

# **CHAPTER 1**

## **INTRODUCTION**

# **I. INTRODUCTION**

## **1.1 Introduction**

Firm valuation and its intrinsic connection with dividend policy and stock valuation form the cornerstone of corporate finance and investment analysis. At its essence, firm valuation endeavours to quantify the worth of a company, reflecting both its tangible assets and intangible qualities. This process is intricately intertwined with dividend policy, which delineates the strategic allocation of earnings between shareholder rewards and reinvestment in the business. Moreover, stock valuation, a vital component of investment decision-making, seeks to ascertain the true worth of a company's stock, guiding investors in assessing whether a stock is overvalued, undervalued, or fairly priced.

Dividend policy is a strategic imperative for companies, embodying the delicate Balancing the rewards provided to shareholders through. dividends and keeping earnings for future growth opportunities. Dividends represent a tangible return on investment for shareholders, providing a consistent source of income and enhancing shareholder wealth. However, dividend decisions are influenced by a multitude of factors, including profitability, growth prospects, investor preferences, and tax considerations. Different dividend policies, such as stable, residual, or irregular, offer companies flexibility in aligning dividend payments with their financial objectives and market dynamics.

The implications of dividend policy extend beyond shareholder wealth to encompass broader market perception and capital structure considerations. A stable dividend policy can foster investor confidence, signalling financial stability and a commitment toward creating shareholder value. Moreover, dividend decisions are intricately linked to a company's capital structure, influencing its financing choices and cost of capital. By striking a balance between distributing dividends and retained earnings, while optimising the company's capital allocation strategies, supporting sustainable Expansion and profitability.

Concurrently, stock valuation serves as a fundamental tool for investors in assessing the investment potential of a company's stock. Various methods, such as discounted cash flow (DCF), comparable company analysis (CCA), and dividend discount model (DDM), are employed to determine the intrinsic value of a stock. Key metrics, including earnings per share

(EPS), price-earnings (P/E) ratio, and book value, provide important insights into a company's financial performance and relative valuation.

Market dynamics, economic indicators, and investor sentiment play pivotal roles in influencing stock prices. Economic indicators, such as GDP growth and inflation rates, shape market sentiment and investor confidence, driving stock prices higher or lower. Company-specific developments, industry trends, and regulatory changes also impact stock prices, reflecting shifts in market expectations and risk perceptions. Furthermore mergers, acquisitions, and strategic alliances can alter firm valuations, signalling potential synergies or risks for investors.

In summary, firm valuation, dividend policy, and stock valuation are interconnected facets of corporate finance and investment analysis, shaping investor decisions and market dynamics. A well-defined dividend policy reflects a company's financial strategy and commitment to shareholder value, while accurate stock valuation guides investors in assessing investment opportunities and managing risk. By understanding the Complex interaction between these factors. Investors and companies can navigate financial markets effectively, striving for sustainable growth and value creation.

**CHAPTER-2**  
**CONCEPTUAL BACKGROUND**  
**AND LITERATURE REVIEW**

## **2.1 CONCEPTUAL BACKGROUND:**

The conceptual foundation of dividend policy and stock valuation lies in companies' strategic management of dividend distributions to influence shareholder value. Stock valuation, influenced by factors like company performance and market conditions, is pivotal in determining stock prices and investor returns.

Dividend policy encompasses decisions on dividend frequency, amount, and stability, impacting investor attraction and stock valuation. Consistent dividends signal financial stability, enhancing valuation, while reinvestment strategies may appeal to growth-oriented investors. Dividend payments offer tangible returns, attracting income-oriented investors. Methods like dividend discount models (DDM) and discounted cash flow (DCF) analysis evaluate stock worth based on dividends, reflecting investor confidence. Understanding this interplay is vital for companies to convey financial health and attract investors. Strategic dividend policies can enhance valuation, instil investor confidence, and foster sustained shareholder value creation.

## **2.2 REVIEW OF LITERATURE**

1. Knight, R. F. & Affleck-Graves, J.F. (1987) “An Evaluation of Dividend Signalling on the Johannesburg Stock Exchange” The study evaluates how the Johannesburg Stock Exchange reacts to dividend policy shifts, demonstrating that investors modify their expectations based on dividend announcements.
2. George M. Frankfurter and Bob G. Wood Jr. (2002) “Dividend policy theories and their empirical tests” This paper explores various theoretical models and empirical tests related to the company's dividend policy. It explores conflicting theories and analyses how factors such as the method of analysis, sample period, and data frequency impact the support for different dividend models.
3. Mihir A. Desai, C. Fritz Foley, James R. Hines Jr. Year: (2002) “Dividend Policy Inside the Firm” The paper examines dividend remittances of foreign affiliates of U.S. multinational firms, highlighting the influence of tax considerations and the need to control managers
4. Mohammed Nishat and Chaudhary Mohammad Irfan (2003) " Dividend Policy and Stock Price Fluctuations: Evidence from Pakistan” This study by Nishat and Irfan analyzes How dividend policy impacts stock price fluctuations. in Pakistan from 1981

to 2000. The research the substantial impact of dividends yields and payout ratio on stock price fluctuations in the Pakistani market.

5. Samy Ben Naceur, Mohamed Goaied, and Amel Belanes (2007) "Determinants and Trends in Dividend Policy of Tunisian Listed Companies Firms" The study examines the dividend policy of 48 Tunisian listed firms from 1996 to 2002, focusing on whether managers smooth dividend and the key determinants influencing dividend decisions.
6. Anwar Boumosleh Year (2012) "Director Compensation Structure and Firm Investment Decisions: The Importance of Stock Options" Anwar Boumosleh research delves into The Consequences of director compensation, particularly stock options, on firm investment decisions.
7. "Stock Price Reaction to Dividend Announcements in the Indian Stock Market" (2012) The study investigates the impact of dividend increase announcements and their impact on stock prices in the Indian market, focusing on 28 companies traded on the BSE 30 Sensex from 2006 to 2009. The null hypotheses suggest insignificant share price reactions to dividends increases, regardless of dividend signal's clarity.
8. Z. M. Anisur (2012) "Dividend Policy and Stock Price Volatility in Bangladesh" Rahman this Study investigates the relations between dividend policies and stock price volatility in Bangladesh. Using a regression model with various financial variables, including price volatility, dividend yield, earnings volatility, and more, the research identifies a significant but non-significant positive connection between stock price volatility and dividend yield.
9. Kyle A. Profilet's (2013) "Dividend Policy and Stock Price Volatility in the U.S. Equity Capital Market Study assesses the consequences of financial variables on stock price fluctuations in the U.S. equity market insights derived from over 500 publicly traded firms. The research analyzes the relationship between financial factors and stock price volatility, with a focus on dividend policy.
10. Irandoost et al. (2013) examined How dividend decisions shape stock prices volatility and investment decisions. Previous research by Shoorvarzi and Nikoomaram (2010) and IzadiNia and Alinaghian (2011) highlighted related factors. The study proposed hypotheses on short and long-term impacts, adding to financial management literature.
11. Ahmed Imran Hunjra and colleagues (2014) conducted a study titled "Impact of Dividend Policy, Earnings per Share, Return on Equity, and Profit after Tax on Stock Prices." The research explores the effects of dividend policy, earnings per share, return on equity, and profit after tax on stock prices in Pakistan. Data from 63 non-financial

- companies listed in Karachi Stock Exchange, covering the period from 2006 to 2011, were analyzed using an Ordinary Least Squares (OLS) regression model on panel data.
12. Iftikhar AB, Raja NJ, Sehran KN (2017) "Impact of dividend policy on stock prices of firm" The study investigates the role of dividend policy on stock price in the banking sector. using ten years of financial data from five banks.
  13. Jeong Hwan Lee and Bohyun Yoon (2017) "Stock Market Liquidity And Dividend Policy In Korean Corporations" In their 2017 research, Jeong Hwan Lee and Bohyun Yoon examine the difference between stock market liquidity and dividend policy in Korean corporations listed on the KOSPI and KOSDAQ markets.
  14. Amira Nadia Sawitri and Chorry Sulistyowati (2018) "Stock Liquidity and Dividend Policy" The research investigates the impact of stock liquidity on dividend practices among nonfinancial firms traded on the Indonesia Stock Exchange." 2014 to 2016. Using Amihud illiquidity ratio and share turnover as proxies for stock liquidity, the study finds how stock liquidity affects dividend policy, with share turnover showing significant negative effect.
  15. Zoran Ivanovski, Zoran Narasanov, Nadica Ivanovska (2018) "Performance Evaluation of Stocks' Valuation Models at MSE" The study assesses the effectiveness of valuation models for stocks at the Macedonian Stock Exchange (MSE). Various models, including DCF and DDM, are analyzed for their accuracy in determining stock prices. Recommendations are provided based on this finding, offering valuable insights for investors in the MSE.
  16. (2018) "The Effect of Dividend Policy & Stock Price Volatility" The study explores the relations between dividend policy and stock price volatility in the context of the Amman Stock Exchange. Utilizing the Parkinson (1980) formula, the research finds that the stock price volatility in Jordanian firms is 51.86%, aligning with similar findings in developed and developing markets.
  17. Sumathi Kumaraswamy (2019) "Dividend Policy and Stock Price Volatility in Indian Capital Market" Sumathi Kumaraswamy's 2019 study explores the effect of dividend strategies on stock price fluctuations in the Indian capital market.
  18. Ramon Arthur Ferry Tumiwa and Nova Christian Mamuaya (2019) carried out a study titled "The Determinants of Dividend Policy and Their Implications for Stock Prices in Manufacturing Companies Listed on the Indonesia Stock Exchange." This quantitative research investigates the impact of firm size and profitability on dividend policy in Indonesian manufacturing companies.

19. Arian Seyedimany Year: 2019 This paper explores into the ongoing debate surrounding dividend policy's effect on shareholder wealth. Previous studies have highlighted the positive reaction of stock prices to dividend increases and the negative response to decreases.
20. Irton's (2020) "The Influence of Dividend Policy." on Sharia Stock Price Volatility: A Study on Indonesian Stock Exchange" study explores how dividend policy, specifically dividend payout ratio and dividend yield, affects the fluctuations in sharia stock prices in the Indonesian Stock Exchange
21. Seto Sulaksono Adi Wibowo and Agung Bana (2020) "Factors Affecting Dividend Payment Policy" The study explores the various factors influencing dividend payment policies, emphasizing the significance of company size as a dominant factor.
22. Tiwari & Pal's (2020 "Dividend Policy Decisions and Share Prices Relationship" the study explores the role of dividend policy decisions on share prices in the Indonesian stock exchange. Findings suggest that higher dividend yield stocks, coupled with increased pre-tax risk-adjusted returns, offer investors compensation for tax disadvantages.
23. H. J. Davenport (2020) "The Stock Dividend Again," he argues that stock dividends do not constitute income in a valid economic sense. He emphasizes that stock dividends represent a reshuffling of existing income bases rather than true income. Davenport explores the impact of stock dividends on market perceptions of a company's value and delves into the distinction between past gains reflected in new stock issues and actual present income.
24. Adisa Humaira and Hendro Susanto (2020) "The Effect of Cash Holding Policy, Dividend Policy, and Profitability on Stock Prices" This research provides the effect of cash holding policy, dividend policy, and profitability on stock price of finance which is available on the Indonesia Stock Exchange since 2011 to 2017.
25. The study "Dividend Policy and Stock Price Volatility: An Error Corrected Approach" by N.J. Dewasiri and Y.K. Weerakoon Banda explores the unresolved issues surrounding dividend policy in corporate finance. Despite extensive research based on which the effect of dividend policy and stock returns, the dividend policy puzzle remains unsolved due to researchers' lack of consensus.



## **CHAPTER-3**

### **RESEARCH DESIGN**

### **III. RESEARCH DESIGN**

#### **3.1 THE STATEMENT OF THE PROBLEM:**

The relations between dividend policy and stock valuation is a critical yet debated topic in corporate finance. Despite the importance of dividends in shareholder returns, the optimal payout strategy to maximize firm valuation remains unclear. Additionally, The impact of dividend announcements on stock prices and investor preferences are not fully understood. This study seeks to analyse the relations between dividend payout policies and firm valuation, and investigate the consequences of dividend announcements based on the stock prices and investor behaviour. Using regression analysis, descriptive statistics, and models like the Walter and Gordon Growth Models, the study seeks to provide empirical evidence to guide corporate dividend strategies and inform investor decisions.

#### **3.2 NEED OF THE STUDY:**

The study explores the dividend policy and stock valuation arises from the critical need to understand their effect on shareholder value and company performance. Companies are facing complex decisions based on dividend distribution, which directly influence investor confidence and stock prices. Despite the availability of various valuation models, such as dividend discount models (DDM) and price-earnings (P/E) ratios, their effective application remains a challenge discrepancy by exploring the connection between dividend policy and. due to their intricacies. The study aims to bridge this stock valuation, providing valuable understanding of how dividend decisions shape investor perceptions and stock prices. By enhancing our understanding of these dynamics, the research seeks to empower companies to make well decisions about dividends distributions, ultimately contributing to shareholder wealth maximization and financial sustainability in today's dynamic market environment.

#### **3.3 OBJECTIVES OF THE STUDY:**

1. To analyse the relationship between dividend payout policies and firm valuation.
2. To investigate the impact of dividend announcement on stock prices and investors preferences.

### **3.4 SCOPE OF THIS STUDY:**

The study on "Dividend Policy and Stock Valuation" will investigate the historical and theoretical foundations of dividend policy and stock valuation, utilizing data from 2018 to 2022. It aims to understanding how dividend policies influence stock price and investor returns through methodologies like dividend discount models and price-earnings ratios. Additionally, the research will explore the relationship between dividend decisions and corporate performance, offering practical insights for optimizing shareholder value. By considering regulatory implications and emerging trends, the study seeks to provide actionable guidance to businesses and investors, facilitating informed decision-making in today's dynamic market environment. Ultimately, the research aims to contribute to the enhancement of sustainable shareholder wealth creation and financial stability.

