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Impact of Dividend Policy on Stock Prices for Nifty 100 Index in NSE India

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Abstract

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Abstract

The aim of this thesis is to investigate how dividend policy affects share price volatility on the National Stock Exchange (NSE) for NIFTY 100 index companies. A selection of 100 NSE listed companies in India are investigated across a five-year period, from 2018 to 2022, utilizing panel data analysis. The analysis is extended to include different sectors constituting the NIFTY 100 index.

After accounting for business size and financial leverage as control variables, the study's explanatory variables—dividend pay-out, dividend yield, and dividend per shar were used to analyze the firms' dividend policies. EViews software was used for analyzing the panel data along with correlation and scatter plot tests. A multivariable regression model was used as the statistical model, and the requisite tests were used to test the composite data (panel). Before analyzing the data, Unit root test, Chaw test and Hausman test for stationary tests of the variables, select panel data in pooling data and the fixed effects model was chosen.

The findings were in line with the dividend irrelevance theory, i.e., at an Index level no association was observed between the dividend policies and the stock price volatility. At the sector level the dividend irrelevance stood true for the Automobile, healthcare, and the NIFTY 100 index with financial companies.

However, for FMCG, Financial services and Information technology sectors there were few negative significant relationships between the dividend policies and stock price volatility. The relationship between dividend policy measures and share price volatility has been illuminated by this idea. Anyone who wants to learn more about the subject will find the findings from this research very useful. People will be able to better appreciate the relevance of different dividend policies and their impact, as there is no correlation between dividend policy measures and stock price volatility.

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List of Symbols

EPS	: Earnings Per Share
DPR	: Dividend Payout Ratio
NP	: Net Profit
DY	: Dividend Yield
SPV	: Stock Price Volatility
DPS	: Dividend Per Share
LEV	: Leverage
FS	: Firm Size

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1 Introduction

The main goal of profitable companies, i.e., maximizing shareholder wealth does not depend on a single decision. To achieve this, four categories of key financial decisions are used, including investment, financing, dividends, and funding decisions. Working capital management decision, the decision to pay dividends is the main topic of this study because it is considered a key indicator of the volatility of a company's stock price. Shareholder wealth is closely related to the market value of the company, which is determined by the share price. Stock price volatility reflects the ability of a stock price to fluctuate either up or down.

1.1 Background

The influence of the capital market on the country's economy is steadily increasing. By highlighting potential returns on investment, it encourages saving and investing for the future (Baker & Kapoor, 2015). It is one of the pillars on which the growth of the nation rests. To use the money or resource as productively as possible, it serves as a link between the user and the investment (Baker et al., 2018).

The capital market can reward investors in two ways: through annual returns or dividends, or through an increase in share price or capital appreciation. Capital appreciation is the increase in the value of an asset that corresponds to an increase in its market price, while dividends are the returns that shareholders receive in proportion to their ownership of the company (Dawar, 2021; Sekhar Mishra & Narender, 1996). It is the method by which investors receive a share of the company's profits. Consequently, the dividend policy of the company influences the decisions of investors in terms of return on investment (A Friedman Doctrine-- The Social Responsibility Of Business Is to Increase Its Profits - The New York Times, n.d.).

The three decisions - investment, financing, and dividend decisions are crucial for all companies, irrespective of the size, age, nature, or duration of the business. The financial stability and operational efficiency of companies are determined by these decisions (Dividend policy - term paper, n.d.).

Investment decisions involve the purchase of current and capital assets. While investment in capital assets relates to the selection of the most lucrative investment opportunities, current

assets are used for the smooth operation of the firm (Umamaheshwari et al., 2022). The amount that needs to be raised depends on the many sources of finance that are available, and the costs, risks and liabilities associated with each source factor into the financing decision. A company can raise money from a variety of internal or external sources of finance, including retained earnings or company reserves, equity finance and debt finance, depending on the risk the company wishes to take and relevant factors (Nath Acharya & Prasanna Mahapatra, n.d.).

The decision whether to distribute profits as dividends or to keep them in the company to use for future development, expansion or other financial needs is called the dividend decision. Dividend payments are used to reward shareholders for their financial commitment to the company. Retention allows investment in more lucrative opportunities for the company or other similar needs (Ebun Araoye et al., 2019). To satisfy and reward investors, an appropriate balance must be struck between paying dividends and retaining earnings to support successful investment ideas.

The dividend policy determines how much profit is distributed and how much is reinvested in the company. For example, the income from retained earnings and dividends. It involves decisions about the structure and timing of dividend payments (Ngunjiri, 2010). Investment and financial decisions are also influenced by this decision. The goal of financial management is to maximize investors' wealth (shareholder value), which depends on how these three decisions are combined. An important question that arises in this context is: "How does dividend policy affect the share price of a company and an industry? "

1.2 Research Aim, Questions and Significance

This research is significant because it is crucial for corporate decision-makers to comprehend the impacts that various dividend policies have on a company's share price, specifically the volatility of the share price. Companies may be able to moderate share price swings, at least in part, by understanding the impacts (Radwan Almanaseer, 2019). They could potentially change how stable their share price is by understanding how the various dividend policy initiatives they implement over time affect it (Anwar et al., 2015).

Additionally, this research offers private persons and investors valuable information regarding the performance of various shares and the actual meaning or importance of various dividend

plans. The objective of this study is to evaluate any correlations between these two dividend-related variables and stock price volatility and their regression analyses.

This study aims to shed light on the connection between stock prices and company dividend payments both at stock and sector level. Historically, stock markets have increased in value over the years, despite possible daily swings. Increased investment in businesses is good for economic development and may increase investors' income through dividends or capital gains. The issue of whether the dividend decision affects stock prices at all emerges. The goal of this study is to clarify the connection between shareholder wealth and dividend payments made by companies included in the Nifty 100 index.

When comparing different companies for investing, dividend policy and share price volatility are both important criteria for both individual and institutional investors. The firm and the investors are both curious to discover how the firm's share price volatility is impacted by its dividend policy measures.

The major goal of this thesis is to give a thorough analysis of any relationships between the variables, if any, and how they might be related. In this study, the relationship between the key dividend policy metrics of dividend payout ratio, dividend per share and dividend yield is calculated. Companies included on the Nifty 100 index have been chosen as part of the sample because it they donate the top 100 listed companies in India (NIFTY 100 Index, Nifty NEXT 100 Stock Price - NSE India, n.d.). This index represents the National Stock Exchange of India Ltd.'s flagship index. It monitors the performance of the biggest and most liquid Indian equities, the blue-chip portfolio of corporations. It is a realistic representation of the Indian stock market and covers about 65% of its float-adjusted market value. Due to their extensive representation and market reach, the Nifty 100 firms have been chosen as the sample. The Nifty100 consists of businesses from 17 different economic sectors. It is a realistic depiction of the Indian stock market and covers around 75% of its float-adjusted market value. Secondary data has been utilized to do event investigation and regression analysis on the link between stock prices and dividends (NIFTY 100 Index, Nifty NEXT 100 Stock Price - NSE India, n.d.).

Therefore, the primary research question is: In regard to publicly traded companies and sector level on the National Stock Exchange (NSE), what is the association between dividend policy measures (DPR, DY & DPS) and share price volatility?

1.3 Research Gap and Contribution

Most of the prior empirical studies focus on the factors that influence dividend decisions and their effects on stock prices. With the many explanations and findings, it is clear why the phrase "dividend conundrum" was created (Charith & Davydenko, 2021). As a result of the various methodologies utilized, the outcomes also vary. In recent years, emerging economies have increasingly realized the value of stock market investing. This tendency is also being seen in India. Along with its expanding importance, financial literacy is being given a lot of attention (Bond, 1991).

Previous Empirical studies done on the same topic from 2009 to 2017 have shown different evidence on shareholders and dividend policies. Researchers have a lot of room to investigate this problem in various nations because its outcomes varied across different countries. Potential investors give weight to shareholders' wealth and company success; thus, it is crucial to research how the dividend policy affects these two factors (Pani, n.d.). Investors are learning to put their money on the market instead of using more conventional means of saving. Dividends continue to be crucial for investors who desire consistent income (Singh & Tandon, 2019). The Nifty 100 index was chosen as a sample because it is representative of 17 distinct economic sectors. The link between dividend policy and market prices for each industry has also been studied in more detail.

1.4 Structure of the study

The theoretical and empirical components make up the two primary sections of the research's framework. In the theoretical part, the reader is introduced to the dividend policy and the various ideas surrounding it. The reader also learns about the volatility of share prices and how different dividend policies affect corporate risk. Since it is a vital component of dividend policy

The author evaluates and summarizes the study's findings in the empirical section of the thesis, placing special emphasis on the most crucial and pertinent data discovered throughout the investigation. The commentary gives the reader a detailed look at the justifications for the estimated correlations and regression analysis. The author then offers a conclusion -and makes some recommendations for possible further research on the subject.

2 Literature review and theoretical framework

It consists of a theoretical framework that describes the ideas underlying this study and an empirical review that identifies previous related studies by different researchers in different countries.

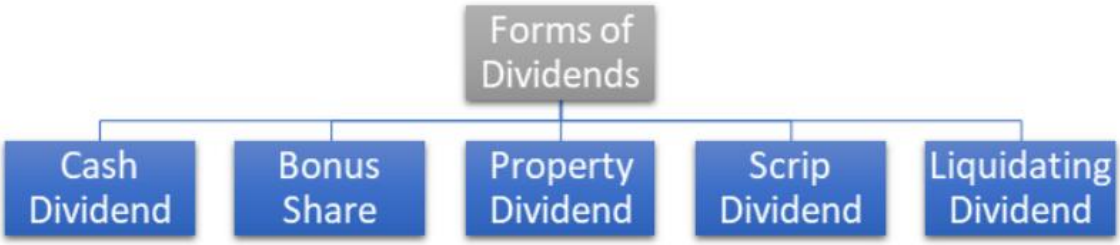
2.1 Dividend: Meaning and Types

The Latin term "Dividendum" meaning "something to be divided" is the origin of the English word "Dividend" According to the Institute of Chartered Accountants of India, a dividend is "a payment to shareholders out of profits or reserves available for that purpose" (Nathani & Gangil, 2018). The distribution of profits (past or present) in kind in proportion to the ownership among the shareholders of the company is called dividend (Frankfurter & Wood, 2002).

The board of directors decides at the annual general meeting how much the dividend should be, keeping in mind the company's financial obligations (Pahi & Yadav, 2019). and the level of acceptable return to shareholders.

Types of Dividends

Depending on how the dividend is paid, the following categories can be distinguished as shown in Figure 1.



(Figure 1) Different types of ways a company can distribute dividends. (Forms of Dividend Payments Definition & Meaning in Stock Market with Example, n.d.)

1. Cash Dividend

Section 205(3) of the Companies Act states that dividends may only be paid in cash. A company must ensure that it has sufficient cash without jeopardizing the company's cash position (Factors Influencing Dividend Policy Decisions of Corporate India, 2004). It is safer to stick to a consistent dividend policy as an unpredictable dividend policy makes it difficult to predict cash dividends.

When a cash dividend is paid, reserves and cash balances decrease by the same amount, which often lowers the market price of shares by the same amount (Baker & Kapoor, 2015). Consequently, when a cash dividend is paid, both the net value of the company and its total assets decrease (Dividend Policy, Growth, and the Valuation of Shares on JSTOR, n.d.).

2. Bonus Shares / Stock Dividend

A company may decide to pay stock dividends to its shareholders if it wants to reward its shareholders while keeping cash available for other business needs (Dawar, 2021). A stock dividend is when a company distributes its ordinary shares to its ordinary shareholders without paying cash. In India, stock dividend is often referred to as the issue of bonus shares.

These are issued by capitalizing company reserves or surplus, which does not affect the total market value of the company's shares (Dividend Policy - Term Paper, n.d.). A stock dividend results in a shareholder owning 5 more, thinner pieces of the company pie, with total ownership remaining the same (Abbas, 2015).

The company's reserves and surplus retained earnings are reduced by the declaration of bonus shares, while paid-up share capital increases. The issue of bonus shares does not affect the total value of the company (Muhammad & Andayani, 2018).

The following are the benefits of bonus shares for shareholders

- Tax benefit: Bonus shares are treated favorably for shareholders for tax reasons. Although dividends received by shareholders in India are tax-free up to a certain amount

- Signal of higher future profits: shareholders often interpret this as an indication of rising profits.

- Psychological value: Issuing bonus shares provides an opportunity to sell them at a higher price and make financial gains while preserving capital. They also believe that the company is on its way to prosperity (Ben Said, 2012).

3. Stock dividends.

Consequently, dividends must be paid to shareholders in the form of promissory notes, issued as "script", promising payment at a specified future date (Singh & Tandon, 2019).

4. Liquidating dividends

The term "liquidation dividend" refers to the pro rata distribution of cash or other assets to investors on account of the liquidation of a company.

5. Product dividend

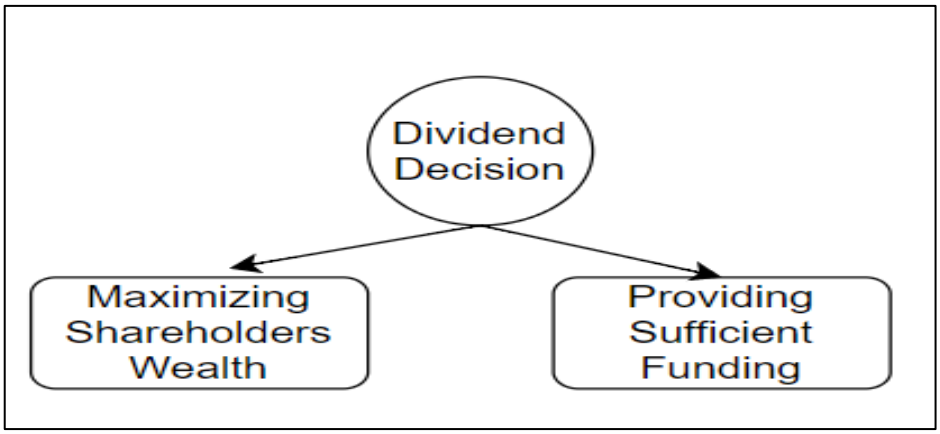
When such a dividend is paid, the company uses assets other than cash and shares to pay the dividend. Because the fair value of the assets is expected to differ slightly from their carrying amount, the entity recognizes the difference as a gain or loss. (Rigar & Mansouri, n.d.).

