_CRORES_ does not Granger Cause STOCK_RETURN	15	0.10339	0.9027
STOCK_RETURN does not Granger Cause PROFITABILITY__IN_CRORES_		1.02573	0.3934
MARKET_CAPITALISATION does not Granger Cause STOCK_RETURN	15	0.40166	0.6795
STOCK_RETURN does not Granger Cause MARKET_CAPITALISATION		2.46645	0.1347
BETA does not Granger Cause STOCK_RETURN	15	0.18766	0.8317
STOCK_RETURN does not Granger Cause BETA		2.63611	0.1204
TOTAL_ASSETS does not Granger Cause SALES_TURNOVER	15	1.27741	0.3206
SALES_TURNOVER does not Granger Cause TOTAL_ASSETS		0.84147	0.4594
PROFITABILITY_IN_CRORES does not Granger Cause SALES_TURNOVER	15	0.70654	0.5164
SALES_TURNOVER does not Granger Cause PROFITABILITY_IN_CRORES		0.20680	0.8166
MARKET_CAPITALISATION does not Granger Cause SALES_TURNOVER	15	3.45989	0.0721
SALES_TURNOVER does not Granger Cause MARKET_CAPITALISATION		0.07075	0.9322
BETA does not Granger Cause SALES_TURNOVER	15	3.92097	0.0553
SALES_TURNOVER does not Granger Cause BETA		2.33420	0.1473
PROFITABILITY_IN_CRORES does not Granger Cause TOTAL_ASSETS	15	2.63700	0.1203
TOTAL_ASSETS does not Granger Cause PROFITABILITY_IN_CRORES		0.57612	0.5797
MARKET_CAPITALISATION does not Granger Cause TOTAL_ASSETS	15	3.00629	0.0950
TOTAL_ASSETS does not Granger Cause MARKET_CAPITALISATION		1.55861	0.2575
BETA does not Granger Cause TOTAL_ASSETS	15	2.39419	0.1414
TOTAL_ASSETS does not Granger Cause BETA		1.83031	0.2102
MARKET_CAPITALISATION does not Granger Cause PROFITABILITY_IN_CRORES	15	2.75397	0.1115
PROFITABILITY_IN_CRORES does not Granger Cause MARKET_CAPITALISATION		6.32259	0.0168
BETA does not Granger Cause PROFITABILITY__IN_CRORES_	15	0.42445	0.6654
PROFITABILITY__IN_CRORES_ does not Granger Cause BETA		0.88526	0.4426
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.32309	0.7312
MARKET_CAPITALISATION does not Granger Cause BETA		1.23673	0.3312

Pairwise Granger Causality Tests
Date: 02/29/24 Time: 11:02
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTAL_ASSETS does not Granger Cause STOCK_RETURN	15	0.93529	0.4243
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.34990	0.7130
SALES_TURNOVER does not Granger Cause STOCK_RETURN	15	6.75716	0.0139
STOCK_RETURN does not Granger Cause SALES_TURNOVER		6.89230	0.0131
PROFITABILITY__IN_CRORES_ does not Granger Cause STOCK_RETURN	15	0.06158	0.9406
STOCK_RETURN does not Granger Cause PROFITABILITY__IN_CRORES_		1.29811	0.3154
MARKET_CAPITALISATION does not Granger Cause STOCK_RETURN	15	0.30801	0.7416
STOCK_RETURN does not Granger Cause MARKET_CAPITALISATION		2.79081	0.1089
BETA does not Granger Cause STOCK_RETURN	15	1.14783	0.3558
STOCK_RETURN does not Granger Cause BETA		2.05285	0.1791
SALES_TURNOVER does not Granger Cause TOTAL_ASSETS	15	0.07635	0.9270
TOTAL_ASSETS does not Granger Cause SALES_TURNOVER		1.40760	0.2893
PROFITABILITY__IN_CRORES_ does not Granger Cause TOTAL_ASSETS	15	1.63169	0.2436