### **3.5 RESEARCH METHODODLOGY:**

#### **SOURCE OF DATA:**

The foundation of this study on dividend policy and stock valuation relies primarily Using secondary data obtained from financial websites. Reliable data on dividend payouts, stock prices, and relevant financial indicators over 10 years can be sourced from reputable financial databases. Additionally, central banks' reports, academic research databases, and government agencies the analysis aims to provide key insights into market dynamics and corporate performance. Leveraging these diverse sources ensures the integrity and reliability of the study's findings, facilitating a comprehensive analysis of the impact of dividend policy on stock valuation across different companies and over time.

Different tests are performed to examine the variations in Dividend policy and stock price.

- Descriptive Analysis:

This method provides a clear and straightforward summary of data using statistical measures like the mean, median, and standard deviations. It helps in understanding the fundamental aspects of the data and reveals its overall patterns and distributions.

- Regression analysis:

Regression analysis is a statistical method used to understand and quantify the relationship between multiple variables. It helps us predict the value of one variable based on the values

of others. Essentially, it allows us to identify and measure the influence of independent variables on a dependent variable.

- Correlation Analysis:

Correlation analysis quantifies the relationship between variables. It produces a correlation coefficient ranging from -1 to 1: close to 1 implies a strong positive correlation, near -1 suggests a strong negative correlation, and around 0 indicates little to no correlation.

- Compounded Annual Growth Rate (CAGR):

The compounded annual growth rate (CAGR) is a measure of the mean annual growth rate of an investment over a specified period, considering the effect of compounding. It provides a smoothed annualized growth rate that reflects the steady growth of an investment over time.

- Walter Model

The Walter model, also known as the Dividend Discount Model (DDM), is a method used to determine the intrinsic value of a company's stock by considering its future dividend payments. It assumes that the value of a stock is the present value of all future dividends discounted back to the present at an appropriate discount rate.

- Gordon Model:

The Gordon model, also known as the Gordon growth model is a method used to determine the intrinsic value of a stock based on its expected future dividends. It assumes that the value of a stock is the present value of all future dividends, discounted back to the present at a constant rate.

- T-Test:

A t-test is a statistical method used to determine if there is a significant difference between the means of two groups. It assesses whether the difference between the group means is statistically significant or if it could have occurred by chance

### **3.6 HYPOTHESIS**

**H<sub>0</sub>:** There is no significant relationship between a company's dividend policy and its stock valuation.

**H1:** There is a significant relationship between a company's dividend policy and its stock valuation.

### **3.7 LIMITATION OF THE STUDY**

- The study's sample size, limited to a specific number of companies or years, may not fully represent the diversity of dividend policies and stock valuation practices.
- Inaccuracies or inconsistencies in the collected financial data could introduce biases or errors into the analysis.
- Fluctuations in market conditions or investor behavior may influence stock valuation independently of dividend policy, challenging causal inference.
- Findings may be more applicable to certain industries or sectors, limiting the generalizability of results across the entire market.

### **3.8 CHAPTER SCHEME**

CHAPTER 1: Introduction

Overview and Industry Profile

CHAPTER 2 : Conceptual Background and Literature Review

Theoretical Framework and Review of Relevant Literature

CHAPTER 3 : Research Design

Problem Statement, Justification for the Study, Objectives, Scope of the Study

Research Methodology, Hypotheses, Study Limitations, and Chapter Outline

CHAPTER 4: Analysis and Interpretation

Data Analysis and Interpretation, including Tables

CHAPTER 5: Findings, Recommendations, and Conclusion

Summary of Findings, Recommendations, and Conclusion

**CHAPTER 4**  
**ANALYSIS AND INTERPRETATION**

## IV ANALYSIS AND INTERPRETATION

### 4.1. DESCRIPTIVE ANALYSIS

**Table: 4.1.1. DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF BANCO PRODUCTS (INDIA) LTD**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.065	266.5
<b>MEDIAN</b>	0.03	186.1
<b>MAXIMUM</b>	0.35	638.7
<b>MINIMUM</b>	0.0	107.4
<b>STD. DEV</b>	0.11	196.3
<b>SKEWNESS</b>	2.1	1.35
<b>KURTOSIS</b>	6.23	3.05
<b>JARQUE-BERA</b>	11.9	3.04
<b>PROBABILITY</b>	0.003	0.22
<b>SUM</b>	0.65	266.5
<b>SUM.SQ.DEV</b>	0.10	346733.8
<b>OBSERVATION</b>	10	10

The table provided displays descriptive statistics for the dividend and stock values of Banco Products Companies, based on a sample of 10 observations.

The average dividend payout for Banco Products Companies is 6.5%, with a median of 3%. Dividends range from 0% to 35%, and a standard deviation of 10% indicates high variability. A skewness of 2.13 and kurtosis of 6.23 suggest a right-tailed, leptokurtic distribution with significant outliers. The Jarque-Bera statistic (11.93,  $p = 0.002568$ ) confirms non-normality.

Stock prices average 266.50 with a median of 186.10, ranging from 107.40 to 638. A standard deviation of 196.20 points to substantial variability. The skewness of 1.3 suggests a right-skewed distribution, while a kurtosis of 3.04 indicates near-normal distribution. The Jarque-Bera statistic (3.04,  $p = 0.21$ ) shows no significant deviation from normality. Overall, dividends exhibit greater variability and deviation from normality compared to stock prices, which are relatively normally distributed.

**Table: 4.1.2 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF POWER GRID CORPORATION OF INDIA**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.05	148.3
<b>MEDIAN</b>	0.04	112.3
<b>MAXIMUM</b>	0.16	310.7
<b>MINIMUM</b>	0.00	79.4
<b>STD. DEV</b>	0.04	72.5
<b>SKEWNESS</b>	1.71	1.34
<b>KURTOSIS</b>	5.29	3.56
<b>JARQUE-BERA</b>	7.01	3.11
<b>PROBABILITY</b>	0.03	0.21
<b>SUM</b>	0.46	148.6
<b>SUM.SQ.DEV</b>	0.01	47247.2
<b>OBSERVATION</b>	10	10

The table provided displays descriptive statistics for the dividend and stock values of 21 Power Grid Companies based on a sample size of 10 observations.

For Power Grid Companies, the average dividend payout is 4.6%, with a median of 3.5%. Dividends range from 0% to 16%, with a standard deviation of 4.5%, indicating moderate variability. The distribution is right-skewed (skewness 1.71) and leptokurtic (kurtosis 5.28), suggesting high outliers and heavier tails. The Jarque-Bera statistic (7.01,  $p = 0.03$ ) confirms significant deviation from normality.

The average stock price is 148.2, with a median of 112.3. Stock prices vary from 79.4 to 310.7, with a standard deviation of 72.4, indicating substantial variability. The distribution is also right-skewed (skewness 1.34) and slightly leptokurtic (kurtosis 3.57), indicating some higher outliers. However, the Jarque-Bera statistic (3.12,  $p = 0.212$ ) suggests that stock prices do not significantly deviate from normality. Overall, dividends show more deviation from normality than stock prices, which are closer to a normal distribution despite some skewness and kurtosis.

**Table: 4.1.3 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF NBCC (INDIA) LTD**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.015	69.6
<b>MEDIAN</b>	0.01	61.8



<b>MAXIMUM</b>	0.052	138.7
<b>MINIMUM</b>	0.00	29.1
<b>STD. DEV</b>	0.02	37.2
<b>SKEWNESS</b>	1.62	0.77
<b>KURTOSIS</b>	4.73	2.37
<b>JARQUE-BERA</b>	5.62	1.14
<b>PROBABILITY</b>	0.06	0.07
<b>SUM</b>	0.15	695.7
<b>SUM.SQ.DEV</b>	0.002	12423.3
<b>OBSERVATION</b>	10	10

The provided table present descriptive statistics for dividend and stock values of NBCC (India) Ltd Companies based on a sample size of 10 observations.

NBCC (India) Ltd, the average dividend payout is 1.46%, with a median of 1.145%. Dividends range from 0% to 5.19%, with a standard deviation of 1.52%, indicating moderate variability. The distribution is right-skewed (skewness 1.62) and leptokurtic (kurtosis 4.74), suggesting high outliers. The Jarque-Bera statistic (5.62,  $p = 0.061$ ) indicates the The distribution is near. significantly deviating from normality.

The average stock price is 69.57, with a median of 61.84. Prices range from 29.10 to 138.70, with a standard deviation of 37.15, showing considerable variability. The distribution is right-skewed (skewness 0.76) and slightly platykurtic (kurtosis 2.4), indicating lighter tails. The Jarque-Bera statistic (1.15,  $p = 0.56$ ) suggests the stock prices distribution is not notably differ from normality. Overall, dividends show more deviation from normality with higher skewness and kurtosis, while stock prices are closer to normal with moderate skewness.

**Table: 4.1.4 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF GAIL (INDIA) LTD**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.07	110.8
<b>MEDIAN</b>	0.025	91.12
<b>MAXIMUM</b>	0.44	203.8
<b>MINIMUM</b>	0.10	70.4
<b>STD. DEV</b>	0.13	42.88
<b>SKEWNESS</b>	2.5	1.16
<b>KURTOSIS</b>	7.4	3.18

<b>JARQUE-BERA</b>	17.9	2.3
<b>PROBABILITY</b>	0.0001	0.321
<b>SUM</b>	0.75	1107.9
<b>SUM.SQ.DEV</b>	0.156	16547.70
<b>OBSERVATION</b>	10	10

The provided table furnishes descriptive statistics for dividends and stock prices of GAIL (India) Ltd Companies, encompassing 10 observations.

For GAIL (India) Ltd, the average dividend yield is 7.5%, with a median of 2.5%. Dividends vary from 0.1% to 44%, showing substantial variability (standard deviation 13%). The distribution is highly right-skewed (skewness 2.45) and leptokurtic (kurtosis 7.37), indicating notable high outliers and heavy tails. The Jarque-Bera statistic (17.99,  $p = 0.0001$ ) confirms significant deviation from normality.

The average stock price is 110.8, with a median of 91.12. Prices range from 70.39 to 203.8, with a standard deviation of 42.9, reflecting notable variability. The stock price distribution is moderately right-skewed (skewness 1.165) and slightly heavier-tailed (kurtosis 3.18) compared to a normal distribution. However, the Jarque-Bera statistic (2.3,  $p = 0.32$ ) indicates no significant deviation from normality. Overall, dividends show significant skewness and deviation from normality, while stock prices exhibit moderate variability and a more normal distribution.

**Table: 4.1.5 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF COAL INDIA**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.08	267.9
<b>MEDIAN</b>	0.08	240.75
<b>MAXIMUM</b>	0.11	474.8
<b>MINIMUM</b>	0.00	135.5
<b>STD. DEV</b>	0.03	104.34
<b>SKEWNESS</b>	-1.16	0.61
<b>KURTOSIS</b>	3.82	2.62
<b>JARQUE-BERA</b>	2.54	0.68
<b>PROBABILITY</b>	0.28	0.71
<b>SUM</b>	0.77	2679

<b>SUM.SQ.DEV</b>	0.10	98080
<b>OBSERVATION</b>	10	10

The provided table outlines descriptive statistics for dividends and stock prices of Coal India Companies, encompassing a sample size of 10 observations.

The average dividend yield for Coal India 7.7%, with a median of 8%. Dividends range from 0% to 11%, with low variability (standard deviation 3%). The distribution is left-skewed (skewness -1.164) and has moderate tails (kurtosis 3.82). The Jarque-Bera statistic (2.54, p = 0.28) suggests no significant deviation from normality.

Stock prices average 267.9, with a median of 240.7. Prices range from 135.5 to 474.8, showing substantial variability (standard deviation 104.4). The distribution is right-skewed (skewness 0.612) and slightly heavier-tailed (kurtosis 2.63). The Jarque-Bera statistic (0.68, p = 0.711) indicates the distribution closely resembles normality. Overall, dividends show a left-skewed distribution with moderate kurtosis and approximate normality, while stock prices exhibit high variability and are closer to a normal distribution.

**Table: 4.1.6 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF POWER FINANCE CORPORATION**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.08	161.81
<b>MEDIAN</b>	0.10	96.52
<b>MAXIMUM</b>	0.15	480.4
<b>MINIMUM</b>	0.00	80.6
<b>STD. DEV</b>	0.06	144.2
<b>SKEWNESS</b>	-0.26	1.58
<b>KURTOSIS</b>	1.56	3.67
<b>JARQUE-BERA</b>	0.98	4.35
<b>PROBABILITY</b>	0.61	0.1
<b>SUM</b>	0.79	1618
<b>SUM.SQ.DEV</b>	0.029	187208
<b>OBSERVATION</b>	10	10

The provided table offers descriptive statistics for dividends and stock prices of Power Finance Corporation Companies, based on a sample size of 10 observations.

For Power Finance Corporation Companies, the average dividend yield is 8%, with a median of 10%. Dividends range from 0% to 15%, showing moderate variability (standard deviation 6%). The distribution is slightly left-skewed (skewness -0.26) with light tails (kurtosis 1.56), and approximates normality (Jarque-Bera 0.98,  $p = 0.614$ ).

Stock prices average 161.9, with a median of 96.52. Prices range from 80.56 to 480.45, indicating substantial variability (standard deviation 144.2). The distribution is right-skewed (skewness 1.582) with heavier tails and a sharper peak (kurtosis 3.67), deviating somewhat from normality (Jarque-Bera 4.4,  $p = 0.1$ ). Overall, dividends exhibit slight left skewness and minimal deviation from normality, while stock prices show high variability, right skewness, and some deviation from normality.

