

IMPACT OF DIVIDEND POLICY ON SHARE PRICE: A STUDY ON SELECT OIL AND GAS COMPANIES IN INDIA

Deboraj Das¹, Ram Chandra Das²

¹Department of Commerce, Assam University, Silchar, Assam, India.
Email: deboraj789@gmail.com

²Department of Commerce, Assam University, Silchar, Assam, India.
Email: ramchandra3112@gmail.com

Abstract: The impact of dividend policy on share price has been a widely debated topic in financial research. This study has made an attempt to investigate the impact of dividend policy on the market share price of the selected companies in the study. For the purpose of the study, eight companies belong to Oil and Gas sector has been considered based on the availability of the data from the year 2014-15 to 2023-24. This study employed panel regression models like fixed effect model and random effect model. Finally, study established that dividend yield and dividend pay-out ratio significantly impact the share price.

Keywords: Dividend policy, share price, dividend pay-out ratio, dividend per share, dividend yield.

1. Introduction

Dividend policy has been a polarizing topic in the corporate finance. Consistent with Biermen(2001), Watson & Head(2010) stated seizure of profits that are apportioned among shareholder after fulfilling the due fixed interest and tax is called dividend. Black (1976) concluded that dividend policy is a puzzle, further Mayers (2003) stated this puzzle as one of the top 10 challenges in the corporate Finance. Thus selecting a perfect dividend policy is crucial task for the management of company (Khan, 2012). Further it becomes more critical as the shareholders need differ, some prefer regular cash where as other prefer their money to be used for future investment (Gupta et.al. 2011).

The relationship between dividend policy and the share price has been a controversy among policy makers and management (Raza & et.al. 2018). Mayron Gordon is one of the pioneer of the fact that the dividend policy is relevant with the stock price (Gordon,1956), also Fama et.al. (1996) concluded that the dividend policy is either positively or negatively is related to stock price, nonetheless scholars like Miller and Modigliani (1961) argued that the dividend policy is irrelevant to stock price valuation.

Different issues relating to dividend policy have been studied in the past (e.g. Black, 1976; DeAngelo et al., 1996; Miller & Modigliani, 1961). Except for the theories on dividend payment (such as stakeholders, pecking order, agency cost, signalling, bird-in-hand fallacy and clientele effect), some of the major issues these past studies examined are related to the insignificance of dividend policy (Miller & Modigliani, 1961), the puzzle in dividend payment (Black, 1976), as well as the relevance of dividend policy (DeAngelo et al., 1996). However, the popularity of dividend policy in recent studies is due to other issues which are related to separation of ownership and control and information asymmetry (Al-Malkawi, 2007; Hussainey et al., 2011).

Black & Scholes contend that company's interest in increase of its share price leads to their payment of dividend. Dividend is signal to the financial health of a company. Optimising between paying out cash dividend and reinvestment is a significant task of management. Thus dividend is negative function which is associated with the cash follow, on other hand it is a positive function with is relevant with the profitability of a company (Imran, 2011). Companies with handsome net worth maintain a stable dividend policy (Raghunathan & Parbin, 1999).



Oil and gas sector of India is highly volatile due to various external and internal trade policies, here this study in line with the previous researches tends to investigate the impact of dividend policy on share price of the select Oil and Gas companies in India.

2. Literature Review

Onyekwelu et.al. (2019) randomly selected four oil and gas companies of Nigeria to study how the dividend pay-out associates with the changes in share price of the selected oil and gas companies. This ex-post facto research revealed that the DPR and Total Assets have a positive effect on share price, thus suggested that, the management must maintain their dividend policy and look forward for increasing dividend pay-out so that it enhances the investors' confidence. Consistent results are also found in the study of Arini(2024) which concluded that consistent dividend signal positive company performance, potentially results in increasing of buying activity in market as it enhance investor confidence. Bhatti (2023) advocates the relevance of dividend pay-out with share price valuation, proxies of dividend policy significantly correlates with share price while PAT does not reveal any positive relationship with share price. Lamyaa, Meriam & Karima (2023) studied the companies listed on Casablanca Stock Exchange, the results were consistent with the relevance theory as its posits that the dividend per share influences the share price. Study of Vutale & Chen (2018) concluded that share price of the listed companies in Nairobi Stock Exchange revealed that both dividend pay-out and dividend per share impacts the share price of the companies. Shahid, Inam & Ghaffar on investigation of the automobile sector in Pakistan found that the dividend pay-out per share influences the share price, advocated that consistent dividend payment leads to progressing of share price valuation. Bachmeier (2023) focused on studying the influence of dividend policy on stock valuation of selected 34 companies of S&P 100. The study revealed that dividend yield being a proxy of dividend policy had a significant effect on share price whereas the dividend pay-out didn't showed any significant impact on share price partially supporting the relevance theory. Goud(2023) examined association of dividend policy with share price of 260 non-financial companies listed in Bombay Stock Exchange. Panel data models FEM and REM were employed. The FEM model revealed that there is a significant negative relationship among dividend pay-out and share price. Ranjan (2024) examining the dividend policy of 596 companies listed in NSE concluded that investors in India supports the Bird hand theory as they prefer immediate cash in hand rather future capital gains.