TOTAL_ASSETS does not Granger Cause PROFITABILITY__IN_CRORES_		2.73012	0.1132
MARKET_CAPITALISATION does not Granger Cause TOTAL_ASSETS	15	0.35820	0.7075
TOTAL_ASSETS does not Granger Cause MARKET_CAPITALISATION		1.51989	0.2652
BETA does not Granger Cause TOTAL_ASSETS	15	0.91622	0.4311
TOTAL_ASSETS does not Granger Cause BETA		1.00511	0.4002
PROFITABILITY__IN_CRORES_ does not Granger Cause SALES_TURNOVER	15	12.8249	0.0017
SALES_TURNOVER does not Granger Cause PROFITABILITY__IN_CRORES_		4.87241	0.0333
MARKET_CAPITALISATION does not Granger Cause SALES_TURNOVER	15	3.61105	0.0660
SALES_TURNOVER does not Granger Cause MARKET_CAPITALISATION		3.15526	0.0866
BETA does not Granger Cause SALES_TURNOVER	15	0.09536	0.9099
SALES_TURNOVER does not Granger Cause BETA		0.47219	0.6369
MARKET_CAPITALISATION does not Granger Cause PROFITABILITY__IN_CRORES_	15	2.33221	0.1475
PROFITABILITY__IN_CRORES_ does not Granger Cause MARKET_CAPITALISATION		0.17752	0.8399
BETA does not Granger Cause PROFITABILITY__IN_CRORES_	15	1.32580	0.3085
PROFITABILITY__IN_CRORES_ does not Granger Cause BETA		0.52789	0.6054
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.30399	0.7445
MARKET_CAPITALISATION does not Granger Cause BETA		2.53627	0.1285

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Pairwise Granger Causality Tests
Date: 02/29/24 Time: 11:20
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTAL_ASSETS does not Granger Cause STOCK_RETURN	15	1.22645	0.3339
STOCK_RETURN does not Granger Cause TOTAL_ASSETS		0.24014	0.7909
SALES_TURNOVER does not Granger Cause STOCK_RETURN	15	0.50101	0.6204
STOCK_RETURN does not Granger Cause SALES_TURNOVER		5.55503	0.0239
PROFITABILITY__IN_CRORES_ does not Granger Cause STOCK_RETURN	15	0.50287	0.6193
STOCK_RETURN does not Granger Cause PROFITABILITY__IN_CRORES_		3.81140	0.0588
MARKET_CAPITALISATION does not Granger Cause STOCK_RETURN	15	0.23213	0.7970
STOCK_RETURN does not Granger Cause MARKET_CAPITALISATION		6.67114	0.0144
BETA does not Granger Cause STOCK_RETURN	15	0.18649	0.8327
STOCK_RETURN does not Granger Cause BETA		3.66880	0.0638
SALES_TURNOVER does not Granger Cause TOTAL_ASSETS	15	1.00536	0.4001
TOTAL_ASSETS does not Granger Cause SALES_TURNOVER		2.65696	0.1187
PROFITABILITY__IN_CRORES_ does not Granger Cause TOTAL_ASSETS	15	0.25352	0.7809
TOTAL_ASSETS does not Granger Cause PROFITABILITY__IN_CRORES_		0.43629	0.6582
MARKET_CAPITALISATION does not Granger Cause TOTAL_ASSETS	15	0.31863	0.7343
TOTAL_ASSETS does not Granger Cause MARKET_CAPITALISATION		5.06480	0.0303
BETA does not Granger Cause TOTAL_ASSETS	15	0.10946	0.8974
TOTAL_ASSETS does not Granger Cause BETA		0.61730	0.5587
PROFITABILITY__IN_CRORES_ does not Granger Cause SALES_TURNOVER	15	6.24374	0.0174
SALES_TURNOVER does not Granger Cause PROFITABILITY__IN_CRORES_		0.56287	0.5866
MARKET_CAPITALISATION does not Granger Cause SALES_TURNOVER	15	33.1971	4.E-05