6. Bond Dividend

During an extended period, dividends are paid in the form of debentures, bonds or notes. Since the bonds have a claim on assets, the shareholders become secure creditors. It is always fascinating. In India, this technique is not allowed by law (Kadioglu & Ocal, 2016).

2.1.1 The Dividend Decision

The board of directors decides whether to pay dividends. They have to decide whether to pay the dividends or invest the money in brand new projects (Malombe, 2011). The decision between paying cash dividends and retaining profits is called the dividend decision. There are two things that need to be done (Malombe, 2011; Ogunleye & Jacob, n.d.). Figure 2 below shows the two major consequences of taking dividend decision.



(Figure 2) Main Objectives of Dividend Decision (Dawar, 2021)

You can create a reasonable frame by considering the following two things:

1) Cash left over after all material payments for debt, capital costs and working capital have been made (Kennedy Kioko & Of Nairobi, n.d.). Shareholders may receive a dividend from the remaining amount.

2) The company has sound investment propositions, such as Return on Equity > Required Return.

If all mandatory payments have been made and the cost of equity exceeds the return on equity, the company should increase dividends while reducing investment (Kadioglu & Ocal, 2016b). This is because there are no worthwhile ventures and there is enough cash to pay dividends.

When there is little cash available and the cost of equity is lower than the return on investment, the company should invest in the best available deals and reduce the amount of dividend (Singh & Tandon, 2019d).

Rational for dividend

Both academics and business managers have long wrestled with the question, "Why do companies pay dividends?" and "Why do investors pay attention to dividends?" Below are some of the reasons companies make payments:

Dividends are paid to shareholders who have invested in the company by buying shares. This money is used for ongoing operations, expansion, and growth (SuSun et al., 1978). By paying

dividends, companies can reward their shareholders and entice others to buy expensive current ordinary shares. Dividends contain information about profits that is communicated to investors. No dividends can be paid without an adequate cash balance, and this balance cannot be changed simply by taking certain actions (Dividend Policy, Growth, and the Valuation of Shares on JSTOR, n.d.). Therefore, the dividend policy is the most important message communicated to market participants about the real prospects of the company.

Investors can be confident that the company's reported earnings are legitimate through continuous dividend payments. Investors' confidence in the company is thus strengthened. They have confidence in the financial stability of the company. (Baker & Weigand, 2015)

Companies that pay dividends to their shareholders thus show their confidence in their potential to generate increasing profits, as they can afford to do so, since a reduction or cut in payments in the future would have a negative impact on their share price and reputation (Jensen, 2005). Lenders also keep an eye on dividend payments, as a higher payout could lead to lower cash balances and a higher probability of default on loan payments.

Investors who need a regular income are attracted to companies that pay regular dividends. Companies that do not pay dividends can only offer returns in the form of capital growth (Jensen & Meckling, 1976) . Then the only goal is to look for rising share prices where 100% of your return is at stake. Therefore, dividend-paying companies are selected (Krylov, n.d.).

When investors show interest in paying premiums for dividend paying stocks, managers also create the opportunity to pay dividends; conversely, when managers do not pay dividends, investors are reluctant to pay premiums for non-dividend paying companies (Iminza, 1997). Therefore, dividends serve as indicators of a company's overall performance, management effectiveness, financial stability, and solvency.

2.1.2 Importance Of Dividends

The significance of dividends is due to three factors. These are:

The clientele effect:

This says something about the different dividend preferences of individuals, institutions, and corporate investors. According to the dividend clientele effect, dividend policy attracts a

particular group of shareholders based on the nature of their investments (Pahi & Yadav, 2019). In their words, each company attracts a "clientele" that finds its dividend policy enticing.

The reasons for the existence of the clientele effect include:

Tax considerations: Investors in high tax brackets often prefer smaller dividend payouts, while investors in low tax brackets might prefer high dividend payouts (Jensen & Meckling, 1976).

Institutional investor requirements: Some institutional investors, for ethical or strategic reasons, only invest in companies that pay dividends or have dividend yields above their target. For example, dividend-oriented mutual funds (Baker & Weigand, 2015). Investor's personal preference: Some investors choose to own shares to invest the money while spending the dividends.

The existence of a client base has significant implications for management. Managers do not have to worry about meeting the various desires of shareholders (Baker & Weigand, 2015; Jensen, 2005). Depending on the investor's financial requirements and tax situation, the distribution system the company chooses will attract an investor.

The need to reduce agency costs.

The inefficiencies created by the conflicting interests of managers and investors are reflected in agency costs (Jensen, 2005). Managers tend to overinvest, which can lead to investment in low NPV projects and lower shareholder wealth.

However, by limiting the amount of money available to managers, shareholders can avoid paying these agency costs. This problem can be solved by increasing the dividend payout from free cash flow (Jensen, 2005; Jensen & Meckling, 1976).

Information signaling

Information asymmetry is the discrepancy between the information available to a company's board and management (insiders) and the information available to investors (outsiders). Since dividends involve the distribution of actual cash and are expected to be "sticky”, they provide investors with more accurate information than mere assertions (Iminza, 1997). Companies increase their dividends only when they are sure that the trend will continue.

2.1.3 Factors Affecting Dividend Payment

Liquidity - Dividend payout is determined by the liquidity position of the company. Profits may be plentiful but there may not be enough cash to pay dividends. Or a growing company may not be able to pay dividends because of its limited cash flow, even though it has development ambitions, strong investment prospects and other financial commitments (Praise for the sixth edition of security analysis, n.d.).

Legal Restrictions - Several provisions of the Companies Act, 1956 must be followed while distributing dividends. For example, only current earnings or past profits after depreciation may be used for declaring or distributing dividends.

Contractual restrictions - Additionally, contractual obligations must be met. For example, dividends on preference shares are paid before regular dividends (Tahir et al., 2015).

Capital structure - Dividends can only be paid if the company's debt-to-equity ratio is favorable.

Internal rate of return - A larger portion of profits should be retained if the cost of retained earnings is greater than the internal rate of return.

Industry trend - Dividends are paid more frequently in certain companies than in others. In this situation, companies need to maintain the status quo and pay dividends to survive.

Restrictions in loan agreements - Lenders will occasionally include a covenant to maintain payments during periods of poor profitability or liquidity (Asquith et al., 1983). For example, a loan agreement may prohibit the payment of dividends if the company's leverage ratio is higher than, say, 1.5.

Profit stability - Companies that have a stable profit pattern over time are better able to pay higher dividends than companies with fluctuating profits.

Access to the capital market - If a company has been profitable in the past, it can easily raise money in the capital market, which gives it greater freedom to pay dividends (Kadioglu & Oecal, 2016).

Control - If a company pays high dividends, it may need money, which it could raise by issuing additional shares in the market (Krylov, n.d.). If the current owners do not buy additional shares,

their ability to exercise control will be reduced. In this situation, the company might seek to retain a larger share of profits to support investment prospects (Kandpal et al., 2015).

2.2 Dividend Policy

Meaning

"Dividend policy is the practice used by management in making dividend distribution decisions, or in other words, the size and pattern of cash distributions to shareholders over time" (Asquith et al., 1983). Dividend policy refers to the explicit or implicit decision by the board of directors about the amount of residual profits (past or present) to be distributed to the company's shareholders (Gibson & Veith, n.d.). In other words, dividend policy is a set of rules that a company applies to determine how much of its profits will be distributed as dividends to shareholders.

The action plan is followed when decisions are made about dividends. It determines how much should be distributed as dividends and how much should be returned to the company (Taufiq Bin Harun, n.d.). It is important to change the dividend policy to ensure the highest level of financial adaptability and to avoid financial constraints and the costs associated with raising debt capital; unlike a low dividend distribution, an excessive dividend distribution would result in less money available for reinvestment in the company for expansion and other positive projects (Al Masum, 2012).

While dividends reduce the company's cash balance, retained earnings are critical to the company's long-term expansion. Therefore, the distribution of dividends and retained earnings must be balanced (Munyua, n.d.). Shareholders are the owners, and the board of directors is the management of a company. The decision to retain profits for potential future growth is made by the board (Dharmarathne & Dharmarthna, 2020). Investors want a quick return on their investment, but the board must make several additional considerations before deciding whether to pay a dividend (Baker et al., 2018).

The best dividend policy should be decided to optimize the share price and shareholder wealth. However, it is still unclear whether they actually have an impact on the share price. Therefore, the company's choice of dividend is clearly important (Munyua, n.d.).

Significance Of Dividend Policy

Before choosing a dividend policy, a company must consider the following:

1. The choice of long-term financing

Money can be raised both internally and externally, through retained earnings. Equity is preferred over retained earnings because retained earnings have no fluctuation costs (Mallikarjunappa & Manjunatha, n.d.).

However, the firm must decide whether to retain earnings or distribute them as dividends. Dividend distributions reduce the amount of money available to fund successful ventures.

Thus, the following two factors drove this decision (Factors Influencing Dividend Policy Decisions of Corporate India, 2004):-

(a) If profits are retained, is there a lucrative opportunity for the company to invest?

b) Does the return on the investment exceed the expectations of the shareholders or is it ROI (Return on Investment) > Ke (cost of equity).

2. Wealth maximization decision

The subject of this decision is the amount of dividend to be paid. What would the dividend payout be relative to the market price of the stock?

(a) Due to the unpredictability of future cash flows and market weaknesses, shareholders prefer current dividends to capital gains (Kapoor, 2006). Increased dividends can lead to an increase in the market price of stock. A healthy balance must be maintained between these two factors.

(b) If more profits are reinvested, dividend payments will decrease, which will affect the market price. Earnings per share will increase in the future if retained earnings are used to finance investments, and vice versa (Profiet, 2013). To maximize shareholder value, the ideal balance

between dividend payments and retained earnings should be maintained. Profitable investment opportunities and the value of dividends relative to capital gains would influence this.

2.3 Theories Of Dividend Policy

Several important questions remain unanswered: Is dividend policy relevant? How does the dividend policy affect the share price? There is a model that can compare different dividend policies considering stock price volatility (ArdArdekani & Younesi, 2012). One of the most controversial issues is the dividend. Several studies have been conducted on this topic. Some dividend theories are presented below (Baker & Kapoor, 2015) :

Dividend Irrelevance Theory (Miller & Modigliani, 1961)

This theory was introduced by Franco Modigliani and Merton H. Miller. They claim that a company's dividend policy has no effect on the value of the company or the cost of capital (Azhagaiah, 2014). They claim that the allocation of profits between dividends and retained earnings is unimportant.

The earnings potential and the asset risk influence the value of a company.

To reach this conclusion, they made the following assumptions (Pahi & Yadav, 2019):

- Investors do not distinguish between dividends and capital gains.
- There are no fees for the initial public offering of shares.
- There is no difference in the information available to investors and management about future opportunities, and the investment policy is independent of the dividend policy.

Considering these assumptions, according to MM, the risk class and fundamental earning power define the value of a company (Farrukh et al., 2017) .Therefore, investors do not care whether a company pays dividends or not, as it does not affect the value of the company (Sekhar Mishra & Narender, 1996).

The Tax Differential Theory: B. Graham and D.L. Dodd (Graham & Dodd, 2009)

According to this theory, paying low dividends would increase the value of the company because investors worldwide pay lower tax rates on capital gains than on dividends. The situation is different in India, where investors prefer dividends to capital gains (Divident Policy - Term Paper, n.d.).

Residual theories of dividend

In this approach, dividends, as the name implies, are viewed as a residual, that is, the money left over after all profitable investment alternatives have been exhausted (Lindeman, n.d.).

This first covers all the company's equity needs, and then if there is any money left over, the remainder is paid out as dividends (Nathani & Gangil, 2018).

- The decision to pay a dividend involves three processes.
- Determine the ideal level of capital expenditure.
- Calculate the total amount of equity financing required to fund the expenditure.
- Reinvest profits to meet equity requirements. If more is available than required for equity, distribute the surplus or balance to shareholders as dividends.

Percent Payout Theory (Rubner, 1966)

According to Rubner, a 100% payout policy can be adopted to increase management job security and persuade investors to invest in their company (K & B. Akash, 2019). Dividends are preferred by shareholders and management needs more funds. By paying dividends on every penny of revenue, this gap can be closed. However, this policy is not followed and is not realistic (Iqbal et al., 2014).

Per Cent Retention Theory Clarkson and Eliot (Jensen, 2000)

It asserts that neither companies nor shareholders have the luxury of paying dividends because paying dividends involves additional costs such as transaction fees and taxes (Iminza, 1997).

As a result, companies may adopt the policy of full profit retention (Singh & Tandon, 2019c). This would also be beneficial as the money would be invested in other productive ventures, which would increase shareholder wealth (Lashgari & Ahmadi, 2014).

Agency Cost Theory (Coffee, 1988)

Many other studies have confirmed the relationship between agency costs and financial operations of the firm, which was first proposed by Jenson and Meckling (Jensen, 2005). Dividend payments are assumed to reduce agency costs (Kengatharan & Ford, 2021). The fact that these companies are listed on the stock market also makes management oversight more affordable. The free cash could be used to fund low NPV initiatives that would be better distributed as dividends (Nathani & Gangil, 2018).

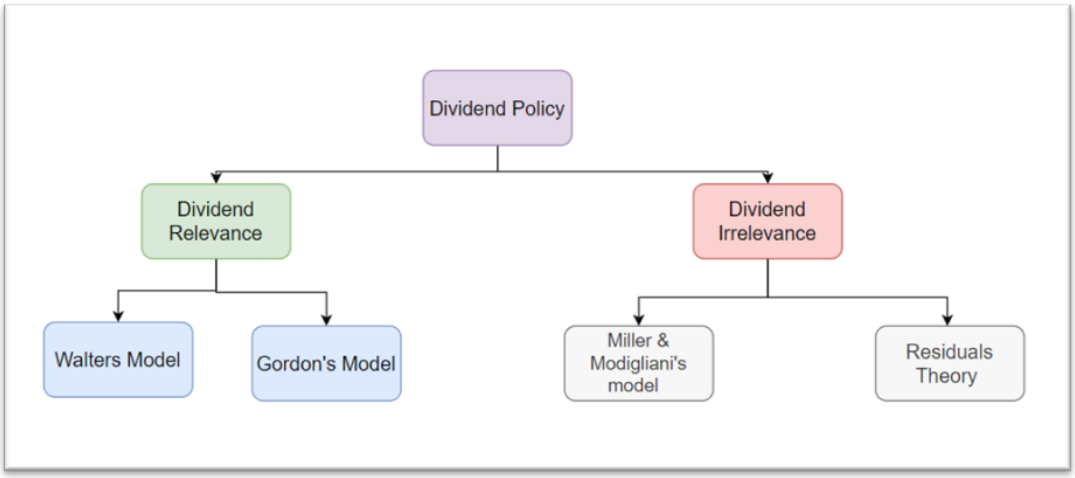
Bird in the hand theory: Gordon and Lintner

First, Kirshman presented the bird-in-the-hand argument, which states that "if two companies have similar earnings numbers and prospects, but one pays a higher dividend than the other, the former is certain to fetch a higher price simply because investors prefer the present to future values. Short-sightedness has some effect on price determination (Pahi & Yadav, 2019). Investors often assume that " the "bird in the hand is worth more than the dove on the rooftop," and thus will pay more for the company with the higher dividend while ignoring the company with the lower dividend (Abbas, 2015).