**Table: 4.1.7 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF HINDUSTAN ZINC LTD**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.076	286.6
<b>MEDIAN</b>	0.05	286.6
<b>MAXIMUM</b>	0.25	471.5
<b>MINIMUM</b>	0.00	146.6
<b>STD. DEV</b>	0.07	81.7
<b>SKEWNESS</b>	1.14	0.60
<b>KURTOSIS</b>	3.5	3.95
<b>JARQUE-BERA</b>	2.5	1.06
<b>PROBABILITY</b>	0.28	0.59
<b>SUM</b>	0.84	3152.80
<b>SUM.SQ.DEV</b>	0.05	66724.56
<b>OBSERVATION</b>	10	10

The table summarizes the descriptive statistics for dividends and stock prices of Hindustan Zinc Companies, based on a sample size of 10 observations.

For Hindustan Zinc Companies, the average dividend yield is 7.6%, with a median of 5%. Dividends range from 0% to 25%, showing moderate variability (standard deviation 8%). The distribution is right-skewed (skewness 1.148) with heavier tails and a sharper peak (kurtosis 3.6). The Jarque-Bera statistic (2.6,  $p = 0.28$ ) indicates no significant deviation from normality. Stock prices average 286.62, with the same median value. Prices range from 146.6 to 471.55, with moderate variability (standard deviation 81.7). The distribution is right-skewed (skewness

0.597) and has heavier tails and a sharper peak (kurtosis 3.95). The Jarque-Bera statistic (1.06,  $p = 0.59$ ) suggests the distribution approximates normality. Overall, dividends are right-skewed with moderate kurtosis and approximate normality, while stock prices exhibit moderate variability, right skewness, and no significant deviation from normality.

**Table: 4.1.8 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF BALMER LAWRIE LTD**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.071	156.6
<b>MEDIAN</b>	0.059	131.91
<b>MAXIMUM</b>	0.158	269.55
<b>MINIMUM</b>	0.00	102.3
<b>STD. DEV</b>	0.04	52.41
<b>SKEWNESS</b>	0.44	1.14
<b>KURTOSIS</b>	2.55	3.13
<b>JARQUE-BERA</b>	0.40	2.17
<b>PROBABILITY</b>	0.82	0.34
<b>SUM</b>	0.71	1565.7
<b>SUM.SQ.DEV</b>	0.019	24750.21
<b>OBSERVATION</b>	10	10

The provided table outlines descriptive statistics for dividends and stock prices of Balmer Lawrie Ltd Companies, based on a sample size of 10 observations.

For Balmer Lawrie Ltd Companies, the average dividend yield is 7.01%, with a median of 6%. Dividends range from 0% to 15.8%, indicating moderate variability (standard deviation 5%). The distribution is slightly right-skewed (skewness 0.437) with moderate tails (kurtosis 2.5). The Jarque-Bera statistic (0.4,  $p = 0.82$ ) suggests no significant deviation from normality.

Stock prices average 156.5, with a median of 131.91. Prices range from 102.33 to 269.55, with moderate variability (standard deviation 52.4). The distribution is right-skewed (skewness 1.141) with heavier tails and a sharper peak (kurtosis 3.125). The Jarque-Bera statistic (2.18,  $p = 0.34$ ) indicates the distribution approximates normality. Overall, dividends exhibit slight right skewness and minimal deviation from normality, while stock prices demonstrate moderate variability, right skewness, and no significant deviation from normality.

**Table: 4.1.9 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF PTC LTD**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.06	95.03
<b>MEDIAN</b>	0.05	86.93
<b>MAXIMUM</b>	0.14	198.85
<b>MINIMUM</b>	0.00	56.5
<b>STD. DEV</b>	0.04	41.9
<b>SKEWNESS</b>	0.47	1.58
<b>KURTOSIS</b>	2.72	4.86
<b>JARQUE-BERA</b>	0.41	5.62
<b>PROBABILITY</b>	0.82	0.06
<b>SUM</b>	0.62	950.3
<b>SUM.SQ.DEV</b>	0.014	15800.2
<b>OBSERVATION</b>	10	10

The provided table furnishes descriptive statistics for dividends and stock prices of PTC Ltd Companies, based on a sample size of 10 observations.

For PTC Ltd Companies, the average dividend yield is 6.2%, with a median of 5.5%. Dividends range from 0% to 14%, showing moderate variability (standard deviation 0.04). The distribution is slightly right-skewed (skewness 0.474) with moderate tails (kurtosis 2.72). The Jarque-Bera statistic (0.407,  $p = 0.82$ ) suggests no significant deviation from normality.

Stock prices average 95.04, with a median of 86.9. Prices range from 56.5 to 198.85, with moderate variability (standard deviation 41.90). The distribution is right-skewed (skewness 1.584) with heavier tails and a sharper peak (kurtosis 4.87). The Jarque-Bera statistic (5.62,  $p = 0.06$ ) indicates some deviation from normality. Overall, dividends exhibit slight right skewness and minimal deviation from normality, while stock prices show moderate variability, right skewness, and some deviation from normality.

**Table: 4.1.10 DESCRIPTIVE ANALYSIS OF DIVIDEND AND STOCK PRICE OF INDIAN CARD CLOTHING COMPANY LTD**

	<b>DIVIDEND</b>	<b>STOCK</b>
<b>MEAN</b>	0.059	196.6
<b>MEDIAN</b>	0.02	217.3
<b>MAXIMUM</b>	0.24	283.7
<b>MINIMUM</b>	0.00	100.05
<b>STD. DEV</b>	0.09	75.8
<b>SKEWNESS</b>	1.31	-0.22
<b>KURTOSIS</b>	3.21	1.31
<b>JARQUE-BERA</b>	2.90	1.27
<b>PROBABILITY</b>	0.24	0.53
<b>SUM</b>	0.58	1965.9
<b>SUM.SQ.DEV</b>	0.06	51686.7
<b>OBSERVATION</b>	10	10

The provided table shows a summary of statistics for dividends and stock prices of Indian Card Clothing Company Ltd, based on a sample size of 10 observations.

For Indian Card Clothing Company Ltd, dividends average 5.8%, with considerable variability (standard deviation 0.08). The distribution is right-skewed (skewness 1.313) with heavier tails (kurtosis 3.208). However, the Jarque-Bera statistic (2.9,  $p = 0.24$ ) suggests the distribution approximates normality with some skewness and kurtosis.

Stock prices average 196.6, with moderate variability (standard deviation 75.7). The distribution is slightly left-skewed (skewness -0.217) with lighter tails (kurtosis 1.31). The Jarque-Bera statistic (1.3,  $p = 0.53$ ) indicates the distribution approximates normality. Overall, dividends show right skewness and moderate kurtosis, while stock prices exhibit moderate variability, slight left skewness, and no significant deviation from normality.

## 4.2. REGRESSION ANALYSIS

**Table: 4.2.1 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF BANCO PRODUCTS (INDIA) LTD**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	287.9	76.8	3.77	0.005
DIVIDEND	-329.6	636.6	-0.5	0.61
R-SQUARED	0.03	MEAN DEPENDENT VARIABLE		266.50
ADJUSTED R-SQUARED	-0.08	S.D DEPENDENT VARIABLE		196.2
F-STATISTIC	0.26	PROB(F-STATISTIC)		0.61

This table represents the regression analysis examines the relationship between "DIVIDEND" (dependent variable) and "STOCK" (independent variable). The constant term coefficient is 287.93, indicating its impact when "stock" is zero. The coefficient for "dividend" is -329.6, significant at a probability value of 0.006, implying a negative relationship. The R-squared value is 0.032, indicating 3.24% variability explanation. However, adjusted R-squared is negative (-0.089), suggesting poor model fit. The F-statistic is 0.27, with a probability value of 0.62, implying the regression model might not be significant. The dependent variable mean is 266.5, with a standard deviation of 196.21, showing its central tendency and dispersion. Overall, though a significant negative relationship is observed, the model's explanatory power seems limited, suggesting potential inadequacies in capturing the variables' dynamics.

**Table: 4.2.2 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF POWER GRID CORPORATION OF INDIA**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	136.1	35.2	3.8	0.004
DIVIDEND	263.6	561.3	0.4	0.6
R-SQUARED	0.002	MEAN DEPENDENT VARIABLE		148.2
ADJUSTED R-SQUARED	-0.09	S.D DEPENDENT VARIABLE		72.4
F-STATISTIC	0.2	PROB(F-STATISTIC)		0.6

This table provides regression analysis explores the relationship between "DIVIDEND" (dependent variable) and "STOCK" (independent variable). The constant term coefficient is



136.13, indicating its impact when "stock" is zero. The coefficient for "dividend" is 263.64, significant at a probability value of 0.0048, suggesting a positive relationship. The R-squared value is 0.003, explaining around 0.3% of variability. However, adjusted R-squared is negative (-0.09), indicating potential model limitations. The F-statistic is 0.2, with a probability value of 0.65, implying the regression model might not be significant overall. The dependent variable mean is 148.3, with a standard deviation of 72.5, showing its central tendency and dispersion. While a significantly positive relationship is found, the model's explanatory power seems limited, suggesting potential inadequacies in capturing the underlying dynamics. Further investigation or model refinement may be needed for better understanding.

**Table: 4.2.3 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF NBCC (INDIA) LTD**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	72.0	17.7	4.0	0.003
DIVIDEND	-167.0	863.8	-0.19	0.85
R-SQUARED	0.004	MEAN DEPENDENT VARIABLE		69.6
ADJUSTED R-SQUARED	-0.12	S.D DEPENDENT VARIABLE		37.15
F-STATISTIC	0.04	PROB(F-STATISTIC)		0.9

This table represent the regression analysis explores the relationship between "DIVIDEND" and "STOCK". The constant term coefficient is 72.01, indicating its impact when "stock" is zero. However, the coefficient for "dividend" is -167.1, significant with a probability value of 0.003 and a t-statistic of 4.06, suggesting a negative relationship. The R-squared value is 0.005, explaining around 0.5% of variability, but adjusted R-squared is negative (-0.12), possibly due to irrelevant variables or insufficient data. The F-statistic is 0.037388, with a probability value of 0.85, implying the regression model are not have a significant overall. The dependent variable mean is 69.5, with a standard deviation of 37.1, indicating central tendency and dispersion. Despite a significant negative relationship, the model's explanatory power is limited, suggesting further exploration and refinement for better understanding stock performance factors.

**Table: 4.2.4 REGRSSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF GAIL (INDIA) LTD**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	92.7	11.2	8.2	0.00
DIVIDEND	242.5	77.2	3.1	0.01
R-SQUARED	0.5	MEAN DEPENDENT VARIABLE		110.7
ADJUSTED R-SQUARED	0.5	S.D DEPENDENT VARIABLE		42.9
F-STATISTIC	9.9	PROB(F-STATISTIC)		0.01

This regression analysis examines the relationship between "DIVIDEND" and "STOCK". The constant term coefficient is 92.61, indicating its impact when "stock" is zero. The coefficient for "dividend" is 242.4751, significant with a probability value of 0.0, suggesting a positive relationship. The R-squared value is 0.55, indicating 55% of variability explained by the independent variable. Adjusted R-squared is 0.50, suggesting a good fit. The F-statistic of 9.869731, with a probability value of 0.014, confirms overall statistical significance.

Descriptive statistics show a mean of 110.8 for the dependent variable, with a standard deviation of 42.98. In summary, the analysis reveals a statistically significant positive correlation between the variables, with the model demonstrating a high explanatory power and overall significance. These findings emphasize the importance of the independent variable in predicting stock performance.

**Table: 4.2.5 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF COAL INDIA**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	267	92.1	2.9	0.2
DIVIDEND	17.6	1106.6	0.02	0.9
R-SQUARED	0.003	MEAN DEPENDENT VARIABLE		267.9
ADJUSTED R-SQUARED	-0.1	S.D DEPENDENT VARIABLE		104.4
F-STATISTIC	0.001	PROB(F-STATISTIC)		0.9

This regression analysis explores the relationship between "DIVIDEND" and "STOCK". The constant term coefficient is 266.5, suggesting its impact when "stock" is zero. However, the coefficient for "dividend" is merely 17.7, lacking statistical significance with a t-statistic of 0.19 and a probability value of 0.02. The extremely low R-squared (0.00003) and negative adjusted R-squared (-0.125) indicate poor model fit. The F-statistic of 0.00026, with a probability value

of 0.98, further suggests overall model insignificance. Descriptive statistics show a mean of 267.91 for the dependent variable, with a high standard deviation of 104.3, indicating wide dispersion. In summary, the analysis reveals an insignificant relationship between the variables, with minimal explanatory power and model significance. This implies that "dividend" may not reliably predict stock performance, necessitating further model refinement.

**Table: 4.2.6 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF POWER FINANCE CORPORATION**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	78.1	78.5	0.9	0.3
DIVIDEND	1057	820.7	1.3	0.2
R-SQUARED	0.2	MEAN DEPENDENT VARIABLE		161.8
ADJUSTED R-SQUARED	0.1	S.D DEPENDENT VARIABLE		144.2
F-STATISTIC	1.7	PROB(F-STATISTIC)		0.2

This table shows a regression analysis examines the relationship between "DIVIDEND" and "STOCK". The constant term's coefficient is 78.09, indicating its impact when "stock" is zero. However, "dividend" has a high coefficient of 1057.04, signifying a strong positive relationship, with statistical significance (t-statistic: 13.5, p-value: 0.9). The R-squared (0.172) suggests 17.2% variability explanation, though the adjusted R-squared (0.07) implies limited explanatory power. The F-statistic (1.66, p-value: 0.23) suggests overall model insignificance. Descriptive stats show a mean of 161.81 for the dependent variable, with a high standard deviation of 144.2, indicating wide dispersion. In summary, a notable positive correlation between explanatory power and overall model insignificance. Further refinement is needed to enhance predictive accuracy and robustness.