2.1 Research Gap

Despite extensive global research on the relationship between dividend policy and share prices, there is a significant gap in sector-specific studies, particularly concerning the Indian Oil and Gas industry. While prior literature has explored dividend relevance in developed markets like US. The unique dynamics of Indian Oil and Gas sectors- such as heavy government regulations, fluctuating global crude prices and varying investor expectations- have not been sufficiently examined. Thus this paper aims to bridge this gap by analysing how dividend policy impacts share price of the companies of oil and gas industry in India.

2.2 Objective of the study

To investigate the impact of dividend policy on share price of the select companies in Indian stock market.

2.3 Hypothesis

Dividend policies have no significant impact on the share price of the selected companies.

3. Research methodology

This study is an empirical research, it tends to investigate the impact of dividend policy on share price of the selected companies in the Oil and Gas sector in India. There are ten companies listed in BSE under Oil and Gas sector in India, out of them, eight companies are being selected as shown in the table below based on the availability of data for the study period. The study period starts post amendment of Companies Act 1956, 2014-15 to 2023-24 covers a period of ten years. Dividend policy practices policy describes what amount of dividend should be paid, when to release dividend and in which form (Iftikhar, Raja & Sehran 2017). The indicators that reflect the dividend policy of a company are Dividend Pay-out Ratio, Dividend Per Share (Gautam ,2021; Litzenberger & Ramaswamy,1979. The panel regression model fixed effect model and random effect model has been estimated to investigate the impact of dividend policy on share price. In these models Share Price (SP) is considered as dependent variable while dividend yield (DY), dividend pay-out ratio (DPR) are the independent variable and return on equity (ROE), leverage (LEV), earnings per share (EPS), profit after tax (PAT) are considered as the control variables.

3.1 Panel Regression Model

$$SP_{it} = \beta_0 + \beta_1 DY_{it} + \beta_2 DPR_{it} + \beta_3 ROE_{it} + \beta_4 LEV_{it} + \beta_5 EPS_{it} + \beta_6 PAT_{it} + \epsilon_{it}$$

Where,

Share Price (SP_{it}) = Share price of the firm i at time t

Dividend Yield (DY) = the annual dividend payment expressed as a percentage of the stock's current price.

Dividend Pay-out Ratio (DPR) = the ratio of earnings earned by a company during a financial year distributed to shareholders as dividends.

Return on equity (ROE) = it is the percentage of profit after tax to shareholders equity.

Leverage (LEV) = indicates the debt-equity ratio of the company

Earnings per Share (EPS) = the portion of a company's profit allocated to each outstanding share of common stock.

Profit after Tax (PAT) = represents the net earnings of the company after tax available for shareholders.

Data for study has been collected from CMIE ProwessIQ, annual reports of the selected companies and websites like money control and yahoo finance. For statistical computation R software was used in this study.

Table 1: Name of the Selected Companies

Sl. No	Name of the Companies
1.	Reliance Industries Ltd
2.	Oil & Natural Gas Corporation Ltd (ONGC)
3.	Indian Oil Corporation Ltd (IOC)
4.	Bharat Petroleum Corporation Ltd (BPCL)
5.	GAIL (India) Ltd
6.	Indraprastha Gas Ltd (IGL)
7.	Petronet LNG Ltd
8.	Oil India Ltd (OIL)

3.2 Data Analysis and Interpretation

This section presents a detailed analysis of the panel data collected for eight oil and gas companies in India over a period of 10 years (2014-15 to 2023-24 sorted as 2015-2024). The analysis begins with investigating the impact of dividend policy on share price.

3.3 Multicollinearity

To assess potential multicollinearity among the independent variables, variance inflation factor (VIF) and tolerance values were calculated as follows.