This hypothesis states that investors prefer assured dividend payments today over uncertain capital gains in the future. According to this hypothesis, a high dividend payout (Factors Influencing Dividend Policy Decisions of Corporate India, 2004). will increase the value of the company because dividends are less risky for investors than capital gains (Muhammad Asiri & Andayani, 2018).

2.4 Dividend Policy and Share Prices

One of the three most important decisions in financial management is the dividend decision. The goal of the company should be to maximize shareholder wealth (Krunal et al., n.d.). The different types of dividend policies are summarized in Figure 3 below



(Figure 3)-- Main Dividend Policy Theories (Profilet, 2013)

If paying dividends maximizes shareholder wealth, it should be preferred; otherwise, profits should be reinvested in the company (Baker et al., 2018). What is the relationship between dividend policy and stock price if the company's main objective is to maximize stock price? This is one of the most controversial and unresolved questions with conflicting scientific support (Ben Said, 2012).

One school of thought holds that dividends are irrelevant and have no impact on stock prices. The opposite school of thought holds that dividends matter and affect stock prices. The following describes the models used by both schools of thought to explain the relationship between dividend policy and stock prices (Baker & Kapoor, 2015):

1) Traditional Position:

The traditional view is that retained earnings are much less important than dividends in the stock market, as detailed by Graham Benjamin and David L. Dodd.

They explain that:

"...the stock market is overwhelmingly in favor of generous dividends and opposed to stingy dividends." (Graham & Dodd, 2009)

Their view is expressed quantitatively in the following valuation model they developed:

P = m (D + E/3)

Where, P = market price of share

D = dividend per share

E = earnings per share

m = a multiplier

This model states that the weight assigned to dividends in the value of stocks is four times the weight assigned to retained earnings (Sekhar Mishra & Narender, 1996). The following modification of the previous equation, changing E to (D + R), makes this clear (Singh & Tandon, 2019b).

P = m [D + (D+R)/3]

Graham and Dodd's weights are based on their subjective judgments and are not the result of objective, factual inquiry (Dawar, 2021). The main argument for the conventional view is that a generous dividend policy increases the stock price (Lim & Tom, n.d.).

2) Walter's Model of Dividend Relevance

In 1963, Professor James E. Walter published a model that illustrates the importance of dividends to stock valuation. He claims that the choice of dividend policy always has an impact on the value of the company (Dividend Policy - Term Paper, n.d.).

His model highlights the importance of considering the relationship between a company's internal rate of return (r) and its cost of capital (k) when choosing a dividend strategy that maximizes shareholder value (Rigar & Mansouri, n.d.).

The following assumptions are made (Kadioglu & Ocal, 2016):

1. The company finances all investments with retained earnings; no debt or new equity is issued.
2. The company's internal rate of return (r) and cost of capital (k) are constant.
3. All profits are either distributed as dividends or immediately reinvested in the company.
4. Dividends and initial profits are constant. Although the model's values for earnings per share (E) and dividends per share (D) can be changed to determine outcomes, any given value for E and D assumes that they will always remain constant. (Muhammad Asiri & Andayani, 2018)
5. The company has an extremely long or infinite life.

Walter's formula for determining the market price per share (P) is as follows:

$$P = D + r/k(E-D) K$$

Scenario	If dividend payout ratio increases	If dividend payout ratio decreases	Optimal dividend payout policy
1. In case of GROWING FIRM i.e., where r >k	Market value of share decreases	Market value of a share increases	Reinvest the full profit since it may exceed investors' expectations.
2. In case of DECLINING FIRM i.e., where r < k	Market value of a share increases	Market value of share decreases	Given the lack of successful investment possibilities, the whole profit should be distributed as a dividend.
3. In case of NORMAL FIRM i.e. Where r = k	No change in value of share	No change in value of share	neither cares about distribution nor retention

3.) Gordon's Model

Another popular model that links the market value of the company to its dividend policy was developed by Myron Gordon (Gordon, 1959).

Assumptions:

The following assumptions form the basis of Gordon's model (Malombe, 2011).

- The company is a pure corporation.
- No external financial resources are available.
- The company's internal rate of return (r) is constant.
- The company's own discount rate (K) remains constant.

- The company and its revenue source are indeterminate.
- No corporate taxes are incurred.

The retention rate (b), once selected, remains the same. As a result, the growth rate (g) = br remains unchanged over time (Ogunseye & Jacob, n.d.).

K > br = g Without satisfying this condition, we cannot determine a meaningful value for the stock.

The market value of a stock (Po) is equal to the present value of an endless stream of dividends that the stock will receive according to Gordon's dividend capitalization model. Consequently, Po = E 1 (1-b)/ K-br (Krunal et al., n.d.).

Gordon's Model versus Walter's Model:

According to Gordon's model, investors evaluate current income and dividends positively, and the company's dividend policy is significant (Singh & Tandon, 2019d). It asserts that dividend policy affects stock value even when a firm's investment return is equal to the required or capitalization rate (i.e., r = ke). According to Walter's approach, investors in this situation are agnostic with respect to dividend payout and reinvestment (Kennedy Kioko & Of Nairobi, n.d.).

Modigliani-Miller approach

They assume that a company's earnings potential and investment strategy, rather than its income distribution, determine its value (Modigliani & Miller, 1958).

The basic assumptions of the Modigliani-Miller hypothesis are explained below:

1. There is a perfect capital market, and investors are sensible. Everyone can access information for a price. There is no investor who is powerful enough to affect the security market pricing (Sun et al., 1978).
2. When securities are purchased and sold, there are no transactional charges, such as brokerage fees or other expenditures.
3. No floating fees are incurred. Without spending money on things such as advertising or brokerage, money may be raised.
4. There is no tax or no distinction between the tax rates that apply to dividends and capital gains (Baker & Weigand, 2015).

The company's investment strategy is set in stone and has never changed.(Jensen, 2005; Jensen & Meckling, 1976.) Therefore, funding an investment program with retained earnings changes neither the business risk nor the required rate of return (Singh & Tandon, 2019d).

The future investments and financial success of the business are certain. As a result, investors can confidently predict future prices and dividends (Sun et al., 1978).

The model given by them is –

Po = D1 + P1/ (1/Ke)

Where, **Po** = Prevailing market price of a share

Ke = Cost of equity capital

D1 = Dividend to be received at the end of period one

P1 = Market price of a share at the end of period on

2.5 Prior Empirical Literature Review

Thus, this literature review has three basic goals:

1. A survey of the relevant literature is conducted.
2. A summary of the data gathered is provided.
3. As a result, literature is presented in a structured manner.

To avoid problems with past research and to perform the study in a unique, superior, and beneficial way for the intended and interested parties, a literature review on the subject is required before engaging in in-depth analysis. Many publications, project reports, unpublished and published theses, websites, research papers, etc. have been researched to accomplish this goal. Here is a summary of the reviews relatable and relevant in this domain:

Literature Review on Same Topic

It consists of a theoretical framework that describes the ideas underlying this study and an empirical overview that highlights previous, related research by various researchers in different countries.

Positive evidence between SPV and Dividend Policies

(IIminza, 1997) conducted a study on the information value of dividend payments and their impact on the pricing of shares of listed companies. The results of this study show that dividend payments have a strong impact on stock prices. Moreover, it was found that stock value is significantly affected when dividend payments are abruptly reduced. This means that share prices are affected by changes in dividend policy. Numerous studies have shown that dividend adjustments have a significant impact on stock returns, firm performance and stock prices (Azhagaiah, 2014; Farrukh et al., 2017) investigated the relationship between a firm's performance and its dividend policy. They discovered a positive correlation between these two factors.

(Tiriongo, 2004) conducted a study on dividend policy using NYSE listed companies as a sample. According to his research, there is a positive correlation between dividend policy and company performance.

The Impact of Dividend Policy on Shareholders' Wealth by (Tahir et al., 2015) examined average market value in relation to book value of equity for dividend payers and non-payers over a 10-year period to look for any noteworthy differences in chemical companies. Stepwise regression models and the multiple regression approach have both been employed. 28 businesses in the chemical industry listed on the Bombay Stock Exchange were chosen using the multi-stage random sample technique. Although the sample consisted of 19 and 9 organic and inorganic firms, respectively, the dividend policy had a substantial influence on the wealth of the shareholders in organic chemical companies but not in inorganic chemical companies.

According to the "information content of dividends" theory" first established by Modigliani-Miller in 1961, dividend fluctuations increase stock returns by informing investors about the company's potential for future profitability. However, several research papers, including those by DeAngelo, DeAngelo, and Skinner, have not confirmed this theory.

The relationship between changes in dividend policy and changes in a firm's performance in terms of profitability was studied by (Nissim and Ziv, 2001). Their study provides convincing evidence that both factors are positively correlated. The relationship between corporate performance and dividend policy was found by (Kioko, 2006). He discovered a strong correlation between dividend fluctuations and potential future profitability. Further research on these factors by (Kioko, 2011) found that both factors positively influence each other.

Using thirty Indian banks listed on the Bombay Stock Exchange (BSE) for the past ten years, (Kapoor, 2006) in "A Study of Dividend Policy and Its Effect on Market Value of Shares of Selected Banks in India" investigated the effect of dividend policy on shareholders' wealth. Multiple regression, t-test and F-value were used to examine the data. The results showed that dividend policy has a significant impact on shareholders' wealth in Indian banks.

(P.N. Munyua ,2012) used a descriptive research design with the help of a full survey over a period of ten years to investigate the "impact of dividend policy on share prices of companies listed on the Nairobi Securities Exchange" using 61 listed companies. In the regression model used for this purpose, share price is a function of dividend, profitability, and debt. According to the study, there is a significant positive relationship between dividends per share and share prices, and dividends paid per share have an impact on share prices.

Negative evidence between SPV and Dividend Policies

Using data from 28 of the 36 public companies listed on the NSE, (Mistry, 2011) attempted to determine the influence of variables affecting dividend choice in the Indian cement industry during the period 2004-05 to 2008-09. The study found that variables with a significant increase affected dividend decisions more than those with a small or moderate increase. The study also found that changes in liquidity, inventory turns, and retained earnings have a negative impact on dividend decisions, while changes in total assets (TA) and profitability (P) have a positive impact.

In their 2013 study, (K & B. Akash, 2019) examined IT companies listed on the Indian stock exchange during a ten-year period. The relationship and statistical significance were tested using the regression model, standard error and t-test. They conclude that dividend policy is not a significant factor in stock price behavior in the information technology sector and that the irrelevance hypothesis holds in the presence of market imperfections.

By using a sample of 500 businesses that have been listed on the BSE for ten years and represent six distinct industries, (Upananda Pani, 2008) attempts to investigate the relationship between dividend policy and stock price behavior in the corporate sector of India. The fixed-effect model's findings indicated that debt-to-equity ratios, business size, and dividend retention rates all significantly influence stock price movement. This demonstrates that when a corporation declares stock dividends, share prices drop on the market and shareholders object to the news. Using a sample of 500 companies listed on the BSE for ten years and representing six different industries, (Upananda Pani, 2008) attempts to examine the relationship between dividend policy and stock price behavior in the Indian corporate sector. The results of the fixed effect model show

that debt to equity ratio, firm size and dividend retention rate significantly affect stock price performance. This shows that stock prices fall in the market when a company pays a dividend and shareholders reject this news.

The research conducted by (Iqbal et al., 2014) on "How Dividend Policy Affects Volatility of Stock Prices of Financial Sector Firms of Pakistan" concluded that dividend policy is a useful tool to manage the market value of financial firms in an emerging economy like Pakistan, as there is a strong inverse relationship between dividend yield over the eight-year study. Using a sample of 75 companies in the financial sector, we conducted a study of dividend payout and price volatility in KSE listed companies.

(Sujata Kapoor, 2009) used the Lintner model, factor analysis, quadratic polynomial model, and event study to focus on the information technology, FMCG, and services sectors. She claimed that dividend announcements in the fast-moving consumer goods and services sectors increased shareholder wealth but added that it was not possible to conclude that a properly implemented dividend policy causes an increase in stock price.

(Singh & Tandon, 2019c) investigated "Dividend Policy and Stock Price Volatility in the U.S. Stock Market" using financial data of about 500 listed companies from the Value Line Investment Survey database and using a three-year regression. Stock price volatility was inversely correlated with dividend yield, leverage, growth, and size, but payout ratio was positively correlated.

The study "Dividend policy and stock price volatility in Nigeria" by C. A. Okafor and C. O. (Mgbame, 2011) examined the relationship between dividend policy and stock price volatility on samples of Nigerian companies using multivariate least squares regression. Four banks and two companies in the food, beverage, brewery, and petroleum industries were included in the sample. The results show that dividend yield has a poor relationship with stock prices, while payout ratio can have both a good and poor relationship with stock prices. Dividend policy was therefore found to have a significant impact on stock price performance among a sample of companies listed on the Nigerian Stock Exchange.

In their article titled "The Impact of Dividend Poli-cy on Share Price Volatility in the Malaysian Stock Market" (Kengatharan & Ford, 2021) examined the relationship between share price volatility, dividend yield and dividend payout using 84 consumer goods companies listed on Bursa Malaysia using multiple regression for a period of six years. It was found that share price volatility and dividend yield and dividend payout have a significant negative relationship. Moreover,

dividend yield and company size have the largest impact on stock price volatility among all predictive factors.

"Dividend Policy and Its Impact on Stock Price - A Study on Commercial Banks Listed in Dhaka Stock Exchange" (Al Masum, 2012) attempts to determine the relationship between dividend policy and stock market returns of 30 private commercial banks and the extent to which each dividend policy affects stock returns over a five-year period. Conclusion: dividend yield and stock price have a statistically significant negative relationship, while the retention rate has a statistically negligible negative relationship with stock prices.