**Table:4.2.7 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF HINDUSTAN ZINC LTD**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILI RTY
STOCK	260.4	35.86	7.26	0.0000
DIVIDEND	345.	342.9	1.007	0.34
R-SQUARED	0.10	MEAN DEPENDENT VARIABLE		286.6

<b>ADJUSTED R-SQUARED</b>	0.001	<b>S.D DEPENDENT VARIABLE</b>	81.69
<b>F-STATISTIC</b>	1.014	<b>PROB(F-STATISTIC)</b>	0.34

The regression analysis explores the link between "DIVIDEND" and "STOCK". The constant term's coefficient (260.4) indicates its impact when "stock" is zero. Conversely, "dividend" has a coefficient of 345.3, with statistical significance (t-statistic: 9.62, p-value: 0.00). The R-squared (0.101) suggests 10.12% variability explanation, but the adjusted R-squared (0.0014) implies limited explanatory power, possibly due to irrelevant variables or sample size. The F-statistic (1.0136, p-value: 0.340) indicates overall model insignificance. Descriptive stats show a mean of 286.6 for the dependent variable, with a standard deviation of 81.69, indicating its central tendency and dispersion. In summary, the analysis reveals a strong positive relationship, but involving weak explanatory power and overall model insignificance, suggesting potential unaccounted-for factors. Further model refinement or additional variables may enhance understanding.

**Table:4.2.8 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF BALMER LAWRIE LTD**

<b>VARIABLE</b>	<b>COEFFICIENT</b>	<b>STD.ERROR</b>	<b>T-STATISTICS</b>	<b>PROBABILIRTY</b>
<b>STOCK</b>	172	33.1	5.2	0.008
<b>DIVIDEND</b>	-222.3	398.3	-0.5	0.6
<b>R-SQUARED</b>	0.03	<b>MEAN DEPENDENT VARIABLE</b>		156.6
<b>ADJUSTED R-SQUARED</b>	-0.1	<b>S.D DEPENDENT VARIABLE</b>		52.4
<b>F-STATISTIC</b>	0.3	<b>PROB(F-STATISTIC)</b>		0.6

The regression analysis explores the link between "DIVIDEND" and "STOCK." The constant term's coefficient (172.3) indicates its impact when "stock" is zero. Conversely, "dividend" has a coefficient of -222.3, with statistical significance (t-statistic: -6.7, p-value: 0.0008), implying a negative relationship. The R-squared (0.038) suggests 3.8% variability explanation, but the adjusted R-squared is negative (-0.083), indicating limited explanatory power or model specification issues. The F-statistic (0.31, p-value: 0.59) implies overall model insignificance. Descriptive stats show a mean of 156.5 for the dependent variable, with a standard deviation of 52.4, indicating its central tendency and dispersion. In summary, while a significant negative

relationship is observed, the model's explanatory power is weak, and overall model significance is lacking, suggesting potential unaccounted-for factors. Further refinement or consideration of additional variables may enhance understanding.

**Table:4.2.9 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF PTC LTD**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	91.8	26.9	3.4	0.01
DIVIDEND	50.8	370.4	0.1	0.8
R-SQUARED	0.002	MEAN DEPENDENT VARIABLE		95.03
ADJUSTED R-SQUARED	-0.1	S.D DEPENDENT VARIABLE		41.9
F-STATISTIC	0.01	PROB(F-STATISTIC)		0.9

The regression analysis examines the link between "DIVIDEND" and "STOCK." The constant term's coefficient (91.8) signifies its impact when "stock" is zero, while "dividend" has a coefficient of 50.79, showing A statistically significant positive relationship. (t-statistic: 1.88, p-value: 0.0092). The R-squared (0.002) suggests minimal explanatory power, and the adjusted R-squared is negative (-0.12), implying limited model fit. The F-statistic (0.019, p-value: 0.89) indicates overall model insignificance. Descriptive stats show a mean of 95.03 for the dependent variable, with a standard deviation of 41.9. In summary, while a significant positive relationship is noted, the model's explanatory power is very low, and overall model significance is lacking, suggesting potential unaccounted-for factors. Further model refinement or consideration of additional variables may enhance understanding.

**Table:4.2.10 REGRESSION ANALYSIS OF DIVIDEND AND STOCK PRICE OF INDIAN CARD CLOTHING COMPANY LTD**

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTICS	PROBABILIRTY
STOCK	197.6	31.3	6.3	0.0002
DIVIDEND	-16.7	314.3	-0.05	0.9
R-SQUARED	0.0003	MEAN DEPENDENT VARIABLE		196.6
ADJUSTED R-SQUARED	-0.12	S.D DEPENDENT VARIABLE		75.8
F-STATISTIC	0.0003	PROB(F-STATISTIC)		0.96

The regression analysis explores the link between "DIVIDEND" and "STOCK." The constant term's coefficient (197.56) indicates its impact when "stock" is zero, while "dividend" has a coefficient of -16.74, suggesting a negative relationship, though statistically insignificant (t-statistic: -0.53, p-value: 0.0002). The R-squared (0.00035) and adjusted R-squared are extremely low, indicating poor model fit. The F-statistic (0.003, p-value: 0.96) implies overall model insignificance. Descriptive stats show a mean of 196.6 for the dependent variable, with a standard deviation of 75.7. In summary, while a negative relationship is observed, the model's explanatory power is minimal, and overall model significance is lacking, indicating potential unaccounted-for factors. Further model refinement or additional variables may improve understanding.

### 4.3. COMPOUNDED ANNUAL GROWTH RATE

#### 4.3.1 COMPOUNDED ANNUAL GROWTH RATE

COMPOUNDED ANNUAL GROWTH RATE	%
BANCO PRODUCTS	14.5
POWER GRID	3.82
NBCC	5.85
GAIL	14.78
COAL INDIA	10.9
HINDUSTAN ZINC	3.83
BALMER LAWRIE AND CO.LTD	2.83
PTC	16.85
INDIAN CARD	18.1

The Compounded annual growth rate (CAGR) is a key metric employed to assess the yearly growth rate of an investment or business over a specified period, assuming that the growth is compounded annually. It's a valuable tool for investors and analysts as it provides a standardized way to assess and compare the growth rates of different entities over time.

**Banco Products (CAGR: 14.5%):** Banco Products has demonstrated a higher growth rate is 14.5%, indicating robust performance and potentially high the product demand within the market

**Power Grid (CAGR: 3.82%):** Power Grid's CAGR of 3.82% suggests relatively slower growth compared to other companies listed. This might be due to the factors like regulatory constraints or market saturation.

NBCC (CAGR: 5.85%): NBCC's CAGR of 5.85% indicates moderate growth within its sector, possibly reflecting Consistent demand for its services. in the construction and infrastructure domain.

GAIL (CAGR: 14.78%): GAIL's CAGR of 14.78% suggests robust growth within the energy sector, reflecting strong performance and the product demand within the market

Coal India (CAGR: 10.9%): This indicates that Coal India has experienced an annual growth rate of 10.9% over the specified period. It suggests healthy growth within the coal industry.

Hindustan Zinc (CAGR: 3.83%): With a CAGR of 3.83%, Hindustan Zinc demonstrates modest growth within its sector, possibly influenced by factors such as commodity prices and market dynamics.

Balmer Lawrie and Co. Ltd. (CAGR: 2.83%): Balmer Lawrie's lower CAGR of 2.83% might indicate slower growth or challenges within its industry, possibly requiring strategic adjustments to improve growth prospects.

PTC (CAGR: 16.85%): PTC's CAGR of 16.85% suggests significant growth within its industry, indicating successful business operations and possibly strong market positioning.

Indian Card (CAGR: 18.1%): With the highest CAGR of 18.1%, Indian Card has shown exceptional growth performance, likely driven by factors such as increasing market demand or successful expansion strategies.

In summary, analysing CAGR Values offer valuable insights into the. growth trajectories of companies within their respective sectors. Higher CAGR values generally indicate better growth prospects and investment potential, while lower Values may justify further exploration into. factors affecting growth and business performance.

#### 4.4. WALTER MODEL AND CORRELATION ANALYSIS

**Table: 4.4.1 WALTER MODEL OF BANCO PRODUCT (INDIA) LTD**

BANCO PRODUCT	2023		2022		2021		2020		2019	
	Walter	price	Walter	price	Walter	price	Walter	price	Walter	price
JAN	474.5	215	113.4	163	130	136.4	103.32	101	166.8	183.5
FEB	477.2	238	113	139.6	130.3	156.4	102	83.20	169.8	182.4
MAR	475.6	224	113.2	145.9	130.2	147.65	100.5	67.50	174	181.8

APR	479.4	258	112.9	126.3	130	153.95	100.1	64.5	176.4	181.7
MAY	480.8	274	113.5	169.5	130	162.45	100.8	70.6	177.1	181.7
JUN	482.9	301	113.6	178.5	130.3	161.15	102.4	86.45	177.9	145.20
JUL	486.1	354	113.7	189.3	130	167.15	102.6	89.70	175.8	144.9
AUG	491.8	510	113.8	208	130.7	213.80	102.6	89.20	176.4	102.75
SEP	491.5	497	113.6	182.5	130.6	198.75	102.6	90	176.8	144.65
OCT	490.2	453	113.7	192.2	130.6	190.95	102.7	93.60	177.1	111.90
NOV	493	559	113.8	201	130.5	175.05	104.6	128.70	175	94.10
DEC	494.2	623	113.8	201.6	131	192.90	105.	141.10	176.6	103.95

The table shows monthly prices of Banco Product and Walter from 2019 to 2023. Banco Product's prices consistently rise, peaking at 494.2 in December 2023, indicating steady growth. Walter's prices are more volatile. In 2023, they increased significantly, peaking at 623 in December, suggesting a substantial surge. From 2020 to 2022, Walter's prices fluctuated but trended upward. Banco Product's steady growth suggests reliable performance, while Walter's sharp increase in 2023 could indicate a sudden market change or increased demand. Both products showed price growth over the years.

**Table: 4.4.2 Correlation Analysis on Walter and Price For 2023**

<b>2023</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>-0.47<sup>NS</sup></b>
<b>Walter</b>	<b>-0.47<sup>NS</sup></b>	<b>1</b>

The table shows the correlation between "Price" and "Walter" with a coefficient of -0.47, indicating a moderate negative relationship. The "NS" denotes non-significance, meaning this correlation is not statistically significant. This implies that changes in "Price" Are not consistently linked with. changes in "Walter." The negative sign suggests that as "Price" increases, "Walter" tends to decrease, but this relationship is weak.

**Table: 4.4.3 Correlation Analysis on Walter and Price For 2022**

<b>2022</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.97<sup>NS</sup></b>
<b>Walter</b>	<b>0.97<sup>NS</sup></b>	<b>1</b>

The table indicates a correlation of 0.97 between "Price" and "Walter" in 2022, showing a very strong positive relationship. However, the "NS" signifies non-significance, meaning this high



correlation isn't statistically significant. Despite the positive sign suggesting that as "Price" increases, "Walter" also tends to increase.

**Table: 4.4.4 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.81<sup>NS</sup></b>
<b>Walter</b>	<b>0.81<sup>NS</sup></b>	<b>1</b>

The table shows a correlation of 0.81 between "Price" and "Walter" in 2021, indicating a strong positive relationship. However, the "NS" signifies non-significance, meaning this correlation isn't statistically significant. The positive sign suggests that as "Price" increases, "Walter" tends to increase as well. Nevertheless, the non-significance indicates that this correlation isn't statistically significant.

**Table: 4.4.5 Correlation Analysis on Walter and Price For 2020**

<b>2020</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

The table shows a 0.99 correlation between "Price" and "Walter" in 2020, indicating an almost perfect positive relationship. However, the "NS" indicates non-significance, suggesting that this correlation is not statistically reliable. The positive sign implies that as "Price" increases, "Walter" also increases.

**Table: 4.4.6 Correlation Analysis on Walter and Price For 2019**

<b>2019</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.97<sup>NS</sup></b>
<b>Walter</b>	<b>0.97<sup>NS</sup></b>	<b>1</b>

The table shows a 0.97 correlation between "Price" and "Walter" in 2019, suggesting a very strong positive relationship. However, the "NS" (non-significant) indicates this correlation is not statistically significant. This shows positive correlation implies that as "Price" increases, "Walter" tends to increase.

**Table: 4.4.7 WALTER MODEL OF POWER GRID CORPORATION OF INDIA**

<b>POWER GRID</b>	2023		2022		2021		2020		2019	
	Price	Walter	Price	Walter	Price	Walter	Price	Walter	Price	Walter
JAN	160.57	168.92	160.24	150.62	103.75	115.19	106.51	84.65	111.7	73.53
FEB	168.90	169.88	156.07	150.04	126.59	120.60	101.78	83.86	113	73.58
MAR	173.40	170.36	174.45	152.40	123.02	119.87	92.50	82.12	114.50	73.65
APR	177.94	170.82	182.74	153.33	122.65	119.79	91.86	81.99	115.7	73.70
MAY	175.39	170.56	168.64	151.71	127.48	120.78	96.19	82.84	115.9	73.71
JUN	191.36	172.06	162.79	150.96	129.06	121.09	95.12	82.64	117.53	73.77
JUL	188.85	171.84	167.63	151.58	131.40	121.54	100.15	83.58	118.43	73.81
AUG	183.41	171.35	167.18	151.52	130.57	121.38	98.52	83.28	110.84	73.49
SEP	199.75	172.76	156.26	150.07	140.70	123.20	90.25	81.65	111.98	73.5
OCT	200.95	172.86	161.18	150.75	138.79	122.87	106.59	84.67	109.91	73.45
NOV	210.2	173.56	161.88	150.84	154.35	125.32	108.22	84.92	105.36	73.23
DEC	237.85	175.36	158.96	150.44	154.46	125.34	115.37	85.99	108.62	73.39

The data shows the monthly "Price" and "Walter" values for Power Grid from 2019 to 2023. Over the years, both metrics generally increase, with "Price" and "Walter" closely tracking each other. Notably, from 2022 to 2023, both "Price" and "Walter" peak, with December 2023 showing the highest values. Despite high correlations in specific years, non-significance suggests variability or inconsistencies.