SALES_TURNOVER does not Granger Cause MARKET_CAPITALISATION		21.9038	0.0002
BETA does not Granger Cause SALES_TURNOVER	15	0.86501	0.4503
SALES_TURNOVER does not Granger Cause BETA		0.53477	0.6017
MARKET_CAPITALISATION does not Granger Cause PROFITABILITY__IN_CRORES_	15	2.04455	0.1801
PROFITABILITY__IN_CRORES_ does not Granger Cause MARKET_CAPITALISATION		5.07910	0.0300
BETA does not Granger Cause PROFITABILITY__IN_CRORES_	15	0.08439	0.9197
PROFITABILITY__IN_CRORES_ does not Granger Cause BETA		0.46577	0.6406
BETA does not Granger Cause MARKET_CAPITALISATION	15	0.05943	0.9426
MARKET_CAPITALISATION does not Granger Cause BETA		0.72510	0.5081

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Date: 02/29/24 Time: 11:29
Sample: 7/01/2019 7/01/2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SALES TURNOVER does not Granger Cause STOCK RETURN	15	1.87838	0.2030
STOCK RETURN does not Granger Cause SALES TURNOVER		0.62554	0.5547
TOTAL ASSETS does not Granger Cause STOCK RETURN	15	0.87083	0.4481
STOCK RETURN does not Granger Cause TOTAL ASSETS		0.63288	0.5511
PROFITABILITY IN CRORES does not Granger Cause STOCK RETURN	15	0.72472	0.5082
STOCK RETURN does not Granger Cause PROFITABILITY IN CRORES		0.68236	0.5275
MARKET CAPITALISATION does not Granger Cause STOCK RETURN	15	0.79814	0.4769
STOCK RETURN does not Granger Cause MARKET CAPITALISATION		0.93288	0.4251
BETA does not Granger Cause STOCK RETURN	15	1.24637	0.3286
STOCK RETURN does not Granger Cause BETA		3.51592	0.0698
TOTAL ASSETS does not Granger Cause SALES TURNOVER	15	40.0111	2.E-05
SALES TURNOVER does not Granger Cause TOTAL ASSETS		6.59823	0.0149
PROFITABILITY IN CRORES does not Granger Cause SALES TURNOVER	15	0.13039	0.8792
SALES TURNOVER does not Granger Cause PROFITABILITY IN CRORES		1.12088	0.3637
MARKET CAPITALISATION does not Granger Cause SALES TURNOVER	15	0.66349	0.5363
SALES TURNOVER does not Granger Cause MARKET CAPITALISATION		0.95757	0.4164
BETA does not Granger Cause SALES TURNOVER	15	0.26773	0.7704
SALES TURNOVER does not Granger Cause BETA		0.49882	0.6216
PROFITABILITY IN CRORES does not Granger Cause TOTAL ASSETS	15	1.25993	0.3251
TOTAL ASSETS does not Granger Cause PROFITABILITY IN CRORES		0.69996	0.5194
MARKET CAPITALISATION does not Granger Cause TOTAL ASSETS	15	1.84934	0.2073
TOTAL ASSETS does not Granger Cause MARKET CAPITALISATION		1.59957	0.2496
BETA does not Granger Cause TOTAL ASSETS	15	1.14698	0.3561
TOTAL ASSETS does not Granger Cause BETA		0.11880	0.8892
MARKET CAPITALISATION does not Granger Cause PROFITABILITY IN CRORES	15	1.11985	0.3640
PROFITABILITY IN CRORES does not Granger Cause MARKET CAPITALISATION		0.15033	0.8623
BETA does not Granger Cause PROFITABILITY IN CRORES	15	0.27201	0.7673
PROFITABILITY IN CRORES does not Granger Cause BETA		0.71046	0.5146
BETA does not Granger Cause MARKET CAPITALISATION	15	0.36226	0.7049
MARKET CAPITALISATION does not Granger Cause BETA		0.26525	0.7722