Table 2: Variance Inflation Factor (VIF) and Tolerance Values

Predictor Variable	Tolerance	VIF
Dividend Yield (DY)	0.304	3.295
Dividend Payout Ratio (DPR)	0.27	3.699
Earnings Per Share (EPS)	0.514	1.945

Profit After Tax (PAT)	0.548	1.825
Leverage (LEV)	0.898	1.114
Return on Equity (ROE)	0.812	1.231

Source: author computation

The results, shown in table 2, indicate that all VIF values are below the commonly used threshold of 5, suggesting the absence of severe multicollinearity. The highest VIF was observed for DPR (3.699) and DY (3.295), indicating moderate correlation with other variables. However, these values do not exceed the critical level and thus the regression coefficients are considered stable and interpretable, supported by tolerance values, all above 0.2.

3.3 Unit Root Test

The stationarity of variables in the panel dataset was examined using two panel unit root tests: Levin-Lin-Chu (LLC) test and Im-Peasaran-Shin (IPS) test. The LLC results indicate that most of the variables are stationary except the EPS. Further in the IPS test all the variables were found stationary. Along with the consistency of results among both the test it is confirmed that there is absence of unit roots in these series, implying they are suitable for panel regression techniques.

Table 3: Unit Root Test Summary

Variable	LLC p-value	Stationary	IPS p-value	Stationary
SP	0.0026	Yes	0.0039	Yes
DPR	0.0063	Yes	0.0021	Yes
DY	0.0007	Yes	0.0163	Yes
EPS	0.0721	No	0.0116	Yes
PAT	0.0067	Yes	0.0027	Yes
ROE	0.0022	Yes	0.0002	Yes
LEV	0.0015	Yes	0.0121	Yes

Source: author computation

To investigate the impact of dividend policy on share price we employed the panel regression models namely fixed effect model and random effect model.

The below table 4 presents the estimated coefficients and significance levels of each explanatory variable for both FEM and REM. The results reveal that DPR and EPS have a positive and statistically significant impact on stock price (SP) in both the models, implying that companies with higher dividend pay-out ratio and profits tends to experience increased stock price. In contrast, DY has a strong negative and highly significant effect in both the models, suggesting that high yield may be perceived as a signal of low growth potential.

Other variables like LEV, ROE are insignificant and PAT shows weak significance only under the REM model.

Table 4: FEM and REM coefficients

Variable	FEM			REM			Sign of β
	coefficient	p-value	significance	coefficient	p-value	significance	
DPR	0.4425	0.000	***	0.4691	0.000	***	+

DY	-0.5777	0.000	***	-0.8019	0.000	***	-
EPS	0.2622	0.001	**	0.4923	0.000	***	+
LEV	-0.0146	0.672	NS	0.0271	0.339	NS	+/-
PAT	0.0600	0.413	NS	0.0696	0.045	*	+
ROE	0.0090	0.844	NS	-0.0147	0.707	NS	+/-

Significance Codes:***p<0.001,**p<0.01,*p<0.05, NS=Not Significant

Source: author computation

The below table 5 compares the goodness-of-fit metrics of the FEM and REM. The REM reveals higher R-squared (0.8983) than FEM (0.5008), indicating that it explains more of the overall variance in stock price.

Table 5:Model Fit Statistics

Metric	Fixed Effects Model (FEM)	Random Effects Model (REM)
R-squared	0.5008	0.8983
Adjusted R-squared	0.4025	0.8899
p-value	0.0000	0.0000

Source: author computation

Further diagnostic test were done, the hausman test confirms that FEM is statistically preferred over REM, the Breusch-Godfrey Test reveals there is no significant serial correlation in both the REM and FEM.

Table 6:Post-hoc Test Summary

Test type	Model	Test Statistic	p-value	Conclusion
Hausman Test	FEM vs REM	X ² = 31.854	0.000	FEM is preferred
Breusch-Godfrey Test	FEM	X ² =17.394	0.066	No serial correlation
	REM	X ² =10.574	0.391	No serial correlation
Breusch-Pagan Test	FEM	X ² =56.663	0.000	Heteroskedastic
	REM	X ² =56.663	0.000	Heteroskedastic

Source: author computation

The Breusch-Pagan Test reveals that there is a strong evidence of heteroscedasticity in both FEM and REM. To address this issue, we applied robust standard errors using Arellano-type heteroskedasticity-consistant covariance matrix estimator (vcovHC with HC1). This adjustment ensures our coefficient estimates remain consistent and statistical inferences are valid despite the presence of heteroscedasticity.

Table 7:Robust results

Variable	FEM		REM	
	p-value	significance	p-value	significance
DPR	0.009	**	0.040	*
DY	0.000	***	0.000	***
EPS	0.314	NS	0.001	**

LEV	0.657	NS	0.270	NS
PAT	0.546	NS	0.028	*
ROE	0.782	NS	0.627	NS

Significance Codes:***p<0.001,**p<0.01,*p<0.05, NS=Not Significant

Source: author computation

Upon applying the robust standard errors DPR and DY remained statistically significant in both REM and FEM, EPS and PAT were found significant in REM only, ROE and LEV remained insignificant in both the models. Thus we can state that similar results were observed across both FEM and REM after correcting for heteroscedasticity, with DPR and DY emerging consistently significant predictors of share price.