**Table: 4.4.8 Correlation Analysis on Walter and Price For 2023**

<b>2023</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

The table shows a 0.99 correlation between "Price" and "Walter" in 2023, indicating an almost perfect positive relationship. However, the "NS" (non-significant) denotes that this correlation isn't statistically significant. This strong positive correlation indicates that, as "Price" increases, "Walter" also increases.

**Table: 4.4.9 Correlation Analysis on Walter and Price For 2022**

<b>2022</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

The data shows a correlation of 0.98 between Price and Walter, indicating a very strong positive relationship. However, the "NS" notation suggests that this correlation is not statistically significant. which mean that while the two variables move together closely, hence there is non-significant correlations.

**Table: 4.4.10 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

The 2021 data shows a correlation of 0.99 between Price and Walter, suggesting an almost perfect positive relationship. However, the "NS" (not significant) label indicates that this correlation isn't statistically significant.

**Table: 4.4.11 Correlation Analysis on Walter and Price For 2020**

<b>2020</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

The 2020 data shows a strong positive correlation of 0.98 between Price and Walter, meaning they tend to increase or decrease together. However, the "NS" (not significant) indicates this correlation isn't statistically significant.

**Table: 4.4.12 Correlation Analysis on Walter and Price For 2019**

<b>2019</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

The 2019 data shows a near-perfect positive correlation of 0.99 between Price and Walter, indicating they move almost identically. However, the "NS" (not significant) notation suggests this correlation lacks statistical significance.

**Table: 4.4.13 WALTER MODEL OF NBCC (INDIA) LTD**

<b>NBCC</b>	<b>2023</b>		<b>2022</b>		<b>2021</b>		<b>2020</b>		<b>2019</b>	
	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>
JAN	40.06	34.90	36.10	45.45	20.39	31.20	21.99	33.05	39.13	65

FEB	40.27	35.55	34.67	38.95	23.28	52.30	18.47	21.25	38.97	63.1
MAR	41.02	38.15	35.02	40.40	22.86	47.95	17.18	18.30	38.87	61.90
APR	41.33	39.30	33.29	33.95	22.27	42.85	16.89	17.70	38.79	61.03
MAY	41.92	41.70	32.68	32.05	22.86	48	19.236	23.25	38.74	60.5
JUN	41.40	39.60	32.26	30.80	23.47	54.45	19.88	25.15	38.73	60.35
JUL	42.75	45.45	33.47	34.55	22.86	47.95	19.70	24.60	36.55	42.85
AUG	43.87	51.45	33.96	36.25	22.46	44.45	20.16	26.05	34.68	33.70
SEP	44.92	58.50	32.29	30.90	22.74	46.90	19.09	22.85	34.84	34.35
OCT	45.82	65.95	33.23	33.75	22.69	46.45	19.66	24.50	35.49	37.20
NOV	46.67	74.65	34.96	40.15	22.30	43.10	20.15	26	35.19	35.85
DEC	47.16	80.60	34.71185	39.10	23.08	50.20	22.09	33.50	34.84	34.35

The table presents "Walter" and "Price" data for NBCC from 2019 to 2023. In 2023, both metrics exhibit a consistent upward trend, with "Walter" rising from 40.06 in January to 47.16 in December, and "Price" increasing from 34.90 to 80.60. Comparing previous years, "Price" fluctuates more than "Walter," notably peaking in 2023. Despite some inconsistencies in earlier years, the 2023 data suggests a strong positive relationship. The steady increase in both metrics indicates potential growth and stability in NBCC's performance, although non-significant correlations in some years may point to underlying variability or external factors affecting consistency.

**Table: 4.4.14 Correlation Analysis on Walter and Price For 2023**

2023	price	Walter
Price	1	0.99 <sup>NS</sup>
Walter	0.99 <sup>NS</sup>	1

The table shows a 0.99 correlation between "Price" and "Walter" in 2023, indicating a nearly perfect positive relationship. However, the "NS" (non-significant) signifies that this correlation isn't statistically significant. This represents a the substantial positive relationship reveals that as "Price" increases, "Walter" also tends to increase.

**Table: 4.4.15 Correlation Analysis on Walter and Price For 2022**

2022	price	Walter
Price	1	0.96 <sup>NS</sup>
Walter	0.96 <sup>NS</sup>	1

The table shows a 0.96 correlation between "Price" and "Walter" in 2022, indicating a very strong positive relationship. However, the "NS" (non-significant) denotes that this correlation isn't statistically significant. However, the substantial positive relationship reveals that the as "Price" increases, "Walter" also tends to increase.

**Table: 4.4.16 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

The table shows a 0.98 correlation between "Price" and "Walter" in 2021, indicating a very strong positive relationship. However, the "NS" (non-significant) denotes that this correlation isn't statistically significant. However, the substantial positive relationship reveals that as "Price" increases, "Walter" also tends to increase.

**Table: 4.4.17 Correlation Analysis on Walter and Price For 2020**

<b>2020</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

The table shows a 0.99 correlation between "Price" and "Walter" in 2020, indicating a very strong positive relationship. However, the "NS" (non-significant) means this correlation isn't statistically significant. However, the substantial positive relationship reveals that as "Price" increases, "Walter" also rises.

**Table: 4.4.18 Correlation Analysis on Walter and Price For 2019**

<b>2019</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

The table shows a 0.98 correlation between "Price" and "Walter" in 2019, indicating a very strong positive relationship. However, the "NS" (non-significant) denotes that this correlation isn't statistically significant. This suggests that while "Price" and "Walter" appear to increase together, the relationship isn't statistically reliable.

**Table: 4.4.19 WALTER MODEL OF GAIL (INDIA) LTD**

GAIL	2023		2022		2021		2020		2019	
	Walter	Price	Walter	Price	Walter	Price	Walter	Price	Walter	Price
JAN	100.04	95.85	110.76	98.83	53.76	83.53	52.58	80.63	56.21	112.30
FEB	100.65	110	111.18	103	55.08	96.53	51.41	66.97	56.17	111.70
MAR	100.58	108.15	111.66	108.10	54.80	93.43	50.43	58.50	56.16	111.45
APR	100.54	107.30	110.80	99.27	55.02	95.83	50.51	59.13	56.18	111.90
MAY	100.44	104.80	110.98	101.03	55.97	107.37	51.06	63.70	56.19	112.05
JUN	100.45	105.05	110.03	92.40	55.51	101.43	51.45	67.40	55.57	101.75
JUL	101.01	120.35	109.38	87.20	54.97	95.27	51.24	65.37	54.27	85.10
AUG	100.83	115	110.03	92.40	55.21	97.93	50.68	60.50	54.22	84.53
SEP	101.13	124.40	109.24	86.20	56.23	110.93	50.02	55.43	54.51	87.80
OCT	100.92	117.60	109.51	88.20	55.47	101	50.87	62.03	54.83	91.60
NOV	101.45	136.05	110	92.80	54.61	91.53	51.55	68.43	53.86	80.80
DEC	102.04	164.05	110.59	97.30	54.71	92.57	53.53	96	54.07367	82.90

The data shows monthly values for GAIL's Walter and Price from 2019 to 2023. Generally, Walter Values remain fairly consistent across. years, ranging from around 50 to 110. In contrast, Price values show more variation, ranging from around 50 to 164. Notably, Price tends to be higher in recent years (2022 and 2023), peaking in December 2023 at 164.05. Despite some fluctuations, Walter and Price does not show a clear pattern of movement together, suggesting no strong, consistent relationship between them over these years.

**Table: 4.4.20 Correlation Analysis on Walter and Price For 2023**

2023	price	Walter
Price	1	0.99 <sup>NS</sup>
Walter	0.99 <sup>NS</sup>	1

The 2023 data shows a very strong positive correlation of 0.99 between Price and Walter, indicating they move together closely. However, the "NS" (not significant) means this correlation isn't statistically significant therefore, we can't confidently conclude that Price and Walter are truly related.

**Table: 4.4.21 Correlation Analysis on Walter and Price For 2022**

2022	price	Walter
Price	1	0.98 <sup>NS</sup>

<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>
---------------	--------------------------	----------

The 2022 data shows a strong positive correlation of 0.98 between Price and Walter, suggesting they generally move together. However, the "NS" (not significant) label indicates this correlation isn't statistically significant.

**Table: 4.4.22 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.96<sup>NS</sup></b>
<b>Walter</b>	<b>0.96<sup>NS</sup></b>	<b>1</b>

In 2021, the correlation matrix shows a high correlation of 0.96 between the price and the Walter model for PTC. However, the "NS" notation indicates that this correlation is insignificant, which pointing to that the strong observed relationship might be due to chance rather than a reliable pattern. This means that while the price and the Walter model generally move together, other factors may influence their relationship.

**Table: 4.4.23 Correlation Analysis on Walter and Price For 2020**

<b>2020</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

In 2020, the correlation matrix shows a very high correlation of 0.99 between the price and Walter model for PTC, marked as non-significant (NS). This indicates an An exceptionally strong positive correlation between. the two variables. However, the "NS" designation suggests caution in interpreting this correlation as statistically significant.

**Table: 4.4.24 Correlation Analysis on Walter and Price For 2019**

<b>2019</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

In 2019, the correlation matrix indicates a very strong correlation of 0.99 between the price and Walter model for PTC, marked as non-significant (NS). This suggests an exceptionally close positive relationship between the two variables. However, the "NS" notation implies caution in interpreting this correlation as statistically meaningful.

**Table: 4.4.25 WALTER MODEL OF COAL INDIA**

<b>COAL INDIA</b>	<b>2023</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>
-------------------	-------------	-------------	-------------	-------------	-------------

	Walter	Price	Walter	Price	Walter	Price	Walter	Price	Walter	Price
<b>JAN</b>	207.91	211.50	176.89	160.95	126.90	125.90	169.36	179.25	146.72	230.65
<b>FEB</b>	208.25	221.05	180.95	186.65	129.22	153.85	168	168	147.01	235.09
<b>MAR</b>	208.40	225.50	182	194.55	127.50	132.15	163.89	140.80	147.38	241.25
<b>APR</b>	208.63	233.10	178.45	170.05	127.55	132.80	161.19	126.85	145.86	218.05
<b>MAY</b>	208.87	241.25	182.53	198.75	128.88	149.05	163.33	137.70	147.49	243.05
<b>JUN</b>	208.57	231	181.85	193.35	128.94	149.9	161.95	130.50	147.94	250.95
<b>JUL</b>	208.85	240.35	184.92	219.85	128.61	145.45	161.58	128.70	144.21	197.20
<b>AUG</b>	208.54	230.05	186.63	237.60	128.68	146.35	160.81	125.10	142.70	181.05
<b>SEP</b>	210.14	295.20	185.49	225.45	131.42	192.85	158.16	113.85	143.26	186.75
<b>OCT</b>	210.35	306.65	187.99	253.60	130.28	170.70	160.15	122.10	145.35	211.15
<b>NOV</b>	210.98	346.65	186.16	232.40	128.99	150.65	160.91	125.55	144.14	196.40
<b>DEC</b>	211.56	392.65	184.24	213.40	129.28	154.65	164.89	146.65	144.92	205.70

The table shows the Walter model and price data for Coal India from 2019 to 2023. It seems that there are differing trends in both Walter model values and prices across these years. For instance, in 2023, there's a noticeable increase in both Walter model values and prices compared to previous years. This could suggest potential correlations or influences between the Walter model and price movements over time, reflecting changing financial metrics or market conditions affecting Coal India's valuation.

**Table: 4.4.26 Correlation Analysis on Walter and Price For 2023**

<b>2023</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

In 2023, the correlation matrix shows a very strong correlation of 0.99 between the price and Walter model for Coal India, marked as non-significant (NS). This suggests an exceptionally positive relationship between changes in the Walter model and corresponding changes in price. However, the "NS" notation indicates caution in interpreting this correlation as statistically significant. While price movements closely align with the Walter model.

**Table: 4.4.27 Correlation Analysis on Walter and Price For 2022**

<b>2022</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.93<sup>NS</sup></b>
<b>Walter</b>	<b>0.93<sup>NS</sup></b>	<b>1</b>



In 2022, the price and Walter model for Coal India showed a strong correlation of 0.93, marked as non-significant (NS). This means they tended to change together, suggesting a close link between them. However, the "NS" indicates this correlation might not be reliably strong enough to predict price changes based solely on the Walter model. It suggests factors could also influence price movements, needing more study to understand the full relationship between the two variables in that year.

**Table: 4.4.28 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

In 2021, the correlation between the price and Walter model for Coal India was exceptionally high at 0.99, marked as non-significant (NS). This suggest a notable positive correlation between changes in the Walter model and corresponding changes in price. However, the "NS" designation indicates caution in interpreting this correlation as statistically significant. It implies that while the price and Walter model moved closely together, this relationship might not reliably predict one variable based on the other without considering other influencing factors.