Ilyas Sharif et al. studied 45 non-financial companies listed in the KSE-100 index that had paid dividends continuously for 12 years. While return on equity showed a significant negative relationship with stock price, earnings per share and dividend payout ratio appeared to have a large positive relationship. DPS, RR and PAT showed only small correlations.

In their study from 2013, (Kandpal et al., 2015) examined IT firms listed on the Indian stock market during a ten-year period. The link and statistical significance were tested using the regression model, standard error, and t-test. They conclude that the dividend policy is not at all a deciding factor for stock price behavior in the information technology sector and that the irrelevance thesis holds true even with market imperfections.

"Stock price reactions to dividend announcements" by BSE-200 Index businesses that declared dividends were included in the sample. The findings indicated that there were no above-average anomalous returns and that the Indian market is inefficient in semi strong form.

In their study "Stock Price Reaction to Dividend Announcements," (Tahir et al., 2015) used event study technique to analyze 65 dividend announcements (increases) and analyze the stock price reactions of 28 businesses listed on the BSE over a four-year period. The results show how inefficient the Indian capital market is. Due to the stock prices responding to an increase in dividend announcements, it supports the signaling characteristic of dividend announcements.

Below is the summarized table for the bulk of empirical studies done historically related to the same topic ranging from the year 2009 to 2017 across different countries and different arock exchanges. Several different methods were used and are discussed in figure 4 below.

Researcher and the publication year	Theoretical Framewoek (Theories used)	Data	Research Methods	Results
Adesina et al. (2017) To study dividend policy and share price valuation in Nigerian banks.	Gordon Theory	The annual reports of four banks (FBN, Access, GT Bank and UBA) and other variables from stock market most especially MPS for the period 2006-2016	Ordinary least square (OLS) Statistical tools	While DY and RRs have a detrimental impact on the MPS, there is a favorable correlation between EPS and MPS.
Ali & Chowdhury (2010) **To examine the impact of dividend announcements on the stock price. (Bangladesh)**	Dividend Irrelevance Theory Signaling Theory	This study examines stock price reactions of listed Private Commercial Banks (PCBs) in Bangladesh surrounding 44 days (about 1 and a half months) of the dividend announcement dates	Hypothesis testing Event study approach	The declaration of dividends has a negligible effect on stock prices.
Hussainey, Mgbame, and Chijoke-Mgbame(2011) **To analyze the relation between dividend policy and share price changes in the UK stock market.**	Dividend irrelevance theory Bird in hand theory Agency cost and the free cash flow theory Signaling Hypothesis Clientele effects of Dividends theories	Data of 123 companies from UK stock market about price volatility Dividend Yield Dividend Payout Earnings Volatility Debt Growth	Multiple regression	While the dividend POR and stock price fluctuations are adversely correlated, DY and stock price changes are positively correlated.
Mehta, Jain, and Yadav (2014) **To examine how the market reacts to the stock dividend**	The trading range hypothesis Cash substitution hypothesis	The target population includes companies that announced stock dividends during the eight-and-a-half-year period starting January 1, 2002, and ending June 30, 2010.There were 875 stock	Return analysis timeline for event study, liquidity, and risk analysis timeline	The viability of returns is decreased when stock dividends are announced. This helps the stock market maintain price stability.

announcements. (India)	Attention gaining hypothesis	dividend announcements during this period		
Farrukh, Irshad, Khakwani, Ishaque, and Ansari (2017) **To explore the relationship of dividend policy with share market price; EPS; and firm performance.** **(Pakistan)**	Dividend irrelevance theory Dividend relevance theory Bird-in-hand theory Clientele effect Agency theory free cash flow theory Signaling effect	A sample of 73 firms listed on the KSE from 2003–2008.	Hypothesis testing Regression analysis	EPS and share price are positively correlated with the dividend policy. Additionally, dividend policy and ROE are strongly positively correlated.
Anwar, Singh, and Jain (2017) **To analyze the impact of the announcement of cash dividends on stock price returns. (India)**	substantial risk, high returns theory	The present study covered ten years from 1st April 2003 to 31st March 2013. There were 2675 cash dividend announcements of the BSE 500 companies listed on BSE (Bombay Stock Exchange) 500 index as on November 7, 2012	Hypotheses Paired sample t-test	Positive AARs for the selected manufacturing companies have been reported for the cash dividend announcements. Overall, the findings are consistent with the payouts' signaling and informative content assumptions.
Kengatharan & Suganya (2019) **Dividend Policy and Share Price Volatility: Evidence from Listed Non-Financial Firms in Sri Lanka**	Dividend irrelevant theory Signaling theory	A sample of 81 listed non -financial firms from CSE in Sri Lanka is examined using panel data analysis for a five-year period from 2013 to 2017	Random effects model	25% of the movements in share prices are explained by the explanatory variables considered in this study. Dividend yield shows significant positive impact on share price volatility whereas dividend per share shows the significant negative impact on share price movements
Tuomas Lindeman (2016) The correlation between	Dividend relevance	Volatility, dividend yield and dividend payout ratio averages for all examined	Statistical analysis	The results of the research clearly show that there is a negative

dividend policy measures and share price volatility on OMX Helsinki	Dividend irrelevance	companies for the 5-year time 4.1.2010-30.12.2014 of OMX Helsinki	Correlation analysis Coefficient of Determination	correlation between dividend policy measures (yield & ratio) and share price volatility among the examined companies
Singh, N.P. & Tandon A. (2019). "The Effect of Dividend Policy on Stock Price: Evidence from the Indian Market,"	Modigliani and Miller (MM) theory Gordon's model	MPSs of Nifty 50 companies listed on the NSE for 2008–2017 (excluding five companies, namely, Hindustan Unilever Limited, HCL, Ambuja Cement, Titan, and Grasim)	Descriptive Statistics and Test for Normality Correlation Analysis Unit Root Test Regression Analysis: Pooled Ordinary Least Square, Fixed and Random Effect	The result of correlation indicates that DY has a negative impact on MPS while other variables such as EPS, DPS, return on earnings and RR are positively correlated with MPS.
Mallikarjunappa, T. & Manjunatha, T. (2009). "Stock price reactions to dividend announcements" (India)	DIVIDEND RELEVANCE	The sample for the study consists of 15 companies and is selected randomly. They are Asian paints, Bajaj auto, BhartiAirtel, Coal India, HUL, HDFC, Infosys, ITC, RIL, TCS, Larsen and Toubro, Tata Motors, Vedanta, Tata Steel and Wipro. All these companies are among the constituents of S&P BSE Sensex.	Descriptive Statistics Pearson Correlation Test Regression Analysis	Only profitability ratio variable is statistically and significantly associated with the dependent variable, Dividend payout ratio and therefore, profitability ratio from among the selected financial ratios is the only determinant of dividend payout ratio of companies selected under study.

(Figure 4) – Summary of prior empirical studies on the association between SPV and Dividend parameters

Based on the prior theories and empirical studies current study hypothesizes as:

H1: There is a significant impact of dividend payout on stock price volatility.

H2: There is a significant impact of dividend yield on stock price volatility.

H3: There is a significant impact of dividend per share on stock price volatility.

H4: There is a significant impact of firm size on stock price volatility.

H5: There is a significant impact of leverage on stock price volatility.

3 Methodology

The selection of the right methodology plays an important part in effective data analysis. Since the data under consideration falls under panel data type hence refining the data and variables to suit the format is necessary. Below is discussed how different data and variables were calculated and derived to meet the panel data requirements along with the software used to implement various tests and analysis.

3.1 Data and Variables

The data was retrieved from a wide array of sources ranging from annual reports to online platforms like screener.com and investing.com. To calculate SPV the historic stock prices were retrieved from the NSE official website. For all other parameters annual reports were consulted along with the financial platforms to reconcile the data

3.1.1 Data

The information on dividends i.e., Dividend Payout Ratio (DPR), Dividend Yield (DY), Dividend Per Share(DPS) was gathered from the websites of the financial research company money control, investing.com and screener.com. The website of NSE India was analyzed to find out the historic share price of the companies for the year 2018 to 2022 which were then used to calculate SPV. Information that was not available on any of the websites as was the case with leverage and firm size which was retrieved using the official financial statements of the chosen companies like screener.com and investing.com. No matter which of these sources was utilized to acquire the data, it was always made sure that variables were computed and interpreted in the same way. In the Data analysis and definitions -paragraph, which is located below, a thorough explanation of how the variables were derived is provided.

The primary goal of the study is to investigate how dividend policies affect the share price volatility of non-financial companies listed on NIFTY 100 index on National Stock Exchange. The 76 enterprises that make up the study's sample were chosen from a population of 100 firms constituting. Some companies were purposefully left out of the population because they lacked

sufficient pertinent data, a small number of them did not pay dividends for the entire five-year period from 2018 to 2022. The annual reports of sample companies for the five years from 2018 to 2022 were where the secondary data for this study was found.

For the analysis study, 76 companies have been shortlisted from 100 companies of Nifty 100 as consistency and continuity of data is required.

List of Selected Companies

(TABLE 1)

List of Sectors Covered

To perform panel data analysis, the number of companies should be more than the number of variables in the equation i.e., six since Random effects estimation requires number of cross sections to be greater than the number of coefficients for between estimator for estimate of RE innovation variance. Based on the above filter only five sectors i.e., Automotive, Finance, healthcare, Information technology and FMCG were eligible for sector level analysis. Based on previous literature reviews a special use case where the financial sector was removed from NIFTY 100 stocks was also included.

(TABLE 2)

3.1.2 Variables and definitions

Although some of the data (variables) for the numerical material utilized in the study already exist variables must be computed. The three variables utilized in the research are computed in detail in the sections that follow.

Dependent Variables

1. Share Price Volatility (SPV) = Standard Deviation of Returns * Square root(252)

It is considered as a dependent variable in current study. Share Value In the current study, the measure of volatility is the share return standard deviation (Radwan Almanaseer, 2019) .It serves as the study's dependent variable as well. The variable was estimated by the author for all

businesses analyzed for the thesis. First, the necessary data on historical share prices for all the firms under inquiry for the relevant time (1.1.201-31.12.2022) was retrieved from the NSE India website in Excel files. Second, the daily returns were computed by dividing the closing price of the most recent day by the closing price of the day before. Third, the standard deviation of these share returns over the whole five-year period was determined, yielding a certain percentage (Nath Acharya & Prasanna Mahapatra, n.d.).

The standard deviation of returns must be multiplied by an annualization factor (the square root of the number of trading days in a year, which is around 252) because the annualized standard deviation of returns must be determined because it is a subject of historical volatility (How Do You Calculate Volatility in Excel? The Blog of Adam H Grimes, n.d.). The collection of numerical data required a significant amount of physical labor, and human error is always a worry when dealing with big data sets of numbers and variables that must be manually examined and compared to one another. The data has been double- and triple-checked the computations and data to reduce the risk of mistakes. The computations may be further examined because the information is available to anybody who is interested.

Independent Variables

2. Dividend Payout Ratio (DPR) = (Annual Dividend Per Share)/ (Earnings Per Share)

Dividend Payout Ratio (DPR) One of the independent variables considered in the study is the dividend payout ratio. To determine it, divide earnings per share by the yearly dividend per share. The amount that the corporation distributes as dividends for the current year is known as the annual dividend per share (per share) (Profilet, 2013). The portion of a company's profit allotted to each share is known as earnings per share. The payout ratios were determined by the author using data on yearly dividends per share (screener) and earnings per share that was already available (money control). For the companies which have negative dividend payout it means that they have paid out dividends from their cash reserves and not profits (Umamaheswari et al., 2022).

3. Dividend Yield (DY) = (Annual Dividend Per Share) / (Price Per Share)

Another independent variable in current study is dividend yield (DY). It is computed by dividing the price of a share by the yearly dividends per share. The dividend yield variable was obtained from the money control website, which has a comprehensive record of dividend yields for all listed businesses going back years. In the current scenario, the share price is the price at the ex-

dividend date (Kumaraswamy et al., 2019). It means that if you buy a share on or after that date, you will not get the next dividend payment that was planned (Brealey, Myers & Allen 2011).

4. Dividend Per Share (DPS) = Total Dividend Paid / Number of ordinary shared outstanding

Dividend per share (DPS) is the sum of the dividends declared for each outstanding common share. The amount of money given by the company to its shareholders is determined by this ratio for investors who anticipate reliable returns on their investment (Ardekani & Younesi, 2012).

Control Variables

5. Leverage (LEV)= Total Debt / Total Assets

As in other experiments, leverage is also employed as a control variable in current studies. It is a form of borrowed cash that the company uses to pay for its assets (Lashgari & Ahmadi, 2014). Leverage that exceeds the permitted level poses a danger to the company and may raise share price volatility.

6. Firm Size (FS)= Ln (total sales)

Firm size is considered as controlling variable of the study. It may be measured in several ways for varied reasons, such as staff count, asset total, and sales revenue total. (Ngunjiri, 2010) . Total sales revenue is the metric used in current study since the sample is made up of service organizations, which lack valuable tangible assets in comparison to other types of businesses.

3.2 Approach and interpretation

To perform the study for the empirical section of the thesis, the author employed a quantitative research approach. When dealing with big collections of numbers and numerical data, the strategy utilized is acceptable (EBSCOhost | 130384029 | The Impact of Dividend Policy on Share Price Volatility in the Context of Banking Sector of Pakistan., n.d.). Simply said, quantitative research involves gathering numerical data, processing it, and figuring out the connections between the data (Bryman & Bell 2011). It provides responses in the form of absolute values and leaves the interpretation up to the researcher.

3.2.1 Research Model

Correlation Analysis

The branch of mathematics involved in the research is statistical analysis. Specifically, Pearson Correlation, which may be used to analyze and assess the correlation of several variables at once (Bryman & Bell 2011). In statistical analysis, the Pearson Correlation Coefficient (Pearson's r) is often used. It displays the degree of linear correlation between the selected variables (Bryman & Bell 2011). Bryman & Bell point out three important characteristics of Pearson's r

1. Coefficient ranges from -1 to 1.

2. A relationship is strong when the coefficient is near to 1, but a link is weak when the coefficient is close to 0 or when $-0{,}30 < r < 0{,}30$.