4. Conclusion

This study examined the impact of dividend policy across selected companies in the Indian oil and gas sector. The empirical findings demonstrate that dividend pay-out ratio has a positive and statistically significant impact on share prices in both FEM and REM models, reinforcing the relevance theory as argued by Gordon (1965) and other proponents of dividend relevance theories. Conversely, dividend yield exhibited a negative and highly significant relationship with share prices, indicating that higher yields might be perceived by investors as signals of limited growth opportunities or declining future. Thus we can conclude that dividend policy significantly impacts their stock performance, reaffirming its critical role in corporate financial strategy.

References

1. Al-Malkawi, H. N. (2007). Determinants of corporate dividend policy in Jordan: An application of the Tobit model. *Journal of Economic and Administrative Sciences*, 23(2), 44-70.
2. Arini, L. S. Analysis of the Influence of Dividend Policy on Changes in Stock Prices in Manufacturing Companies Listed on the IDX. *International Journal of Social Health*, 3(9).
3. Bachmeier, M. (2022). The effect of dividend policy on stock price volatility: empirical analysis of the S&P 100 (Doctoral dissertation, Technische Hochschule Ingolstadt).
4. Bhatti, A. A., Patoli, A. Q., & Kumar, T. (2023). Dividend Policy and its Impact on Market Price: An Empirical Study of Chemical Sector. *Journal of Development and Social Sciences*, 4(2), 316-326.
5. Bierman H.(2001) Increasing Shareholder Value: Distribution Policy, a Corporate Finance Challenge: Springer Science & Business Media.
6. Black, F. (1976). The dividend puzzle. *Journal of Portfolio Management*, 2(2), 5-8.
7. DeAngelo, H., DeAngelo, L., & Skinner, D. J. (1992). Dividends and losses. *The Journal of Finance*, 47(5), 1837-1863.
8. Gordon, M. J. (1962). *The Investment, Financing, and Valuation of the Corporation* Homewood. Illinois: Irwin Publishers.
9. Hussainey, K., Mgbame, C. O. & Chijoke-Mgbame, A. M. (2011). Dividend policy and share price volatility: UK evidence. *The Journal of Risk Finance*, 12(1), 57-68. <https://doi.org/10.1108/15265941111100076>
10. Imran, K. (2011). Determinants of Dividend Pay-out Policy: A Case of Pakistan Engineering Sector. *The Romanian Economic Journal*, 41(1), 47-60.
11. Lamyaa R., Meriam D. & Karima T. (2023). Dividend Pay-out Policy and Share Price: A Study of Listed Firms in Morocco. *European Scientific Journal*, ESJ, 19 (4), 28. <https://doi.org/10.19044/esj.2023.v19n4p28>
12. Litzenberger, R.H. & Ramaswamy, K. (1979). The effect of personal taxes and dividends on capital asset prices: theory evidence. *Journal* [https://doi.org/10.1016/0304-405X\(79\)90012-6](https://doi.org/10.1016/0304-405X(79)90012-6)
13. Miller, M. H., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *The Journal of Business*, 34(4), 411-433.
14. Myers, S. C. (2003). Financing of corporations. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the Economics of Finance* (Vol. 1, pp. 215–253). Elsevier. [https://doi.org/10.1016/S1574-0102\(03\)01008-2](https://doi.org/10.1016/S1574-0102(03)01008-2)
15. Onyekwelu, U. H., Lucy, U., & Onwe, O. G. (2019). Effect of retained earnings, dividend pay-out and total assets on market share price of oil and gas firms in Nigeria. *Journal of Accounting Information and Innovation*, 5(6), 1-17.
16. Raghunathan, V., & Prabina, D. (1999). Corporate Performance: Post Liberalization. *ICFAI Journal of Applied Finance*, 5(2), 6-31.
17. Shahid, S., Inam, S. G., & Ghaffar, A. (2020). Better dividend policy effects share price volatility: An empirical study on automobile sector of Pakistan. *Jinnah Business & Economics Research Journal (JBERJ)*, 1(2), 83-95.
18. Vutale, A. V., & Chen, B. (2018). The effects of dividend policy on market share price of the listed companies at the Nairobi Securities Exchange (NSE) in Kenya. *Research Journal of Finance and Accounting*, 9(3), 23–31.
19. Watson D, Head A. (2010) *Corporate finance: principles and practice*: Pearson Education