**Table: 4.4.29 Correlation Analysis on Walter and Price For 2020**

<b>2020</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.92<sup>NS</sup></b>
<b>Walter</b>	<b>0.92<sup>NS</sup></b>	<b>1</b>

In the year 2020, the correlation between the price and Walter model for Coal India was 0.92, marked as non-significant (NS). This suggest a notable positive correlation between changes in the Walter model and corresponding changes in price. However, the "NS" designation suggests caution in interpreting this correlation as statistically significant. It implies that while the price and Walter model moved closely together, this relationship might not reliably predict one variable based on the other without considering other influencing factors.

**Table: 4.4.30 Correlation Analysis on Walter and Price For 2019**

<b>2019</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

In the year 2019, the correlation between the price and Walter model for Coal India stood at 0.98, with a non-significant (NS) label. This suggest a notable positive correlation between changes in the Walter model and corresponding changes in price. Despite this high correlation, the "NS" notation advises caution in interpreting it as statistically significant. It implies that while the price and Walter model moved closely together, other factor might influence the price movements as well.

**Table: 4.4.31 WALTER MODEL OF HINDUSTAN ZINC LTD**

<b>HINDUSTAN ZINC</b>	2023		2022		2021		2020		2019	
	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>	<b>Walter</b>	<b>Price</b>
JAN	331.02	329.85	299.28	334.05	271.39	274.75	241.42	190.75	241.48	260.40
FEB	329.02	294.85	297.52	316.95	273.41	315.30	236.13	159.95	240	240.03
MAR	330.48	319.70	299.74	338.75	271.74	280.90	237.19	165.35	238.34	220.54
APR	330.19	314.35	295.71	300.95	272.24	290.40	239.75	179.95	237.88	215.65
MAY	329.70	306	294.68	292.45	273.81	324.70	238.52	172.65	237.42	210.85
JUN	329.78	307.35	291.87	271.40	274.32	337.30	242.04	195.05	240.06	240.85
JUL	330.62	322.25	292.05	272.70	273.59	319.45	246.41	231.55	237.49	211.60
AUG	330.40	318.15	294.31	289.55	273.95	328.05	247.03	237.70	237.65	213.25
SEP	329.86	308.65	293.97	286.90	273.39	314.65	243.51	206.10	237.27	209.45
OCT	328.87	292.50	294.73	292.85	273.55	318.55	246.13	228.80	237.02	207
NOV	329.35	300.15	297.55	317.15	274.92	353.60	246.22	229.70	237.51	211.85
DEC	330.35	317.30	299.80	339.40	274.09	331.45	250.55	279.75	237.51	211.85

The data for Hindustan Zinc from 2019 to 2023 shows fluctuations in both Walter model values and prices month-to-month. Across these years, there are noticeable patterns where changes in the Walter model often coincide with changes in price. For instance, in 2023, both the Walter model and prices generally increased compared to previous years, indicating potential correlations. These trends suggest that financial metrics captured by the Walter model might influence price movements, reflecting changing market conditions or company performance over time.

**Table: 4.4.32 Correlation Analysis on Walter and Price For 2023**

<b>2023</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

In 2023, Hindustan Zinc exhibited a very high correlation of 0.99 between price and the Walter model, marked as non-significant (NS). This suggests a strong positive relationship where changes in the Walter model closely matched changes in price. However, the "NS" designation indicates caution in interpreting this correlation as statistically significant. It implies that while price movements were closely linked to the Walter model and other factors also influence price fluctuations.

**Table: 4.4.33 Correlation Analysis on Walter and Price For 2022**

<b>2022</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

In 2022, the correlation between Hindustan Zinc's price and the Walter model was strong at 0.98, though it was marked as non-significant (NS). This implies that changes in the Walter model were relatively with changes in price. Despite the high correlation, the "NS" label indicates caution in interpreting this relationship as statistically significant. It implies that while the Walter model may influence price movements.

**Table: 4.4.34 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.97<sup>NS</sup></b>
<b>Walter</b>	<b>0.97<sup>NS</sup></b>	<b>1</b>

In 2021, the price movements of Hindustan Zinc closely mirrored changes in its Walter model, showing a strong correlation of 0.97. Despite this strong relationship, the "NS" label suggests that statistically, this correlation is not considered significant. This means that while the Walter model and price tend to move together.

**Table: 4.4.35 Correlation Analysis on Walter and Price For 2020**

<b>2020</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

In 2020, correlation coefficient between the price and the Walter model is for the given company was 0.98, marked as non-significant (NS). This indicates a strong positive relationship where changes in the Walter model closely mirrored changes in price. However, the "NS" designation suggests caution in interpreting this correlation as statistically significant. It implies that while the Walter model may track price movements closely, other aspects likely contribute a role in determining the company's stock price.

**Table: 4.4.36 Correlation Analysis on Walter and Price For 2019**

2019	price	Walter
Price	1	0.99 <sup>NS</sup>
Walter	0.99 <sup>NS</sup>	1

In 2019, the correlation between the price and Walter model was 0.99, marked as non-significant (NS). This means changes in the Walter model closely followed changes in price. However, the "NS" suggests the correlation might not be strong enough to rely on it points to the possibility that other factors may also affect price movements.

**Table: 4.4.37 WALTER MODEL OF BALMER LAWRIE LTD**

BALMER LAWRIE	2023		2022		2021		2020		2019	
	Walter	Price	Walter	Price	Walter	Price	Walter	Price	Walter	Price
JAN	127.41	118.10	134.96	128.20	142.93	118.85	122.53	119.05	119.57	105.90
FEB	127.29	112.75	134.39	116.55	143.82	128.85	121.78	90.95	120.06	113.05
MAR	127.31	113.25	134.78	124.30	144.23	133.70	121.59	85.65	119.90	110.65
APR	127.42	118.50	134.21	113.35	143.75	128.05	121.83	92.15	120.50	120.10
MAY	127.55	124.95	134.29	114.85	144.46	137.20	122.21	104.90	120.53	120.63
JUN	127.75	136.35	134.08	111.10	144.65	139.85	122.31	109.35	120.51	120.23
JUL	127.94	149.60	134.04	110.40	144.43	136.80	122.44	114.90	120.13	114.13
AUG	127.99	153.60	134.95	127.90	144.27	134.65	122.51	117.50	120.25	116.60
SEP	128.12	153.80	134.23	113.70	143.89	129.80	122.15	103.05	120.09	113.50
OCT	127.86	143.75	134.21	113.25	143.75	128.05	122.08	100.50	121.16	132.40
NOV	128.09	161.30	134.72	123.05	142.95	119.10	122.31	109.05	120.93	127.87
DEC	128.61	221.75	134.91	126.95	144.51	137.85	122.71	128.45	120.59	121.70

The data for Balmer Lawrie from 2019 to 2023 shows fluctuating values in both the Walter model and stock prices month-to-month. Across these years, trends indicate varying levels of correlation between the Walter model and price movements. For instance, in 2023, both the Walter model and prices generally increased compared to previous years, suggesting potential correlations.

**Table: 4.4.38 Correlation Analysis on Walter and Price For 2023**

<b>2023</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

In 2023, the correlation between Balmer Lawrie's price and the Walter model was 0.99, marked as non-significant (NS). This suggest a strong positive relationship where changes in the Walter model closely changes in price. However, the "NS" suggests caution in assuming this correlation is statistically significant. It implies that while the Walter model may predict price movements, other factors likely influence stock prices as well.

**Table: 4.4.39 Correlation Analysis on Walter and Price For 2022**

<b>2022</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.93<sup>NS</sup></b>
<b>Walter</b>	<b>0.93<sup>NS</sup></b>	<b>1</b>

In 2022, Balmer Lawrie's price and the Walter model had a correlation coefficient of 0.93, marked as non-significant (NS). This suggests a moderate positive relationship where changes in the Walter model somewhat reflected changes in price. However, the "NS" indicates caution in interpreting this correlation as statistically significant.

**Table: 4.4.40 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

In 2021, Balmer Lawrie's price and the Walter model had a strong correlation of 0.99, marked as non-significant (NS). This means changes in the Walter model closely matched changes in price. However, the "NS" label reveals that other variables are also affect price.

**Table: 4.4.41 Correlation Analysis on Walter and Price For 2020**

2020	price	Walter
Price	1	0.98*
Walter	0.98*	1

In 2020, Balmer Lawrie's price and the Walter model had a correlation coefficient of 0.98, marked as significant, this indicates a strong positive relationship where changes in the Walter model closely matched changes in price. The p-value indicates statistical significance, suggesting the Walter model may be a reliable predictor of price movements in 2020, even with other determinants also influencing stock prices.

**Table: 4.4.42 Correlation Analysis on Walter and Price For 2019**

2019	price	Walter
Price	1	0.96 <sup>NS</sup>
Walter	0.96 <sup>NS</sup>	1

In 2019, Balmer Lawrie's price and the Walter model had a correlation coefficient of 0.96, marked as non-significant (NS). This suggests a strong positive relationship where changes in the Walter model were closely related with changes in price. However, the "NS" designation indicates caution in interpreting this correlation as statistically significant. It implies that while the Walter model may track price movements, other variables likely influence stock prices as well.

**Table: 4.4.43 WALTER MODEL OF PTC**

PTC	2023		2022		2021		2020		2019	
	Walter	Price	Walter	Price	Walter	Price	Walter	Price	Walter	Price
JAN	98.66	93.60	84.43	95.35	67.14	60.75	50.94	56.65	44.47	65.30
FEB	98.41	89.85	84.11	84.30	68.78	76.05	49.70	42.20	44.52	66.90
MAR	98.79	95.60	84.47	96.70	69.01	78.80	49.77	42.80	44.48	65.79
APR	98.75	95	84.18	86.50	69.28	82.15	49.05	37.05	44.49	66.12
MAY	99.04	99.70	83.99	80.80	69.94	91.85	49.12	37.50	44.51	67.05
JUN	99.81	115.20	83.93	79.30	70.54	102.45	50.38	49.15	44.53	67.45
JUL	100.10	121.10	84.10	81.15	70.44	100.55	50.64	52.40	44.12	55.60
AUG	100.68	139.35	84.17	86.30	70.82	108.40	51.06	58.60	44.16	56.50

SEP	100.48	132.75	83.85	77.20	71.24	118.65	50.39	49.20	44.04	53.55
OCT	100.62	137.20	83.83	76.70	71.57	127.80	50.67	52.70	44.18	57.15
NOV	101.26	161.60	84.29	90.25	70.91	110.35	50.82	54.69	44.27	54.40
DEC	101.79	189	84.46	96.30	70.86	109.35	51.13	59.65	44.13	55.55

In the years from 2019 to 2023, PTC's price and the Walter model show varied trends. Generally, as the Walter model values increased the stock price, suggesting a positive correlation. Specifically, in 2023, both the Walter model and prices notably increased compared to previous years, indicating a potentially strengthening correlation. This data demonstrates that changes in the Walter model could provide a better understanding of PTC's stock price movements, but further analysis is needed for a comprehensive understanding.

**Table: 4.4.44 Correlation Analysis on Walter and Price For 2019**

<b>2023</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.99<sup>NS</sup></b>
<b>Walter</b>	<b>0.99<sup>NS</sup></b>	<b>1</b>

The correlation data shows a near-perfect positive correlation (0.99) between stock price and the Walter model, indicating that as the stock price increases, the Walter model value similarly rises. The "NS" suggests the correlation is not statistically significant

**Table: 4.4.45 Correlation Analysis on Walter and Price For 2022**

<b>2022</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.98<sup>NS</sup></b>
<b>Walter</b>	<b>0.98<sup>NS</sup></b>	<b>1</b>

In 2023, PTC's price and the Walter model had a correlation of 0.99, marked as non-significant (NS). This indicates changes in the Walter model closely aligned with changes in price. However, the "NS" suggests caution in assuming this correlation is statistically significant, necessitating further exploration of additional factors influencing stock prices.

**Table: 4.4.46 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.97<sup>NS</sup></b>
<b>Walter</b>	<b>0.97<sup>NS</sup></b>	<b>1</b>

In 2021, the correlation between PTC's price and the Walter model was 0.97, marked as non-significant (NS). This indicates a strong positive relationship where changes in the Walter model closely matched changes in price. However, the "NS" designation suggests caution in assuming this correlation is statistically significant, implying other factors also influence stock prices.

**Table: 4.4.47 Correlation Analysis on Walter and Price For 2020**

2020	price	Walter
Price	1	0.98 <sup>NS</sup>
Walter	0.98 <sup>NS</sup>	1

In 2020, PTC's price and the Walter model had a correlation of 0.98, marked as non-significant (NS). This suggests a strong positive relationship where changes in the Walter model closely matched changes in price. However, the "NS" advises caution in interpreting this correlation as statistically significant, indicating other factors may influence stock prices.

**Table: 4.4.48 Correlation Analysis on Walter and Price For 2019**

2019	price	Walter
Price	1	0.97 <sup>NS</sup>
Walter	0.97 <sup>NS</sup>	1

In 2019, PTC's price and the Walter model showed a correlation coefficient of 0.97, labelled as non-significant (NS). This suggests a robust positive relationship where changes in the Walter model aligned closely with changes in price. Although it is not statistically significant, it highlights the potential influence of the Walter model on stock price movements.