3. The coefficient, which denotes the relationship's direction, can be either positive or negative.

The data collected are interpreted using the correlation coefficient, sometimes referred to as Pearson's r. Additionally, the analysis will also be built on the Sig. (2-tailed) value. Simply expressed, Sig. (2-tailed) displays the statistical significance of the calculated value of Pearson's r. (Bryman & Bell, 2011).

Panel Data Analysis

The purpose of the study is to look at how dividend policies affect share price volatility with a focus on NIFTY 100 enterprises. There may be cross-sectional impacts on each firm or on a group of enterprises; panel data considers observations on comparable transversal units throughout a wide range of time periods. There are several ways to approach these issues, but models with fixed and random effects in panel econometric approaches are particularly crucial. The fixed effects model still assumes that the slope coefficients within the firms are constant while accounting for the independence of each company or cross-sectional unit included in the sample (Pratheepan & Yatiwella, 2016).

The random effects model, which may be defined, estimates the coefficients under the presumption that the individual or group effects do not depend on other independent variables (Pratheepan & Yatiwella, 2016). Pooled OLS, fixed, and random effect models are used to determine the best technique of analysis for carrying out the empirical investigation. (Bond, 1991)

Pooled data occur when we have a "time series of cross sections," but the observations in each cross section do not necessarily refer to the same unit (Section 13 Models for Pooled and Panel Data, n.d.). Pooled regression is performed by specifying the POOLED option in the MODEL statement. Pooled regression is standard ordinary least squares (OLS) regression without any cross-sectional or time effects. The error structure is simply $u_{it} = e_{it}$, where they are independently and identically distributed (iid) with zero mean and variance σ_e^2 (SAS Help Center: Pooled Regression (POOLED), n.d.).

The **Fixed Effects regression model** is used to estimate the effect of intrinsic characteristics of individuals in a panel data set. Examples of such intrinsic characteristics are genetics, acumen, and cultural factors. Such factors are not directly observable or measurable, but one needs to find a way to estimate their effects since leaving them out leads to a sub-optimally trained regression model. The Fixed Effects model is designed to address this problem (Baltagi, 2021).

The **Random Effects regression model** is used to estimate the effect of individual-specific characteristics such as grit or acumen that are inherently immeasurable. Such individual-specific effects are often encountered in **panel data** studies. Along with the **Fixed Effect regression** model, the Random Effects model is a commonly used technique to study the effect of individual-specific features on the response variable of the panel data set (Baltagi, 2021).

Pooled OLS (PLS) Model

$$SPV_{it} = \alpha_0 + \alpha_1 DP_{it} + \alpha_2 DY_{it} + \alpha_3 DPS_{it} + \alpha_4 LEV_{it} + \alpha_5 FS_{it} + \in_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Fixed Effect (FE) Model

$$SPV_{it} = \alpha_0 + \alpha_1 DP_{it} + \alpha_2 DY_{it} + \alpha_3 DPS_{it} + \alpha_4 LEV_{it} + \alpha_5 FS_{it} + \mu_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Random Effect (RE) Model

$$SPV_{it} = \alpha_0 + \alpha_1 DP_{it} + \alpha_2 DY_{it} + \alpha_3 DPS_{it} + \alpha_4 LEV_{it} + \alpha_5 FS_{it} + \mu_{it} + \in_{it} \ldots\ldots\ldots\ldots\ldots (3)$$

In the equation:

SPV_{it} is share price volatility of firm i at time t.

DP_{it} is dividend payout of firm i at time t.

DY_{it} is dividend yield of firm i at time t.

DPS_{it} is the dividend per share of firm i in time t.

LEV_{it} is financial leverage of a firm i at time t.

FS_{it} is Size of firm i at time t.

α0 – intercept coefficient of firm i at time t.

α1, α2, α3, α4, & α5 – row vectors of slope coefficient of regressors

$\in_{it}$: Stochastic error term of firm i at time t

μ_{it}: error term of firm i at time t

Selection Method of Regression Data Panel

To select the most appropriate model, there are several tests that can be done, such as (Rizka Zulfikar & Fakultas Ekonomi Universitas Islam Kalimantan MAB Banjarmasin, n.d.) :

Chow Test

The Chow test is a test to determine the model of whether Pooled OLS (PLS) or Fixed Effect (FE) is most appropriately used in estimating panel data.

If Results:

H0': Select PLS (p> 0.05)

H1': Select FE (p <0.05)

Test Lagrange Multiplier

Lagrange multiplier test (LM) is a test to determine whether Random Effect model is better than Pooled OLS (PLS) method used.

If Result:

H0'': Select PLS (p> 0.05)

H1'': Select RE (p <0.05)

Hausman Test

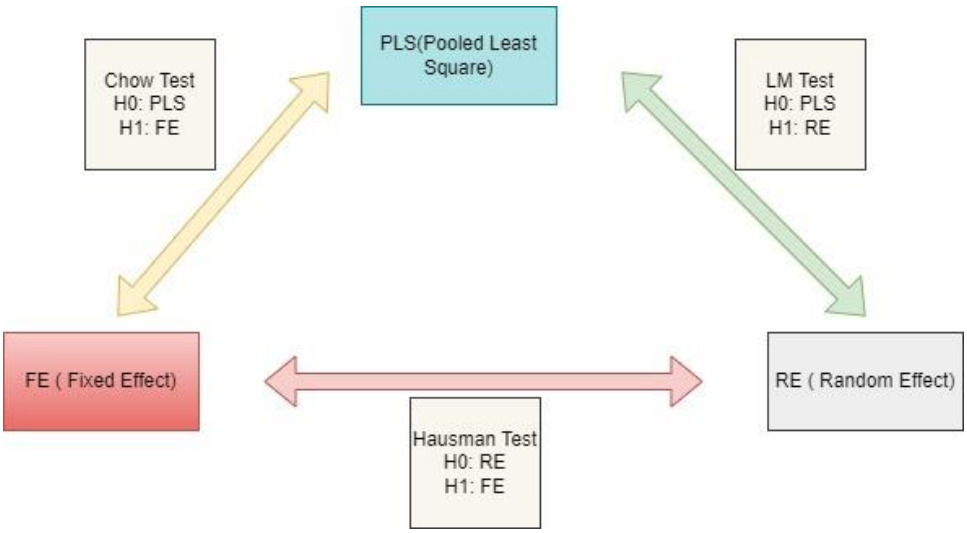
The Hausman test is a statistical test to select whether the most appropriate Fixed Effect or Random Effect model is used.

If Result:

H0’’’: Select RE (p> 0.05)

H1’’’: Select FE (p <0.05)

From the three tests to determine the Estimation Method above, illustrated in the graph below:



Choice Of Regression Estimation of Panel Data

Source: (Rizka Zulfikar & Fakultas Ekonomi Universitas Islam Kalimantan MAB Banjarmasin, n.d.)

3.2.2 Tools and Software

Excel was used to calculate SPV, DY, DPS, DP, LEV, and FS. To determine correlation matrix and descriptive statistics excel plugin of data analysis was also used.

EViews software was used to perform panel data analysis. Econometric Views, often known as EViews, is a collection of econometric, forecasting, and statistical tools that serve as a reference for academics, researchers, and other professionals that analyze data. EViews offers access to tools for statistical analysis, time-series analysis, forecasting, and modeling concepts that are

simple and dependable to use for quantitative analysis through an object-oriented interface. The secondary data analysis is frequently a quantitative study that aids in identifying any gaps or inconsistencies that may have existed in the past. As a result, EViews supports the examination of the data using a variety of techniques. (McKenzie & Takaoka, 2007).

EViews was created with the user interface in mind, making it easier to use for a variety of tasks that might help with doing a secondary data analysis. In addition to providing high-quality presentations for publishing, it also offers simple processes for data import and input, statistical analysis, data visualization, forecasting, model solution, and estimate (EViews And Secondary Data Analysis | StatWorkz, n.d.)

EViews offers simple instructions as well as a powerful command language and programming environment that may be used to automate monotonous processes. The additional support provided by EViews also includes methods for logistic regression, weighted regression, coefficient statistics, and regression analysis using the least squares approach (EViews And Secondary Data Analysis | StatWorkz, n.d.)..

4 Empirical results

The actual study results and their interpretation are the main topic of the empirical part of the paper. The sample of 380 observations (76 companies) that were examined in the study is presented in this section, together with an explanation of the main findings. To simplify and show what the author considers important and interesting, tables are used as aids. If a reader wishes to look up a particular term not covered in the main text, all the empirical data collected is available as appendices at the end of the paper.

4.1 Descriptive statistics

It shows a summary of the information gathered from each firm during the study. It makes it possible to give basic details about variables in a dataset.

As per the descriptive statistics presented in table 3, the mean value of dividend payout is 0.395. It has a range from -4.370 to 19.000. Dividend yield ranges from 0.00 to 26.03 and mean value is 1,7278 with the standard deviation of 2.587. Dividend per share has a mean value of 22.413 with the minimum value is 0.000 and maximum value is 315.000. The level of leverage ranges from 0.000 to 24.978 and the mean value is 0.524 with the standard deviation of 2.357. The firm's size has a mean value of 10.206. The mean value of the share price volatility is 0.327, which ranges from 0.161 to 0.869. This is the general information of the data collected for current study.

(TABLE 3)

4.2 Correlation Analysis

It is carried out to assess the degree of association between just two variables. Thinking about cause and consequence is prohibited. It helps to measure the degree to which two variables are related to one another. As a result, it is considered a foundational study before moving on to more complex statistical analysis.

The scatter plots between the SPV and all other variables are shown below in Table 4. It represents 5 scatter plots for 76 companies over a 5-year span. Scatter Plot 1 represents SPV vs DY (n=380) which clearly shows no correlation between the two variables based on the scatter plot. Scatter Plot 2 represents SPV vs DP (n=380) which clearly shows no correlation between the two variables based on the scatter plot. Scatter Plot 3 represents SPV vs DPS (n=380) which clearly shows no correlation between the two variables based on the scatter plot. Scatter Plot 4 represents SPV vs FS (n=380) which clearly shows no correlation between the two variables based on the scatter plot. Scatter Plot 5 represents SPV vs LV (n=380)) which clearly shows no correlation between the two variables based on the scatter plot.

(TABLE 4)

The result of correlation analysis between explanatory variables and dependent variable is presented in table 5. According to current results, dividend payout ratio (r = -0.046, p =0.352), leverage (r = 0.030, p =0.539), firm size (r = 0.062, p =0.212) and Dividend Yield (r =0.069, p = 0.168) is not significantly associated with share price volatility But dividend per share (r = -0.1677, p =0,000) is significant in terms of code value but since r < 0.30 hence not correlated with share price volatility. Therefore, it can be concluded that dividend yield, leverage, dividend payout ratio and firm size have no association with share price movements while even though the coefficient has significant value for dividend per share but since the value of r is -0,30<r<0,30 hence no association with share price volatility.

(TABLE 5)

4.3 Test for Variance Inflation Factor (VIF)

Variance Inflation Factor (VIF) and Tolerance can be used to analyze the multicollinearity among the independent variables. The VIF measures the extent the variance of estimated regression coefficients is inflated because of being related to the other independent variables, and Tolerance is the amount of variability of the selected independent variables not explained by other independent variables (Al-Shawawreh, 2014). Any variables with a VIF value above 10 or with a value below 0.10 of Tolerance would have a correlation of more than 0.90 with other variables, indicative of the multi-co linearity problem (Hair,Tatham & Anderson, 1998). Results of VIF test

of current study are presented in table 5 explain that there is no multicollinearity among the explanatory variables.

(TABLE 6)

4.4 Panel Data Regression Analysis

Panel data regression analysis is utilized to evaluate hypothesis since the data for current study was gathered from numerous businesses throughout a range of years because it can fix the issue with the data set's entity impact and time effect. To determine whether of the Pooled OLS, fixed effect, and random effect models is suitable to explain the study's findings, the Breusch and Pagan Lagrangian Multiplier Test and Hausman Specification Test were used.

4.4.1 Panel Data Regression Analysis for Nifty 100

Table 7 illustrates the results of pooled OLS, fixed effect, and random effect models to investigate the impact of divided policy on share price volatility in NIFTY 100 firms for the 5 years period from 2018 to 2022. As per their probability values of the F statistics indicated in the Table 6, all three models are significant to explain the impact of dividend policy on share price volatility (pooled OLS model: F-statistic= 7.492, P = 0.000; fixed effect model: F= 2.120, P = 0.000; and random effect model: F= 4.399, P = 0.000). Even though, it is identified which model is more suitable to explain the impact of dividend policy on the share price volatility by performing the relevant analysis. Firstly, the F test is performed to compare the pooled OLS model and fixed effect model and it is hypothesized that H0' is rejected and H1' is accepted. Then Breusch and Pagan Lagrangian Multiplier test is performed to compare the pooled OLS model and random effect model and it is hypothesized that H0'' is rejected and H1'' is accepted. To decide which one of the alternative panel analysis models is fixed effect model or random effect model, Hausman specification test is performed. By performing the Hausman test statistics (9.084, P > 0.05), it is identified that H0''' is accepted and H1 ''' is rejected i.e., random effect model is appropriate as the null hypothesis accepted that random effects would be consistent and efficient. Therefore, random effect model is most suitable to explain the impact of dividend policy on share price volatility for NIFTY 100 firms for the 5 years from 2018 to 2022.

As per the random effect model presented in table 7, Out of five explanatory variables considered in current study, dividend per share (α3 = -0.000 P > 0.05), dividend payout (α1 = -038, P > 0.05), firm size (α5 = 0,000, > 0.05), dividend yield (α2 = 0.004, > 0.05) and firm leverage (α4 = 0.065, P > 0.05) have not shown any significant impact on share price volatility. The study's findings are not supported with H1, H2, H3, H4 ,H5 that dividend payout, yield, dividend per share, firm size and leverage do not significantly influence share price volatility.

(TABLE 7)

4.4.2 Panel Data Regression Analysis for Automobile Sector

Table 8 illustrates the results of pooled OLS, fixed effect, and random effect models to investigate the impact of divided policy on share price volatility of Automobile Sector in NIFTY 100 firms for the 5 years period from 2018 to 2022. As per their values of the F statistics indicated in Table 8. Firstly, the F test is performed to compare the pooled OLS model and fixed effect model and it is hypothesized that H0' is accepted and H1' is rejected. Then Breusch and Pagan Lagrangian Multiplier test is performed to compare the pooled OLS model and random effect model and it is hypothesized that H0'' is accepted and H1'' is rejected which implies that pooled OLS is more appropriate than random effect model. Therefore, pooled OLS model is most suitable to explain the impact of dividend policy on share price volatility for NIFTY 100 Automobile Sectoral firms for the 5 years from 2018 to 2022.