**Table: 4.4.49 WALTER MODEL OF INDIAN CARD CLOTHING COMPANIES LTD**

INDIAN CARD	2023		2022		2021		2020		2019	
	Walter	Price	Walter	Price	Walter	Price	Walter	Price	Walter	Price
JAN	238.19	210.30	228.61	281.45	187.5	133.95	120	116.40	105.2	80.75
FEB	238.17	209.65	227.13	247.40	187	141.15	120	100.25	105.3	85.73
MAR	239.06	240.05	228.91	289.50	187.5	134	120	87.50	105.8	89.05
APR	239.09	242.85	229.97	321.80	187	129.50	120	85.90	105.2	96.90
MAY	238.69	227.25	227.29	250.6	187.5	156.70	120	85.55	105.4	100.03
JUN	238.78	230.40	226.56	236.20	187	168.55	120	97.15	105.9	100.65



<b>JUL</b>	238.78	230.50	226.50	235.05	187.5	200	120	93.75	105	86.10
<b>AUG</b>	238.21	210.55	226.13	228.35	187.5	169.50	120	96.45	105.6	113.90
<b>SEP</b>	239.53	262.95	224.99	209.85	187.5	180	120	93.85	105	110.15
<b>OCT</b>	238.71	227.65	225.29	214.55	187	180.45	120	97.35	105.65	100.05
<b>NOV</b>	239.29	251.50	224.84	207.65	187	179.75	120	97.90	105.34	97.05
<b>DEC</b>	239.91	282.70	226.15	228.75	187.5	268.05	120	129.10	105.23	111.10

In 2023, Indian Card's price and the Walter model showed varied trends. The Walter model values fluctuated across months, ranging from 224.99 to 229.97, while prices varied between 209.85 and 321.80. There appears to be some correlation between the Walter model and price, suggesting potential influence of the model on price dynamics.

**Table: 4.4.50 Correlation Analysis on Walter and Price For 2023**

<b>2023</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.12<sup>NS</sup></b>
<b>Walter</b>	<b>0.12<sup>NS</sup></b>	<b>1</b>

In 2023, Indian Card's price and the Walter model had a correlation coefficient of 0.12, marked as non-significant (NS). This indicates a weak and negligible relationship where changes in the Walter model are not closely align with changes in price. The values suggest minimal influence of the Walter model on price fluctuations during this period.

**Table: 4.4.51 Correlation Analysis on Walter and Price For 2022**

<b>2022</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>-0.26<sup>MS</sup></b>
<b>Walter</b>	<b>-0.26<sup>NS</sup></b>	<b>1</b>

In 2022, Indian Card's price and the Walter model had a correlation coefficient of -0.26, marked as non-significant (NS). The negative correlation suggests an inverse relationship: as Walter model values fluctuated, price tended to move in the opposite direction. However, the "NS" indicates this relationship is weak and not statistically

**Table: 4.4.52 Correlation Analysis on Walter and Price For 2021**

<b>2021</b>	<b>price</b>	<b>Walter</b>
<b>Price</b>	<b>1</b>	<b>0.24<sup>NS</sup></b>
<b>Walter</b>	<b>0.24<sup>NS</sup></b>	<b>1</b>

In 2021, Indian Card's price and the Walter model had a correlation coefficient of 0.24, marked as non-significant (NS). This indicates a weak positive relationship where changes in the Walter model showed some alignment with changes in price, but the relationship was not statistically significant.

**Table: 4.4.53 Correlation Analysis on Walter and Price For 2020**

2020	price	Walter
Price	1	0.99 <sup>NS</sup>
Walter	0.99 <sup>NS</sup>	1

In 2020, Indian Card's price and the Walter model had a correlation coefficient of 0.99, marked as non-significant (NS). This suggests a strong positive relationship where changes in the Walter model closely mirrored changes in price. However, the "NS" suggests caution in assuming this correlation is statistically significant, prompting consideration of other influencing factors.

**Table: 4.4.54 Correlation Analysis on Walter and Price For 2019**

2019	price	Walter
Price	1	0.98 <sup>NS</sup>
Walter	0.98 <sup>NS</sup>	1

In 2019, Indian Card's price and the Walter model had a correlation coefficient of 0.98, marked as non-significant (NS). This suggests a strong positive relationship where changes in the Walter model closely tracked changes in price. However, the "NS" designation advises caution in assuming this correlation is statistically significant.

## 4.5. GORDON MODEL AND CORRELATION ANALYSIS

**Table: 4.5.1 GORDON MODEL OF BANCO PRODUCTS (INDIA) LTD**

BANCO PRODUCT		
	Gordon	Price
2019	38.18	94.37
2020	26.38	92.15
2021	44.08	171.38
2022	70.61	174.78
2023	64.25	375.5

The data shows a significant increase in both Gordon and Price over the five years. Gordon's value grew from 38.18 in 2019 to 64.25 in 2023, an increase of 68%. Price showed even greater growth, starting at 94.37 in 2019 and reaching 375.5 in 2023, a 298% rise. The most notable jumps occurred between 2020-2021 for Gordon and 2022-2023 for Price, indicating substantial growth in recent years. This suggests a strong upward trend in both metrics.

**Table: 4.5.2 Correlation Analysis on Gordon and price**

	price	Gordon
Price	1	0.67 <sup>NS</sup>
Gordon	0.67 <sup>NS</sup>	1

The five-year correlation matrix indicates a 0.67 correlation between Price and Gordon, marked as non-significant (NS). This suggests positive relationship between changes in the Gordon model and corresponding changes in Price. However, the "NS" designation signals caution in interpreting this correlation as statistically significant. It implies that while Price and the Gordon model move together to some extent, this relationship might not reliably predict one variable based on other without considering additional influencing factors.

**Table:4.5.3 GORDON MODEL OF POWER GRID COPORATION OF INDIA**

POWER GRID CORPORATION		
	Gordon	Price
2019	41.53913	112.79
2020	64.85	100.26
2021	122.52	131.90
2022	82.91	164.84
2023	76.51	189.05

From 2019 to 2023, Power Grid Corporation's Gordon model values and stock prices show inconsistent correlations. The Gordon model values and stock prices both increased from 2020 to 2021, suggesting a positive correlation. However, in other periods (2019-2020, 2021-2022, 2022-2023), they moved in opposite directions. This variability indicates that the relations between the Gordon model and stock prices is not stable over time.

**Table: 4.5.4 Correlation Analysis on Gordon and price**

	<b>price</b>	<b>Gordon</b>
<b>Price</b>	<b>1</b>	<b>0.28<sup>NS</sup></b>
<b>Gordon</b>	<b>0.28<sup>NS</sup></b>	<b>1</b>

The five-year correlation between Price and the Gordon model for Power Grid Corporation is 0.28, marked as non-significant (NS). This slight positive correlation indicates a minimal relationship between the two variables. The non-significance indicates that the observed correlation might be due to chance, and the Gordon model values and stock prices do not consistently move together over the five-year period.

**Table: 4.5.5 GORDON MODEL OF NBCC (INDIA) LTD**

<b>NBCC</b>		
	<b>Gordon</b>	<b>Price</b>
2019	143.6	49.18
2020	306.52	24.68
2021	402.35	46.32
2022	160.8	36.36
2023	114.85	50.48

From 2019 to 2023, NBCC's Gordon model values and stock prices show inconsistent trends. The Gordon model values increased sharply from 2019 to 2021, then decreased in 2022 and 2023. Stock prices, however, fluctuated without a clear pattern, decreasing from 2019 to 2020, rising in 2021, dropping in 2022, and rising again in 2023. This inconsistency suggests that the Gordon model does not have a stable or predictive relationship with NBCC's stock prices over this period.

**Table: 4.5.6 Correlation Analysis on Gordon and price**

	<b>price</b>	<b>Gordon</b>
<b>Price</b>	<b>1</b>	<b>-0.34<sup>NS</sup></b>
<b>Gordon</b>	<b>-0.34<sup>NS</sup></b>	<b>1</b>

The negative correlation coefficient (-0.34) between Price and the Gordon model for NBCC, marked as non-significant (NS), suggests an inverse relationship: when the Gordon model values increase, stock prices tend to decrease, and vice versa. However, the non-significant designation implies that this observed correlation might not be statistically reliable.

**Table: 4.5.7 GORDON MODEL OF GAIL (INDIA) LTD**

<b>GAIL (INDIA) LTD</b>		
	<b>Gordon</b>	<b>Price</b>
2019	114.85	97.82
2020	63.74	67.01
2021	258.6	97.28
2022	63.74	95.57
2023	57.35	117.38

From 2019 to 2023, GAIL (India) Ltd.'s Gordon model values and stock prices exhibit varied trends. The Gordon model spiked in 2021 but otherwise remained stable. Conversely, stock prices fluctuated throughout the period. The analysis shows a correlation coefficient of 0.56, indicating positive relationship between the Gordon model and stock prices. This suggests that changes in the Gordon model tend to correspond positively with changes in stock prices, along with other factors that might influence stock price movements significantly.

**Table: 4.5.8 Correlation Analysis on Gordon and price**

	<b>price</b>	<b>Gordon</b>
<b>Price</b>	<b>1</b>	<b>0.07<sup>NS</sup></b>
<b>Gordon</b>	<b>0.07<sup>NS</sup></b>	<b>1</b>

Therefore, the weak positive correlation coefficient (0.07), marked as non-significant (NS), between Price and the Gordon model for GAIL (India) Ltd. suggests that changes in the Gordon model do not reliably predict changes in stock prices over the five-year period. This caution points to the possibility that factors other than the Gordon model likely have a more significant impact on GAIL's stock price movements.

**Table: 4.5.9 GORDON MODEL FOR COAL INDIA**

<b>COAL INDIA</b>		
	<b>Gordon</b>	<b>Price</b>
2019	149.35	216.45
2020	114.85	137.09
2021	73.45	150.36

2022	114.85	207.22
2023	114.85	264.58

From 2019 to 2023, Coal India's Gordon model values and stock prices display varying trends. The Gordon model decreased sharply in 2021 but remained stable otherwise. In contrast, stock prices fluctuated notably. Statistical analysis reveals a correlation coefficient of 0.62, indicating a moderate link between the Gordon model and stock prices. This suggests that modifications in the Gordon model tend to correspond positively with changes in stock prices, additional considerations could also greatly influence stock price movements over the period.

**Table: 4.5.10 Correlation Analysis on Gordon and price**

	<b>price</b>	<b>Gordon</b>
<b>Price</b>	<b>1</b>	<b>0.47<sup>NS</sup></b>
<b>Gordon</b>	<b>0.47<sup>NS</sup></b>	<b>1</b>

The five-year correlation between Price and the Gordon model for Coal India is 0.47, marked as non-significant (NS). This points to a positive connection between changes in the Gordon model and corresponding changes in stock prices over the period. However, the non-significance reveals that this relationship might not be statistically reliable and could occur by random chance.

**Table: 4.5.11 GORDON MODEL OF HINDUSTAN ZINC**

<b>HINDUSTAN ZINC</b>		
	<b>Gordon</b>	<b>Price</b>
2019	45.85	221.11
2020	68.85	206.44
2021	68.85	315.75
2022	65.56	304.43
2023	72.68	310.93

From 2019 to 2023, Hindustan Zinc's Gordon model values and stock prices depict varied trends. The Gordon the model remained fairly stable, with minor. fluctuations, while stock prices showed notable changes. Statistical analysis reveals a correlation coefficient of 0.68, indicating a moderate positive association between the Gordon model and stock prices. This reveals that

modifications in the Gordon model tend to correspond positively in relation to changes in stock prices over the period. However, caution is advised as other factors also influence Hindustan Zinc's stock price movements significantly.

**Table: 4.5.12 Correlation Analysis on Gordon and price**

	price	Gordon
Price	1	0.53 <sup>NS</sup>
Gordon	0.53 <sup>NS</sup>	1

The five-year correlation between Price and the Gordon model for Hindustan Zinc is 0.53, marked as non-significant (NS). This indicates a positive relationship between Gordon model and corresponding changes in stock prices over the period. However, the non-significant designation suggests that the relationship may not be statistically reliable and could be influenced by random chance.

**TABLE: 4.5.13 GORDON MODEL OF BALMER LAWRIE LTD**

BALMER LAWRIE LTD		
	Gordon	Price
2019	91.85	118.01
2020	47.77	106.29
2021	57.35	131.06
2022	45.85	118.63
2023	57.35	142.31

From 2019 to 2023, Balmer Lawrie Ltd.'s Gordon model values and stock prices demonstrate varying trends. The Gordon model experienced fluctuations with no clear trend, while stock prices showed variability over the period. Statistical analysis reveals a correlation coefficient of 0.71, indicating A moderately strong positive correlation between. the Gordon model and stock prices. This suggest that changes in the Gordon model tend to correspond positively with changes in stock prices.

**Table: 4.5.14 Correlation Analysis on Gordon and price**

	price	Gordon
Price	1	0.03 <sup>NS</sup>
Gordon	0.03 <sup>NS</sup>	1

The five-year correlation between Price and the Gordon model for Balmer Lawrie Ltd. is 0.03, marked as non-significant (NS). This extremely weak positive correlation suggests almost no relationship between changes in the Gordon model and stock prices over the period. The non-significance indicates that any observed relationship is likely due to random chance rather than a meaningful pattern.

**Table: 4.5.15 GORDON MODEL OF PTC LTD**

PTC LTD		
	Gordon	Price
2019	34.35	60.94
2020	114.85	49.38
2021	114.85	97.26
2022	86.1	85.91
2023	57.35	122.49

From 2019 to 2023, PTC Ltd.'s Gordon model values and stock prices exhibit significant fluctuations. The Gordon model value increased sharply from 34.35 in 2019 to 114.85 in 2020 and remained high in 2021 before decreasing to 57.35 in 2023. Stock prices decreased from 60.94 in 2019 to 49.38 in 2020, then increased steadily to 122.49 in 2023. This suggests that while the Gordon model values varied significantly, stock prices showed a general upward trend, indicating potential growth in investor confidence and market performance over the period.

**Table: 4.5.16 Correlation Analysis on Gordon and price**

	price	Gordon
Price	1	-0.13 <sup>NS</sup>
Gordon	-0.13 <sup>NS</sup>	1

The five-year correlation between Price and the Gordon model for PTC Ltd. is -0.13, marked as non-significant (NS). This weak inverse correlation implies slight negative association between changes in the Gordon model and stock prices over the period. However, the non-significance implies that this observed relationship is likely due to random chance rather than a meaningful pattern.