As per the random effect model presented in table 8, 17 % (r square = 0,176) of the total variability in the share price volatility has been explained by dividend policy. Out of five explanatory variables considered in current study, Out of five explanatory variables considered in current study, dividend payout (α1 = 0.081 P > 0.05) , dividend per share (α3 =0,000, P > 0.05), firm size (α5= -0,011, P > 0.05) , dividend yield (α2 = -0.015 P > 0.05) and leverage (α4= 0.028, P > 0.05) have not shown any significant impact on share price volatility. Therefore, the results of the study are not supported with H1, H2, H3, H4 ,H5 that dividend payout, dividend yield, dividend per share firm size and leverage do not have any significant influence on share price volatility.

(TABLE 8)

4.4.3 Panel Data Regression Analysis for Financial Services Sector

Table 9 illustrates the results of pooled OLS, fixed effect, and random effect models to investigate the impact of divided policy on share price volatility Financial Services sector in NIFTY 100 firms for the 5 years period from 2018 to 2022. As per their probability values of the F statistics indicated in Table 9. First, the F test is performed to compare the pooled OLS model and fixed effect model, and it is hypothesized that H0' is accepted and H1'' rejected. Then Breusch and Pagan Lagrangian Multiplier test is performed to compare the pooled OLS model and random effect model and it is hypothesized that H0''is accepted and H1'' is rejected which implies that pooled OLS is more appropriate than random effect model. Therefore, pooled OLS model is most suitable to explain the impact of dividend policy on share price volatility for Financial Services sector in NIFTY 100 firms for the 5 years from 2018 to 2022.

As per the random effect model presented in table 9, 8% (r square = 0,080) of the total variability in the share price volatility has been explained by dividend policy. Out of five explanatory variables considered in current study, Out of five explanatory variables considered in current study, dividend payout ($\alpha 1$ = 0.008 P > 0.05) , dividend per share ($\alpha 3$ =0.000, P > 0.05), firm size ($\alpha 5$ = -0,017 , P > 0.05) , dividend yield ($\alpha 2$ = -0.057 P > 0.05) and leverage ($\alpha 4$ = 0.047, P > 0.05) have not shown any significant impact on share price volatility. Therefore, the results of the study are not supported with H1, H2, H3, H4 ,H5 that dividend payout, dividend yield, dividend per share firm size and leverage do not have any significant influence on share price volatility.

(TABLE 9)

4.4.4 Panel Data Regression Analysis for Healthcare Sector

Table 10 illustrates the results of pooled OLS, fixed effect, and random effect models to investigate the impact of divided policy on share price volatility Healthcare sector in NIFTY 100 firms for the 5 years period from 2018 to 2022. As per their probability values of the F statistics indicated in Table 10. First, the F test is performed to compare the pooled OLS model and fixed effect model, and it is hypothesized that H0' is accepted and H1' rejected. Then Breusch and Pagan Lagrangian Multiplier test is performed to compare the pooled OLS model and random effect model and it is hypothesized that H0'' is accepted and H1'' is rejected which implies that pooled OLS is more appropriate than random effect model. Therefore, pooled OLS model is found

to be most suitable to explain the impact of dividend policy on share price volatility for healthcare sector in NIFTY 100 firms for the 5 years period from 2018 to 2022

As per the random effect model presented in table 10, 17% (r square = 0,176) of the total variability in the share price volatility has been explained by dividend policy. Out of five explanatory variables considered in current study, Out of five explanatory variables considered in current study, dividend payout (α1 = 0.081 P > 0.05) , dividend per share (α3 =-0.000, P > 0.05), firm size (α5 = -0.010 , P > 0.05) , dividend yield (α2 = -0.015 P > 0.05) and leverage (α4 = -0.028, P > 0.05) have not shown any significant impact on share price volatility. Therefore, the results of the study are not supported with H1, H2, H3, H4 ,H5 that dividend payout, dividend yield, dividend per share firm size and leverage do not have any significant influence on share price volatility.

(TABLE 10)

4.4.5 Panel Data Regression Analysis for Information Technology Sector

Table 11 illustrates the results of pooled OLS, fixed effect, and random effect models to investigate the impact of divided policy on share price volatility Information Technology sector in NIFTY 100 firms for the 5 years period from 2018 to 2022. As per their probability values of the F statistics indicated in Table 11. First, the F test is performed to compare the pooled OLS model and fixed effect model, and it is hypothesized that H0' is accepted and H1' rejected. Then Breusch and Pagan Lagrangian Multiplier test is performed to compare the pooled OLS model and random effect model and it is hypothesized that H0'' is accepted and H1'' is rejected which implies that pooled OLS is more appropriate than random effect model. Therefore, the pooled OLS model is most suitable to explain the impact of dividend policy on share price volatility for Information Technology sector in NIFTY 100 firms for the 5 years from 2018 to 2022.

As per the random effect model presented in table 11, 36% (r square = 0,363) of the total variability in the share price volatility has been explained by dividend policy. Out of five explanatory variables considered in current study, out of five explanatory variables considered in current study, dividend payout (α1 = 0.129 P > 0.05) , dividend per share (α3 =-0.001, P > 0.05), dividend yield (α2 = -0.020 P > 0.05) and leverage (α4 = -0.420, P > 0.05) have not shown any significant impact on share price volatility. But firm size (α5 = -0.032, P < 0.05) has shown significant impact on the SPV. Therefore, the results of the study are not supported withH1, H2, H3, H5 that dividend payout, dividend yield, dividend per share firm size and leverage do not have

any significant influence on share price volatility. But and H4 is true i.e., Firm size has an effect on SPV for Information technology sector.

(TABLE 11)

4.4.6 Panel Data Regression Analysis for FMCG Sector

Table 12 illustrates the results of pooled OLS, fixed effect, and random effect models to investigate the impact of divided policy on share price volatility for FMCG sector in NIFTY for the 5 years period from 2018 to 2022. As per their probability values of the F statistics indicated in Table 12. First, the F test is performed to compare the pooled OLS model and fixed effect model, and it is hypothesized that H0' is accepted and H1' rejected. Then Breusch and Pagan Lagrangian Multiplier test is performed to compare the pooled OLS model and random effect model and it is hypothesized that H0'' is accepted and H1'' is rejected which implies that pooled OLS is more appropriate than random effect model. Therefore, pooled OLS model is most suitable to explain the impact of dividend policy on share price volatility for FMCG sector in NIFTY 100 for the 5 years from 2018 to 2022.

As per the pooled OLS model presented in table 12, 20 % (r square = 0,197) of the total variability in the share price volatility has been explained by dividend policy. Out of five explanatory variables considered in current study, dividend payout ($\alpha 1$ = -0.103 $P < 0.01$) has shown the significant negative impact on share price volatility. However, dividend per share ($\alpha 3$ =0.000, $P > 0.05$), firm size ($\alpha 5$ = -0,000, > 0.05), dividend yield ($\alpha 2$ = 0.017, > 0.05) and leverage ($\alpha 4$ = 0.237, $P > 0.05$) have not shown any significant impact on share price volatility. Therefore, the study results are supported with H1 that dividend per share significantly impacts share price volatility. But, findings of the study are not supported with H2, H3, H4 ,H5 that dividend payout, dividend yield, firm size and leverage do not have any significant influence on share price volatility.

(TABLE 12)

4.4.7 Panel Data Regression Analysis for in Nifty 100 without financial firms

Table 13 illustrates the results of pooled OLS, fixed effect, and random effect models to investigate the impact of divided policy on share price volatility in NIFTY 100 without financial

firms for the 5 years period from 2018 to 2022. As per their probability values of the F statistics indicated in the Table 13, all three models are significant to explain the impact of dividend policy on share price volatility (pooled OLS model: F= 5.166, P = 0.000; fixed effect model: F= 3,034, P = 0.000; and random effect model: F= 2,382249, P = 0.03835). Even though, it is identified which model is more suitable to explain the impact of dividend policy on the share price volatility by performing the relevant analysis. First, the F test is performed to compare the pooled OLS model and fixed effect model, and it is hypothesized that H0' is rejected and H1' correct. Then Breusch and Pagan Lagrangian Multiplier test is performed to compare the pooled OLS model and random effect model and it is hypothesized that H0'' is rejected and H1'' is accepted. To decide which one of the alternative panel analysis models is fixed effect model or random effect model, Hausman specification test is performed. By performing the Hausman test statistics (13.498, P< 0.05), it is identified that H0''' is rejected and H1 ''' is accepted i.e. fixed effect model is appropriate is found to be most suitable to explain the impact of dividend policy on share price volatility for sector in NIFTY 100 without financial firms for the 5 years period from 2018 to 2022.

As per the fixed effect model presented in table 13, 41 % (r square = 0,413) of the total variability in the share price volatility has been explained by dividend policy. Out of five explanatory variables considered in current study, dividend payout (α1 = 0.009 P > 0.05), dividend per share (α3 = 0.000, P > 0.05), firm size (α5 = 0.000, P > 0.05), dividend yield (α2 = 0.002. P > 0.05) and leverage (α4= 0.014., P > 0.05) have not shown any significant impact on share price volatility. Therefore, the results of the study are not supported with H1, H2, H3, H4 ,H5 that dividend payout, dividend yield, dividend per share firm size and leverage do not have any significant influence on share price volatility.

(TABLE 13)

5 Discussion

The study's goal was to investigate whether dividend policies affect share price volatility, concentrating on NIFTY 100 companies listed on the NSE between 2018 and 2022 and its various constituent sectors. The impact was tested using panel data analysis, and the best model to explain the results of current empirical investigation was determined to be the random effect model. At an index level none of the variables, i.e., dividend yield, dividend per share, dividend payout ratio, leverage and company size had no significant association with share price volatility. It was found that none of the independent variables i.e., dividend yield, dividend payout ratio and dividend per share had any influence on share price volatility. Also, there was no connection between dividend policy and share price volatility, the study's findings are consistent with the dividend irrelevance theory (Miller & Modigliani, 1961). The research is line with previous results on the same topic as (Sujata Kapoor, 2009) (Arindam Das and Amalendu Samanta , 2013) and (Mallikarjunappa, T.; and Manjunatha, T, 2009) which concluded that the dividend policy is not at all a deciding factor for stock price behavior in the indices and that the irrelevance thesis holds true even with market imperfections.

Similar result was observed for the Automobile, Healthcare and for Nifty 100 index without financial services companies i.e., none of the variables, i.e., dividend yield, dividend per share, dividend payout ratio, leverage and company size had no significant link with share price volatility. The reason which can be attributed to it is that both Automobile and Healthcare sector are very cyclical -in nature hence the SPV varies a lot in case of both headwinds and tailwinds for example The healthcare sector in India is largely dependent on global exports and during the time span for which the data was collected, that is 2018 to 2022 the world faced a global pandemic called covid-19 which had a significant impact on the earnings of the healthcare sector mostly acted as a headwind which impacted the volatility and the dividend pattern for the healthcare sector

In the case of the financial sector dividend yield had a slightly negative impact on stock price volatility. This could be because higher dividend yield leads to more cash outflow in the case of leverage entities like banks and NBFC which in turn increases their fund cost consequently reducing their net interest margin and hence having a negative effect on the profits. In the case of the information technology sector, the firm size had a slightly negative impact on the stock price volatility mainly due to the fact that big firms in IT sector are usually cash rich due to large institutional and FII(Foreign Institutional Investors) holding they must declare more dividends are

resort to buybacks to utilize their cash reserves which in turns impact the stock price volatility. In the case of the FMCG sector dividend payout ratio had a slight negative impact on the stock price volatility because conventionally FMCG sector is one of the defensive sectors in the Indian stock market and companies which have a less dividend payout ratio is usually less favored when compared with companies having higher dividend payout ratio in FMCG sector

5.1 Managerial, Theoretical and Practical Implications

Top management and policy makers can pinpoint the elements of a company's dividend policy that are contributing to shareholders' wealth. The study's findings demonstrate that businesses and their decision-makers need to be aware of the effects of various dividend programs. Increased dividends, addressing both yield and payout ratio, might result in a more stable and less volatile share as dividend policy metrics are inversely connected with share price volatility. Less risk also translates to less volatile shares. Even if there are no risk-free shares available on the Stock Exchange, it is always desirable to keep risk to a minimum level. On the other hand, cutting back and lowering dividends may cause greater share price volatility, which implies a perceived seeming risk. It comes down to adjusting and striking a balance between the proper dividend policy and share price volatility.

The corporations under investigation have dramatically different dividend payment percentages. This explains the various dividend policies that the corporations have. While some people favor a greater payout ratio, others choose a lower one. In this instance, multiple firms had exceptionally high payout percentages of above 100%. This could indicate that the corporation has used funds from its own cash reserve to pay the dividends. This is typically not regarded as wise. The distribution of surplus financial reserves to shareholders in the form of dividends. On the other hand, it can be viewed as a kind act. The corporation may choose to reinvest the dividends shareholders receive.

Companies which are publicly listed are more focused upon generating profit for their shareholders. Everyone participating in the process must comprehend the significance and effects of various dividend policies since the profit is typically delivered to shareholders in the form of a dividend. The dividend policy of each firm varies, just like many other facets of business do. There is no clear-cut, right or incorrect approach to taking on the problem. Naturally, it is always

preferable to use concepts and theories that have been demonstrated to work in the actual world and to benefit the company.

Most private investors simply consider the entire dividend paid out for each share. That makes sense since the dividend itself represents a transfer of money from the corporation to the shareholder, which is a tangible asset. In addition to the actual dividend amount, it would be beneficial for individuals to know why the distribution was made.

Most of the time, people have no idea how the firm operates or what choices, such those involving dividends, are made within. Private investors should also have a deeper understanding of the critical elements to consider while making investing selections. The study conducted for this thesis contributes to our understanding of the challenges.

The relationship between dividend policy measures and share price volatility has been illuminated by this idea. Everybody who wants to learn more about the subject will find the knowledge gleaned from this research to be of potential use. People can better appreciate the relevance of various dividend policies and their ramifications since there is no association between dividend policy measurements and share price volatility.

5.2 Limitations and Suggestions for Further Research

The study's shortcomings are listed below.

- The study can cover five years, including 2020, which had seen a global meltdown in stock prices due to the COVID 19 pandemic.
- The NIFTY 100 index businesses is the only index included in the research.
- Only secondary data were used to conduct the research. The research contains all the drawbacks associated with secondary data.
- Price level fluctuations are not considered in the research.
- Only quantitative analysis served as the foundation for the results. There are some situations when qualitative factors are also quite important. The results in these situations may be deceptive.

An investigation of from several countries and their stock exchanges might be conducted to fully grasp any potential discrepancies between countries and their stock exchanges to further investigate this topic and to gain a more comprehensive and global knowledge of the problem.

All factors considered, it will be fascinating to watch how future research on dividend policy and share price volatility is conducted. Whether businesses and their decision-makers truly embrace and use the knowledge offered by all linked research is still an open question.

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Appendices

APPENDIX 1: Companies Analyzed

Table 1: List of Selected Companies

Company Name	Industry	Symbol
ACC Ltd.	Construction Materials	ACC
Adani Enterprises Ltd.	Metals & Mining	ADANIENT
Adani Ports and Special Economic Zone Ltd.	Services	ADANIPORTS
Ambuja Cements Ltd.	Construction Materials	AMBUJACEM
Apollo Hospitals Enterprise Ltd.	Healthcare	APOLLOHOSP
Axis Bank Ltd.	Financial Services	AXISBANK
Bajaj Auto Ltd.	Automobile and Auto Components	BAJAJ-AUTO
Bajaj Finance Ltd.	Financial Services	BAJFINANCE
Bajaj Finserv Ltd.	Financial Services	BAJAJFINSV
Bajaj Holdings & Investment Ltd.	Financial Services	BAJAJHLDNG
Bandhan Bank Ltd.	Financial Services	BANDHANBNK
Bank of Baroda	Financial Services	BANKBARODA
Berger Paints India Ltd.	Consumer Durables	BERGEPAINT
Bharat Electronics Ltd.	Capital Goods	BEL
Bharat Petroleum Corporation Ltd.	Oil Gas & Consumable Fuels	BPCL
Bharti Airtel Ltd.	Telecommunication	BHARTIARTL
Bosch Ltd.	Automobile and Auto Components	BOSCHLTD
Britannia Industries Ltd.	Fast Moving Consumer Goods	BRITANNIA
Cholamandalam Investment and Finance Company Ltd.	Financial Services	CHOLAFIN
Cipla Ltd.	Healthcare	CIPLA

Coal India Ltd.	Oil Gas & Consumable Fuels	COALINDIA
Colgate Palmolive (India) Ltd.	Fast Moving Consumer Goods	COLPAL
Dabur India Ltd.	Fast Moving Consumer Goods	DABUR
Divi's Laboratories Ltd.	Healthcare	DIVISLAB
Dr. Reddy's Laboratories Ltd.	Healthcare	DRREDDY
Eicher Motors Ltd.	Automobile and Auto Components	EICHERMOT
GAIL (India) Ltd.	Oil Gas & Consumable Fuels	GAIL
Godrej Consumer Products Ltd.	Fast Moving Consumer Goods	GODREJCP
Grasim Industries Ltd.	Construction Materials	GRASIM
HCL Technologies Ltd.	Information Technology	HCLTECH
HDFC Bank Ltd.	Financial Services	HDFCBANK
Havells India Ltd.	Consumer Durables	HAVELLS
Hero MotoCorp Ltd.	Automobile and Auto Components	HEROMOTOCO
Hindalco Industries Ltd.	Metals & Mining	HINDALCO
Hindustan Unilever Ltd.	Fast Moving Consumer Goods	HINDUNILVR
Housing Development Finance Corporation Ltd.	Financial Services	HDFC
ICICI Bank Ltd.	Financial Services	ICICIBANK
ICICI Lombard General Insurance Company Ltd.	Financial Services	ICICIGI
ICICI Prudential Life Insurance Company Ltd.	Financial Services	ICICIPRULI
ITC Ltd.	Fast Moving Consumer Goods	ITC
Indus Towers Ltd.	Telecommunication	INDUSTOWER
IndusInd Bank Ltd.	Financial Services	INDUSINDBK
Infosys Ltd.	Information Technology	INFY

InterGlobe Aviation Ltd.	Services	INDIGO
JSW Steel Ltd.	Metals & Mining	JSWSTEEL
Kotak Mahindra Bank Ltd.	Financial Services	KOTAKBANK
LTIMindtree Ltd.	Information Technology	LTIM
Larsen & Toubro Ltd.	Construction	LT
Mahindra & Mahindra Ltd.	Automobile and Auto Components	M&M
Marico Ltd.	Fast Moving Consumer Goods	MARICO
Maruti Suzuki India Ltd.	Automobile and Auto Components	MARUTI
MphasiS Ltd.	Information Technology	MPHASIS
Muthoot Finance Ltd.	Financial Services	MUTHOOTFIN
NTPC Ltd.	Power	NTPC
Nestle India Ltd.	Fast Moving Consumer Goods	NESTLEIND
Oil & Natural Gas Corporation Ltd.	Oil Gas & Consumable Fuels	ONGC
PI Industries Ltd.	Chemicals	PIIND
Pidilite Industries Ltd.	Chemicals	PIDILITIND
Power Grid Corporation of India Ltd.	Power	POWERGRID
Procter & Gamble Hygiene & Health Care Ltd.	Fast Moving Consumer Goods	PGHH
Reliance Industries Ltd.	Oil Gas & Consumable Fuels	RELIANCE
SRF Ltd.	Chemicals	SRF
Shree Cement Ltd.	Construction Materials	SHREECEM
Siemens Ltd.	Capital Goods	SIEMENS
State Bank of India	Financial Services	SBIN
Sun Pharmaceutical Industries Ltd.	Healthcare	SUNPHARMA
Tata Consultancy Services Ltd.	Information Technology	TCS
Tata Consumer Products Ltd.	Fast Moving Consumer Goods	TATACONSUM
Tata Power Co. Ltd.	Power	TATAPOWER
Tata Steel Ltd.	Metals & Mining	TATASTEEL

Tech Mahindra Ltd.	Information Technology	TECHM
Titan Company Ltd.	Consumer Durables	TITAN
Torrent Pharmaceuticals Ltd.	Healthcare	TORNTPHARM
UPL Ltd.	Chemicals	UPL
UltraTech Cement Ltd.	Construction Materials	ULTRACEMCO
Wipro Ltd.	Information Technology	WIPRO

Table 2: List of Selected Sectors

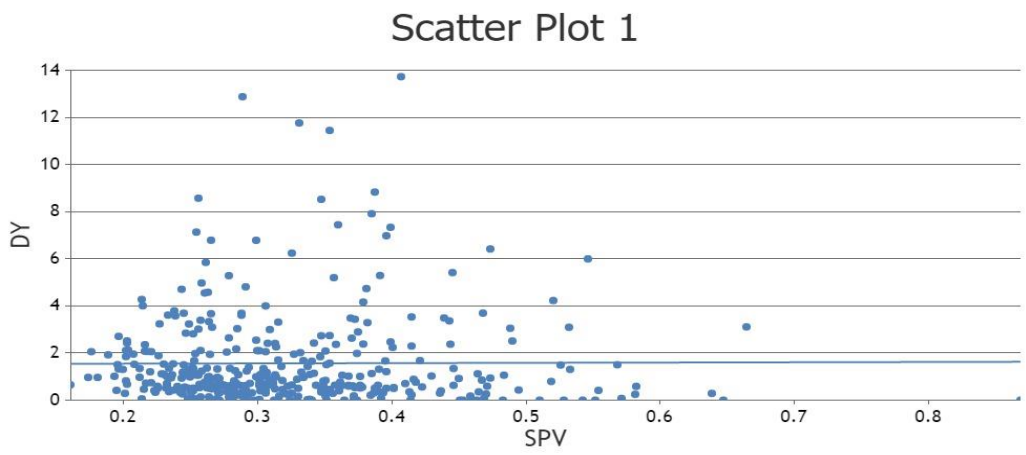
1	Automobile and Auto Components
2	Capital Goods
3	Chemicals
4	Construction
5	Construction Materials
6	Consumer Durables
7	Consumer Services
8	Fast Moving Consumer Goods
9	Financial Services
10	Healthcare
11	Information Technology
12	Metals & Mining
13	Oil Gas & Consumable Fuels
14	Power
15	Realty
16	Services
17	Telecommunication

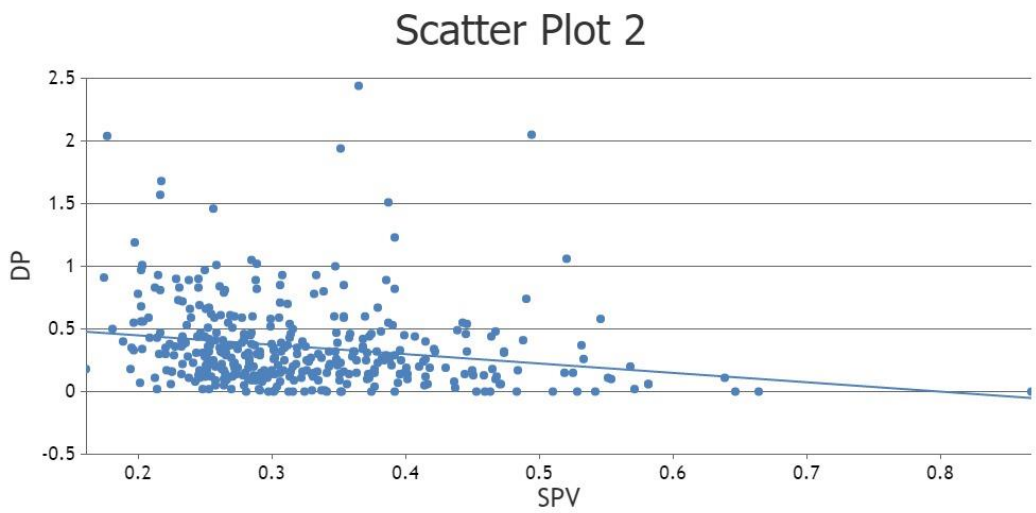
APPENDIX 2: Statistical and correlation tables for the entire data

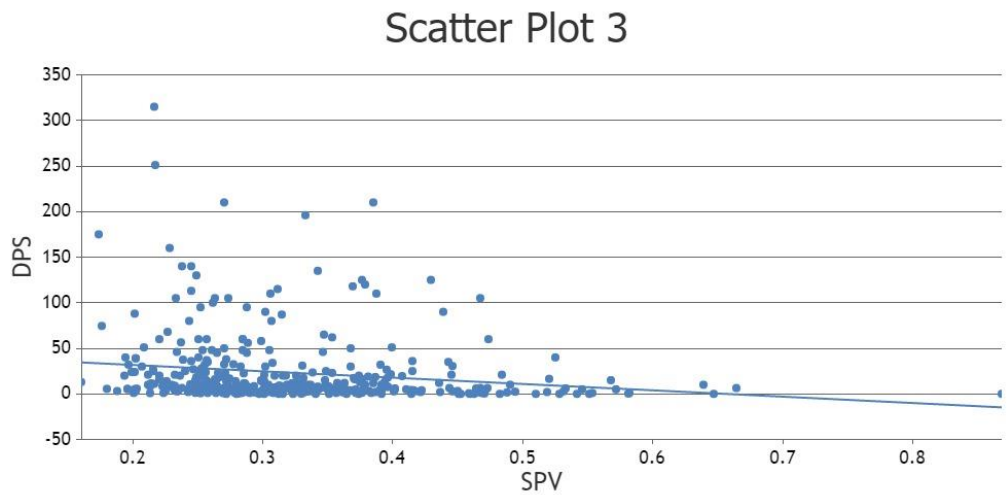
Table 3: Descriptive Statistics

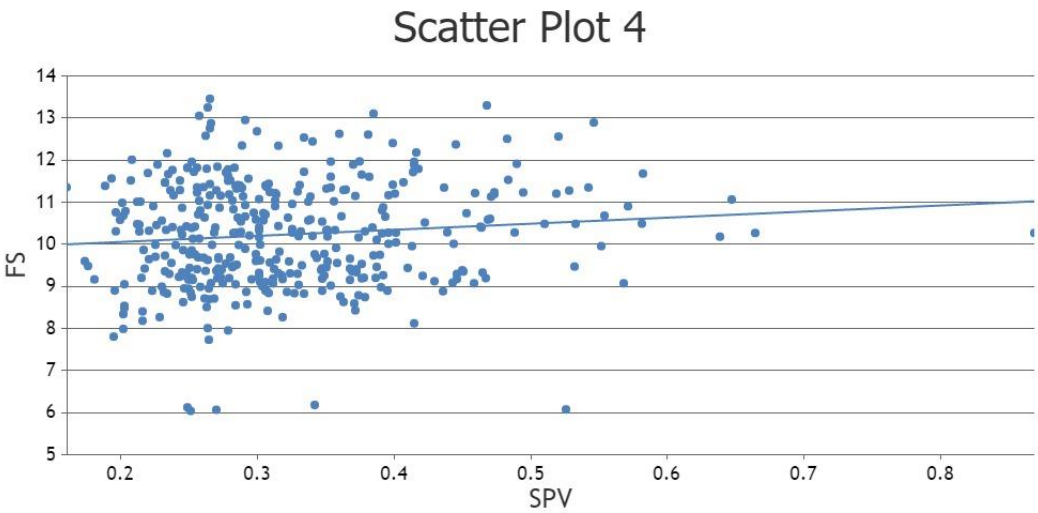
Variables	Obs	Mean	St.Dev.	Minimum	Maximum
Dividend Payout	380	0,357	0,338	0,000	2,440
Dividend Yield	380	1,562	1,976	0,000	13,726
Dividend Per Share	380	23,205	39,156	0,000	315,000
Leverage	380	0,269	0,285	0,000	0,900
Ln(Firm Size)	380	10,232	1,255	6,041	13,457
Share Price Volatility	380	0,323	0,094	0,161	0,869

Table 4 : Scatter Plot for Different Variables








Scatter Plot 4
FS
SPV
14
13
12
11
10
9
8
7
6
5
0.2
0.3
0.4
0.5
0.6
0.7
0.8

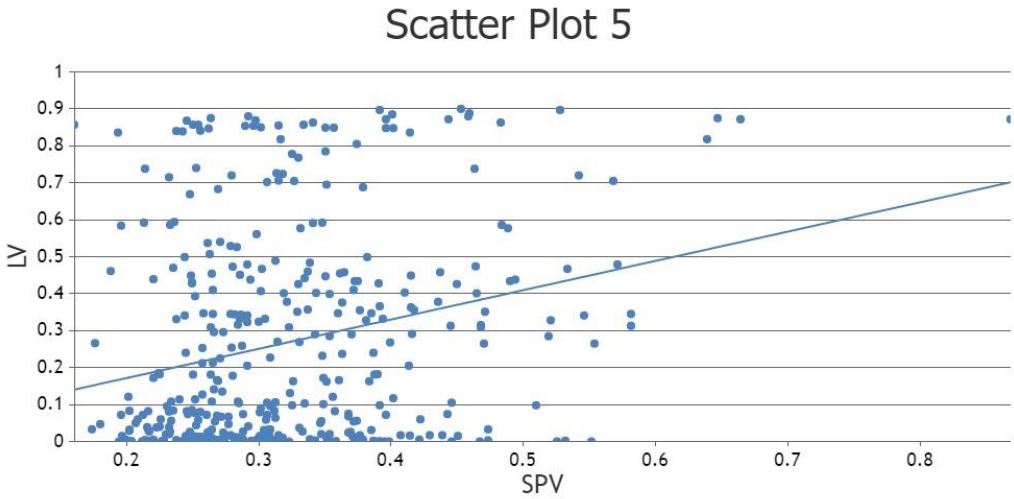

Scatter Plot 5
LV
SPV
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.2
0.3
0.4
0.5
0.6
0.7
0.8

Table 5: Correlation Analysis

	DY	DPR	DPS	FS	LEV	SPV
DY	1					
DPR	0,33	1				
DPS	0,137	0,387	1			
FS	0,29	-0,074	-0,215	1		
LEV	-0,096	-0,358	-0,332	0,312	1	
SPV	0,006	-0,207**	-0,167**	0,108*	0,261**	1

This table presents Pearson correlations above the diagonal. DPR is dividend payout ratio. DY is dividend yield. DPS is dividend per share. FS is firm size. LEV is leverage. SPV is the share price volatility.