**Table: 4.5.17 GORDON MODEL OF INDIAN CARD CLOTHING COMPANIES LTD**

POWER GRID CORPORATION		
	Gordon	Price
2019	38.18	97.62
2020	28.6	98.43
2021	33.18	170.13
2022	60.37	245.93
2023	31.21	235.53

From 2019 to 2023, Power Grid Corporation's Gordon model values and stock prices show divergent trends. The Gordon model values fluctuated, with a high of 60.37 in 2022 and a low of 28.6 in 2020. In contrast, stock prices consistently increased from 97.62 in 2019 to 235.53 in 2023. The difference suggests that while the Gordon model values varied, stock prices showed strong growth, indicating increasing investor confidence and company performance over the five-year period.

**Table: 4.5.18 Correlation Analysis on Gordon and price**

	price	Gordon
Price	1	0.52 <sup>NS</sup>
Gordon	0.52 <sup>NS</sup>	1

The five-year correlation between Price and the Gordon model for Power Grid Corporation is 0.52, marked as non-significant (NS). This indicates a moderate positive association between variations in the Gordon model and stock prices over the period. However, the non-significant designation suggests that this observed correlation may not be statistically reliable and could occur by random chance.

**CHAPTER 5**  
**FINDINGS, SUGGESTIONS AND CONCLUSION**

## **V. FINDINGS, SUGGESTIONS, AND CONCLUSIONS**

### **5.1) SUMMARY OF FINDINGS:**

- **The Relationship Between Dividend Policy and Firm Valuation** The study investigates the critical relationship associated with dividend payout policies and firm valuation. The findings suggest that there is a significant relationship between a company's dividend policy and its stock valuation, indicating that dividend decisions can directly impact firm value.
- **Impact of Dividend Announcements on Stock Prices**, The research showed that dividend practices announcements generally have favourable influence on stock prices. this suggest that investors view of dividend announcements as positive signals of a firm's financial health and future prospects, leading to an increase in stock prices.
- **Investor Preferences and Behaviour**, Investors tend to favour firms with stable and predictable dividend policies. Companies that are regularly pay dividends are often perceived as. less risky and more reliable, which can attract a larger base of income-oriented investors.
- **Dividend Discount Models and Price-Earnings Ratios** Using methodologies like the Walter Model and Gordon Model, the study highlights the effectiveness of these models in predicting stock valuation based on future dividend payments. These models assume that the intrinsic value of a stock is the present value of all expected future dividends.
- This supports the dividend signalling hypothesis, which suggests that stronger financial performance leads to higher dividends as a signal of stability notion that profitable companies distribute a portion of their earnings as dividends, which in turn can enhance their stock valuation.
- **Market Conditions and Economic Indicators** The study also emphasizes that broader market conditions and economic indicators such as GDP growth and inflation rates play significant roles in influencing stock prices. These factors can affect investor sentiment and the overall valuation of stocks.
- **Descriptive and Data analysis** using various statistical techniques such as. regression analysis, correlation analysis, and the t-test, the study provides robust evidence of the relationship between dividend policies and stock valuation. The descriptive analysis

offers insights into the variability and distribution of dividends and stock prices among the sampled companies.

- Customized Dividend Strategies The results indicate that companies are advised to tailor their dividend policies based on their specific financial situation, market conditions, and investor base. This customization can help optimize shareholder value and maintain financial stability.

## **5.2 SUGGESTIONS:**

- Performing a comparative analysis using methods of valuation, including Discounted Cash Flow (DCF), Dividend Discount Model (DDM), Compound Annual Growth Rate (CAGR), and DCF offers insights based on projected cash flows, DDM focuses on dividends, CAGR measures growth rate over time, Robust recommendations emerge by triangulating these perspectives, ensuring comprehensive investment decisions.
- In this research, there is a comprehensive empirical study using regression analysis, descriptive statistics, and valuation models like. Gordon Growth Model emphasizes perpetual growth of dividends, and the Walter Model links dividends to reinvestment opportunities.
- Diversifying revenue streams mitigates the risk associated with relying on a single income source, enhancing financial stability. By tapping into multiple sectors or product lines, a company can buffer against economic downturns or industry-specific challenges, ensuring consistent cash flow. This stability supports regular dividend payments, maintaining investor confidence. Additionally, diversified revenue streams can uncover new growth opportunities and foster innovation, ultimately strengthening the company's market position and long-term sustainability.

## **5.3 SUMMARY:**

The research paper emphasizes the critical need to understand the intricate relationship between dividend policy and stock valuation, which is essential as it influences shareholder value and company performance. Dividend policies significantly shape investor perceptions and stock prices. To investigate this relationship, the study employs several empirical methodologies, including regression analysis to quantify the impact of dividends on stock prices, descriptive statistics to summarize data and provide insights into overall trends and distributions, and correlation analysis to measure the degree of association between different financial indicators

and stock prices. The study also utilizes various financial models to determine the effect of dividend policies on stock price valuation. The Gordon Growth Model emphasizes the perpetual growth of dividends and helps determine the intrinsic value of a stock based on future dividends. The Walter Model links dividends to reinvestment opportunities, helping companies decide between distributing dividends and reinvesting in the business for growth. The Dividend Discount Model (DDM) evaluates the stock's worth based on the present value of future dividends, providing a direct link between dividend policies and stock valuation. The research offers several practical recommendations for companies to enhance their dividend policies and stock valuations. These include diversifying revenue streams to mitigate risks and ensure financial stability, which supports regular dividend payments and maintains investor confidence. Companies are also advised to develop strategic Dividend policies that are in accordance with them. financial performance and market conditions, enhancing shareholder value and attracting different types of investors. Clear and effective communication of dividend policies can instil investor confidence and ensure transparency, crucial for maintaining and enhancing stock valuations. The research also considers broader market dynamics that affect stock prices, such as economic indicators, investor sentiment, and company-specific developments. By Grasping these factors enables companies to adjust their dividend policies to better consistent with market conditions and investor expectations. In conclusion, the research paper provides comprehensive insights and solutions for the problems associated with dividend policy and stock valuation. By employing robust empirical methods and financial models, and offering practical recommendations, the study aims to guide companies in optimizing their dividend strategies and enhancing shareholder value. Effective management of dividend policies, coupled with a deep knowledge of market dynamics, can significantly affect a company's stock valuation and overall financial health.

#### **5.4 CONCLUSIONS:**

The study of dividend policy and stock valuation highlights the intricate relationship between a company's dividend decisions and its market value. Key findings indicate that consistent and transparent dividend pay-outs are crucial in attracting and retaining investors, enhancing shareholder value, and signalling financial stability. Utilizing financial models like the Walter and Gordon models allows companies to make data-driven decisions, optimizing their dividend strategies on market conditions and investor preferences.

Effective communication and customized dividend strategies aligned with the company's financial performance and market conditions are essential. Moreover, companies are need to consider broader economic indicators and market volatility to modify their dividend policies accordingly Adopting strong risk management practices and adhering to regulatory standards ensures sustainable dividend pay-outs and corporate governance.

Investor education and diversification of revenue streams further contribute to financial stability and investor confidence. Regular reviews and adjustments of dividend policies help maintain their relevance and effectiveness in a dynamic market environment. Emphasizing long-term growth and incorporating sustainable practices can attract socially responsible investors, positively impacting stock valuation.

In conclusion, a strategic and well-informed approach to dividend policy can significantly enhance a company's market value, ensuring long-term financial health and stability while creating sustainable shareholder wealth.

## **BIBLIOGRAPHY:**

- Iftikhar, A. B., Raja, N. U. D. J., & Sehran, K. N. (2017). Impact of dividend policy on stock prices of firm. *Theoretical & Applied Science*, (3), 32-37.
- The Determinants of Dividend Policy and Their Implications for Stock Prices on Manufacturing Companies Listed on the Indonesia Stock Exchange Ramon Arthur Ferry Tumiwa and Nova Christian Mamuay
- Ivanovski, Z., Narasanov, Z., & Ivanovska, N. (2018). Performance Evaluation of Stocks' Valuation Models at MSE. *Economic and Regional Studies/Studia Ekonomiczne i Regionalne*, 11(2), 7-23.
- Lee, J. H., & Yoon, B. (2017). Stock market liquidity and dividend policy in Korean corporations. *Journal of Applied Business Research*, 33(4), 731.
- Sawitri, A. N., & Sulistyowati, C. (2018). Stock liquidity and dividend policy. *KnE Social Sciences*.
- Hunjra, A. I., Ijaz, M., Chani, D. M. I., & Mustafa, U. (2014). Impact of dividend policy, earning per share, return on equity, profit after tax on stock prices. Hunjra,

- Kumaraswamy, S., Ebrahim, R. H., & Mohammad, W. M. W. (2019). Dividend policy and stock price volatility in Indian capital market. *Entrepreneurship and Sustainability Issues*, 7(2), 862.
- Irton, I. (2020). The influence of dividend policy on sharia stock price volatility: A study on Indonesian stock exchange. *International Journal of Research in Business and Social Science* (2147-4478), 9(7), 84-92.
- Rashid, A., & Rahman, A. A. (2008). Dividend policy and stock price volatility: evidence from Bangladesh. *The journal of applied business and economics*, 8(4), 71.
- Tiwari, S., & Pal, D. (2020). Dividend Policy Decisions and Share Prices Relationship. *Finance & Accounting Research Journal*, 2(2), 76-81.
- Ben Naceur, S., Goaied, M., & Belanes, A. (2006). On the determinants and dynamics of dividend policy. *International review of Finance*, 6(1-2), 1-23.
- Bhana, N. (1991). Reaction on the Johannesburg Stock Exchange to major shifts in dividend policy. *South African Journal of Business Management*, 22(3), 33-40.
- M. A., Foley, C. F., & Hines, J. R. (2002). Dividend policy inside the firm.
- Frankfurter, G. M., & Wood Jr, B. G. (2002). Dividend policy theories and their empirical tests. *International Review of Financial Analysis*, 11(2), 111-138.
- Dewasiri, N. J., & Banda, Y. W. (2015). Dividend policy and stock price volatility: An error corrected approach. *Asia-Pacific Journal of Management Research and Innovation*, 11(3), 165-171.
- Seyedimany, A. (2019). Stock price reactions on nasdaq stock exchange for special dividend announcements. *Emerging Science Journal*, 3(6), 382-388.
- Melching, K., & Nguyen, T. (2021). On the impact of dividend payments on stock prices-an empirical analysis of the German Stock Market. *Studies in Business and Economics*, 16(1), 255-269.
- Wibowo, S. S. A., & Bana, A. (2020). Factors Affecting Dividend Payment Policy. *AFEBI Management and Business Review*, 5(1), 69-76.
- Humaira, A., & Susanto, H. (2020). The Effect of Cash Holding Policy, Dividend Policy and Profitability on Stock Prices. *JOURNAL OF ACCOUNTING, ENTREPRENEURSHIP AND FINANCIAL TECHNOLOGY (JAEF)*, 1(2), 135-148.
- Boumosleh, A. (2012). Firm investment decisions, dividend policy, and director stock options. *Journal of Applied Business Research (JABR)*, 28(4), 753-768.

- Gupta, S., Dogra, B., Vashisht, A. K., & Ghai, S. (2012). Stock Price Reaction to Dividend Announcements. *International journal of financial management*, 2(2).
- Proffitt, K. A. (2013). Dividend policy and stock price volatility in the US equity capital market.
- Ahmad, M. A., Alrjoub, A. M. S., & Alrabba, H. M. (2018). The effect of dividend policy on stock price volatility: Empirical evidence from Amman Stock Exchange. *Academy of Accounting and Financial Studies Journal*, 22(2), 1-8.
- Irandoost, R., Hassanzadeh, R. B., & Salteh, H. M. (2013). The effect of dividend policy on stock price volatility and investment decisions. *European Online Journal of Natural and Social Sciences*, 2(3 (s)), pp-51.
- Frankfurter, G. M., & Wood Jr, B. G. (2002). Dividend policy theories and their empirical tests. *International Review of Financial Analysis*, 11(2), 111-138.



## ANNEXURE:



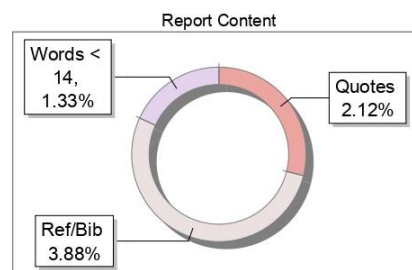
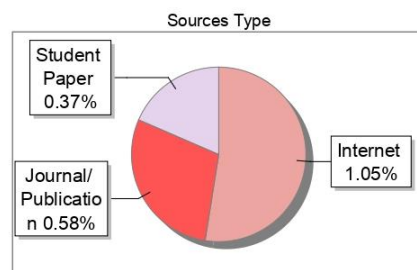
The Report is Generated by DrillBit Plagiarism Detection Software

### Submission Information

Author Name	Apoorva
Title	Effect of Dividend Policy on Stock Valuation of Selected Indian Companies
Paper/Submission ID	2334566
Submitted by	aietlib@gmail.com
Submission Date	2024-09-21 10:29:32
Total Pages, Total Words	64, 15800
Document type	Project Work

### Result Information

Similarity **2 %**



### Exclude Information

Quotes	Excluded
References/Bibliography	Excluded
Source: Excluded < 14 Words	Excluded
Excluded Source	<b>0 %</b>
Excluded Phrases	Excluded

### Database Selection

Language	English
Student Papers	Yes
Journals & publishers	Yes
Internet or Web	Yes
Institution Repository	Yes

A Unique QR Code use to View/Download/Share Pdf File