The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level, ** denotes significance at the 0.05 (95 %) level and * denotes significance at the 0.10 (90 %) level

TABLE 6: VALUES OF VARIANCE INFLATION FACTOR

VARIABLE	VIF	1/VIF
DY	1,005	0,995
DPR	1,002	0,999
DPS	1,029	0,971
LEV	1,004	0,996
FS	1,001	0,999
MEAN VIF	1.008	

APPENDIX 3: Panel data analysis table for NIFTY 100 and the different sectors

Table 7: Panel Data Regression Analysis for Nifty 100

The dependent variable is the Stock Price Volatility (SPV) for the NIFTY 100 constitutes from 2018 to 2022. The Firm Size (FS) is standardized with natural logarithm. Panel data estimation methods were employed and ran all models both with random effects and fixed effects models. Each column presents the results from each model. The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level. ** denotes significance at the 0.05 (95 %) level. * Denotes significance at the 0.10 (90 %) level. The p-value is shown in parenthesis.

Variable	Pooled OLS	Fixed effect	Random effect
	(Coef)	(Coef)	(Coef)
C	0,316	0,249	0,308
	(0.000)	(0.315)	(0.000)
Dividend Payout	-0,038**	0,004	-0,027
	(0.016)	(0.815)	(0.354)
Dividend Yield	0,004	0,002	0,003
	(0.158)	(0.572)	(0.117)
Dividend Per Share	0.000	0,000	0,000
	(0.307)	(0.692)	(0.024)
Leverage	0,065***	0,016	0,068
	(0.000)	(0.087)	(0.648)
Ln(Firm Size)	0.000	0,0067	0,000
	(0.999)	(0.790)	(0.871)
No. of obs	380	380	380
R-square	0,091	0,362	0,060
	7.492	2.120	4.399

F-statistic/ Wald Chi2 of the model and P Value	0,000	(0.000)	0.000
Breush & Pegan Lagrange Multiplier Test	8.503**		
(Pooled VS Random)	(0.003)		
Hausman Specification Test (Fixed Vs Random)		9.084	
		(0,106)	

Table 8: Panel Data Regression Analysis for Automobile Sector

The dependent variable is the Stock Price Volatility (SPV) for the Automobile Sector in NIFTY 100 constitutes for the period of 2018 to 2022. The Firm Size (FS) is standardized with natural logarithm. Panel data estimation methods were employed and ran all models both with random effects and fixed effects models. Each column presents the results from each model. The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level. ** denotes significance at the 0.05 (95 %) level. * Denotes significance at the 0.10 (90 %) level. The p-value is shown in parenthesis.

VARIABLE	POOLED OLS	FIXED EFFECT	RANDOM EFFECT
	(Coef)	(Coef)	(Coef)
C	0.407	3.811	0.407
	(0.088)	(0,084)	(0.083)
DIVIDEND PAYOUT	0.081	0.059	0.081
	(0.269)	(0.287)	(0.260)
DIVIDEND YIELD	-0.015	0.043	-0.015
	(0.943)	(0.925)	(0.942)

DIVIDEND PER SHARE	0,000	0.000	0,000
	(0.820)	(0.303)	(0.817)
LEVERAGE	0.028	-1.505	0.028
	(0.620)	(0.106)	(0.614)
FIRM SIZE	-0.011	-0.338	-0.011
NO. OF OBS	30	30	30
R-SQUARE	0.176	0.370	0.176
F-STATISTIC/ WALD CHI2 OF THE MODEL AND P VALUE	1.027	1.117	1.027
	(0.424)	(0.399)	(0.424)
BREUSH & PEGAN LAGRANGE MULTIPLIER TEST	1.834 (0,175)		
(POOLED VS RANDOM)			
HAUSMAN SPECIFICATION TEST (FIXED VS RANDOM)		5.857(0.320)	

Table 9: Panel Data Regression Analysis for Finance Sector

The dependent variable is the Stock Price Volatility (SPV) for the Financial Services sector in NIFTY 100 constitutes for the period of 2018 to 2022. The Firm Size (FS) is standardized with natural logarithm. Panel data estimation methods were employed and ran all models both with random effects and fixed effects models. Each column presents the results from each model. The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level. ** denotes significance at the 0.05 (95 %) level. * Denotes significance at the 0.10 (90 %) level. The p-value is shown in parenthesis.

VARIABLE	POOLED OLS	FIXED EFFECT	RANDOM EFFECT
	(Coef)	(Coef)	(Coef)
C	0.527	-0,798	0.532

	(0.000)	0,358	0.000
DIVIDEND PAYOUT	0.008	(0,010)	(0.008)
	(0.290)	(0,247)	(0.288)
DIVIDEND YIELD	-0.057*	-0,114**	-0.062*
	(0.079)	(0,028)	(0.060)
DIVIDEND PER SHARE	0.000	0,001	0.000
	(0.892)	(0,591)	(0.832)
LEVERAGE	0.047	1,532*	0.048
	(0.347)	(0,078)	(0.360)
FIRM SIZE	-0.017	0,026	-0.017
	(0.173)	(0,665)	(0.177)
NO. OF OBS	75	75	75
R-SQUARE	0.080	0.328	0.080
F-STATISTIC/ WALD CHI2 OF THE MODEL AND P VALUE	1.201	1,416	1.212
	(0.318)	(0,158)	(0.312)
BREUSH & PEGAN LAGRANGE MULTIPLIER TEST	0,007 (0,931)		
(POOLED VS RANDOM)			
HAUSMAN SPECIFICATION TEST (FIXED VS RANDOM)		8.879(0.114)	

Table 10: Panel Data Regression Analysis for Healthcare Sector

The dependent variable is the Stock Price Volatility (SPV) for the Healthcare Sector in NIFTY 100 constitutes for the period of 2018 to 2022. The Firm Size (FS) is standardized with natural logarithm. Panel data estimation methods were employed and ran all models both with random effects and fixed effects models. Each column presents the results from each model. The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level. ** denotes

significance at the 0.05 (95 %) level. * Denotes significance at the 0.10 (90 %) level. The p-value is shown in parenthesis.

VARIABLE	POOLED OLS	FIXED EFFECT	RANDOM EFFECT
	(Coef)	(Coef)	(Coef)
C	0.407	3.811	0.407
	(0.008)	(0,084)	(0.083)
DIVIDEND PAYOUT	0.081	0.059	0.081
	(0.066)	(0,2272	(0.061)
DIVIDEND YIELD	-0.015	0.043	-0.015
	(0.269)	(0,2087)	(0.260)
DIVIDEND PER SHARE	0.000	0,000	0.000
	(0.943)	(0,9259	(0.942)
LEVERAGE	0.028	-1.5055	0.028
	(0.124)	(0,303)	(0.817)
FIRM SIZE	-0.010	-0.338	0.010
	(0.620)	(0,106)	(0.614)
NO. OF OBS	30	300	30
R-SQUARE	0.176	0.370	0.176
F-STATISTIC/ WALD CHI2 OF THE MODEL AND P VALUE	1.026	1.117	1.026
	(0.424)	(0,398)	(0.424)
BREUSH & PEGAN LAGRANGE MULTIPLIER TEST	1.839(0.175)		
(POOLED VS RANDOM)			
HAUSMAN SPECIFICATION TEST (FIXED VS RANDOM)		5.857(0.320)	

Table 11: Panel Data Regression Analysis for Information Technology Sector

The dependent variable is the Stock Price Volatility (SPV) for the Information Technology Sector in NIFTY 100 constitutes for the period of 2018 to 2022. The Firm Size (FS) is standardized with natural logarithm. Panel data estimation methods were employed and ran all models both with random effects and fixed effects models. Each column presents the results from each model. The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level. ** denotes significance at the 0.05 (95 %) level. * Denotes significance at the 0.10 (90 %) level. The p-value is shown in parenthesis.

VARIABLE	POOLED OLS	FIXED EFFECT	RANDOM EFFECT
	(Coef)	(Coef)	(Coef)
C	0.677	-0,870	0.677
	(0.000)	(0,369)	(0.000)
DIVIDEND PAYOUT	0.129	0,124	0.129
	(0.127)	(0,267)	(0.146)
DIVIDEND YIELD	-0.020	-0,003	-0.020
	(0.199)	(0,874)	(0.222)
DIVIDEND PER SHARE	-0.001	-0,002	-0.001
	(0.359)	(0,190)	(0.382)
LEVERAGE	-0.420	-0,910	-0.420
	(0.131)	(0,123)	(0.150)
FIRM SIZE	-0.032**	0,117	-0.032
	(0.005)	(0,215)	(0.007)
NO. OF OBS	35	35	35

R-SQUARE	0.363	0,418	0.363
F-STATISTIC/ WALD CHI2 OF THE MODEL AND P VALUE	3.306	1,655	3.306
	(0.017)	(0,148)	(0.017)
BREUSH & PEGAN LAGRANGE MULTIPLIER TEST	3,720 (0,054)		
(POOLED VS RANDOM)			
HAUSMAN SPECIFICATION TEST (FIXED VS RANDOM)		3,177(0,672)	

Table 12: Panel Data Regression Analysis for FMCG sector

The dependent variable is the Stock Price Volatility (SPV) for the FMCG Sector in NIFTY 100 constitutes for 2018 to 2022. The Firm Size (FS) is standardized with natural logarithm. Panel data estimation methods were employed and ran all models both with random effects and fixed effects models. Each column presents the results from each model. The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level. ** denotes significance at the 0.05 (95 %) level. * Denotes significance at the 0.10 (90 %) level. The p-value is shown in parenthesis.

VARIABLE	POOLED OLS	FIXED EFFECT	RANDOM EFFECT
	(Coef)	(Coef)	(Coef)
C	0.195	0,136	0.199
	(0.071)	(0,828)	(0.088)
DIVIDEND PAYOUT	-0.103***	-0,087**	-0.104***
	(0.003)	(0,082)	(0.003)
DIVIDEND YIELD	0.017*	0,037**	0.019*
	(0.097)	(0,021)	(0.075)
DIVIDEND PER SHARE	0.000*	0,000	0.000*

	(0.059)	(0,524)	(0.066)
LEVERAGE	0.237*	0,040	0.235*
	(0.057)	(0,863)	(0.069)
FIRM SIZE	0.009	0,012	0.008
	(0.441)	(0,854)	(0.509)
NO. OF OBS	50	50	
R-SQUARE	0.208	0,390	0.197
F-STATISTIC/ WALD CHI2 OF THE MODEL AND P VALUE	2.313	1,600	2.157
	(0.060)	(0,128	(0.076)
BREUSH & PEGAN LAGRANGE MULTIPLIER TEST (POOLED VS RANDOM)	0,245(0,620)		
HAUSMAN SPECIFICATION TEST (FIXED VS RANDOM)		5.042(0.411)	

Table 13: Panel Data Regression Analysis for Nifty 100 Without Financial Sector

The dependent variable is the Stock Price Volatility (SPV) for the NIFTY 100 without Financial Firms constitutes for 2018 to 2022. The Firm Size (FS) is standardized with natural logarithm. Panel data estimation methods were employed and ran all models both with random effects and fixed effects models. Each column presents the results from each model. The asterisks denote the significance level. *** denotes significance at the 0.01 (99%) level. ** denotes significance at the 0.05 (95 %) level. * Denotes significance at the 0.10 (90 %) level. The p-value is shown in parenthesis.

VARIABLE	POOLED OLS	FIXED EFFECT	RANDOM EFFECT
	(Coef)	(Coef)	(Coef)
C	0.285	0.234	0.275
	(0.0000)	(0,387)	(0.000)
DIVIDEND PAYOUT	-0.0353***	0,009	-0.021
	(0.025)	(0.609)	(0.177)
DIVIDEND YIELD	0.002	0,004	0.002
	(0.376)	(0,346)	(0.398)
DIVIDEND PER SHARE	0.000	0.00	0.000
	(0.675)	(0,790)	(0.629)
LEVERAGE	0.14***	-0,008	0.111**
	(0.000)	(0.917)	(0.000)
FIRM SIZE	0.000	0,007	0.002
	(0.6299)	(0,775)	(0.6235)
NO. OF OBS	305	305	305
R-SQUARE	0.126	0,413	0.078
F-STATISTIC/ WALD CHI2 OF THE MODEL AND P VALUE	8.665	2.588	5.072
	(0.000)	(0.000)	(0.000)
BREUSH & PEGAN LAGRANGE MULTIPLIER TEST	9.682*** (0.001)		
(POOLED VS RANDOM)			
HAUSMAN SPECIFICATION TEST (FIXED VS RANDOM)		13.498(0.019)	