

# FIRM'S CHARACTERISTICS AND BOARD COMPOSITION IMPACT ON DIVIDEND POLICY: A STUDY ON ROLE OF CRISIS (PANDEMIC) PERIOD IN INDIAN CONTEXT

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**Abstract** *The global pandemic has weakened the company's financial stability and slowed the economy. Using 241 Indian-listed companies of the BSE (A Group) for 5 years (i.e., 2017–2021), the study aims to examine the moderating role of the pandemic crisis on the dividend policy and its determinants associations. Applying the regression technique, the study reveals that profitability, liquidity, leverage, firm size and board independence have significant impact on dividend policy for the Indian listed businesses. However, the overall findings of the study suggest that the instability in the economic condition that occurred for the years 2020 and 2021 has weakened the association of free cash flows, the board size, CEO duality, and board independence with the dividend policy in India. The study also reports the positive impact of the crisis on dividend policy; accordingly, it implies that Indian firms may prefer to pay dividends during the crisis period to calm investors and restore their confidence. Relatively a low relationship between free cash flows and the state of the economy with the dividend policy is an indicator of serious agency problems.*

**Keywords:** *Dividend Policy, Pandemic, Bombay Stock Exchange, Firm Characteristics, Board Composition, Moderating Effect*

## INTRODUCTION

Any organisation's financial strategy is based on three inter-related choices: investment, financing, and dividend selections. The ultimate goal of any business is the maximisation of shareholders' wealth, which is accomplished by providing them with appropriate returns in the form of dividends in exchange for the risk they embarked on. As a result, the dividend is frequently regarded as a crucial component of business strategy. There is extensive literature on DP drivers with an emphasis on India (Singla & Samanta, 2018), Priya and Mohansundari (2016). Indian corporations are required to disclose their dividend plan and retention funds plan as part of the obligatory disclosure policy (Singla & Samanta, 2018; Bhayani & Ajmera, 2021; Bhayani, 2020). Studies have shown that even while businesses are profitable, they do not consistently pay dividends (Mehdi et al., 2017; Jabbouri, 2016). Knowing the drivers of the DP of the corporations is prompted by their irregular dividend-paying practises.

Additionally, a significant factor in dividend distribution is the quality of governance. The agency dilemma and information asymmetry that the enterprises must deal with are impacted by the governance system's quality. As a result, the board composition has been regarded in the current study as the primary factor influencing the dividend policy since it affects the manager's incentives, improving the financial performance of the firms (Mehdi et al., 2017; Boshnak, 2021). The board is made up of internal and external directors, and it usually adds the components of independence and duality, which have an impact on the company's choice of dividends. Therefore, the current study examines board composition in order to determine how it affects dividend policy.

India is one of the world's economies that is growing the quickest. According to Agarwal (2021), there has been a noticeable increase in investor activity in the Indian capital market. More specifically, the survey revealed that the pandemic has had an influence on investors' global financial situations. Due to the pandemic, many businesses are forced

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to forgo or reduce dividends even in India. As a result, the global economy is affected, and India is no exception (Agarwal, 2021). India's Gross Domestic Product growth rate was 6.5 in 2018 and dropped to 3.7 in 2019, before experiencing a sharp decline to -6.6 in 2020 (World Bank, 2021). Furthermore, the growing doubts about how long the crisis will last forced corporate boards to make a number of challenging decisions about dividend payments while taking into account the expectations of the shareholders and the company's earnings for the year (Paine, 2020). The negative effects of the crisis on the dividend behaviour of nations like India, Indonesia, and Pakistan have also been well-established in the literature already in existence (Agarwal, 2021; Tinungki et al., 2021; Ali, 2021). In line with previous research, the current studies examine the factors influencing the DP of Indian enterprises while observing the impact of the pandemic crisis.

Despite the theoretical underpinnings of the DP and the extensive research in this field that has concentrated on dividend payout determinants, this topic continues to be one of the most contentious and hotly disputed ones in both academia and corporate finance. The current study is groundbreaking because it uses the pandemic crisis as a moderator to examine the DP and its relationships with market factors in India. The following research questions are examined in this study:

- How do a firm's characteristics and its board structure relate to the DP?
- What effect do board structure and company characteristics have on the DP?
- How has the pandemic crisis affected the DP and its relationships with its determinants?

This paper aims to address three specific objectives based on the aforementioned research questions: (a) to identify the relationship between firm characteristics and board composition and dividend policy; (b) to investigate the effect of firm characteristics and board composition on dividend policy; and (c) to measure the moderating impact of the pandemic crisis on both the relationship between firm characteristics and dividend policy as well as the relationship between board composition and dividend policy. The paper's summary is organised as follows: The literature review is described in Section 2 along with the formulation of the hypothesis. The conceptual framework is presented in Section 3, and the research technique is presented in Section 4. Section 5 presents the conclusions reached after the discussions in Section 6. The results' level of robustness is described in Section 7. While Section 9 discusses the study's constraints and potential avenues for future research, Section 8 provides the study's implications. The study concludes in Section 10.

## REVIEW OF LITERATURE AND DEVELOPMENT OF HYPOTHESIS

The breadth of the literature examined the variables that influence the DP, which differ across emerging markets. In this study, the impact of the firm's characteristics and the board's composition on dividend payment policy were examined in the national and international literature on dividend policies. In light of the literature reviews, the study retrieved important explanatory variables to reveal the factors that influence the DP. Accordingly, the hypothesis has been evolved. Liquidity, leverage, free cash flows and the state of the economy are the key variables connected to the characteristics of the firms. Board independence and CEO duality are two variables that are chosen to reflect the board makeup. The study also seeks to understand how the pandemic crisis and dividend policy have affected Indian firms. In addition, the current study analyses the control variables and examines how they affect dividend policy.

### Liquidity

The key determinant of a company's dividend policy is liquidity. The lack of liquidity prevents the company from paying dividends. Prior research by Jabbouri (2016) and Kim et al. (2007) made it clear that the cash position of the company is more crucial to the corporate dividend policy than its earnings. According to Najjar and Hussainey (2009), businesses with strong liquidity pay bigger dividends than those with cash flow problems. Liquidity was highlighted by Singla and Samanta (2018), who also proved its significance and the strong correlation with the DP. The developed hypothesis is as follows in light of the provided arguments:

*H<sub>1</sub>: Liquidity is positively and significantly impacted to the DP.*

### Leverage

Researchers Boshnak (2021), Mehdi et al. (2021), Jabbaour (2016), and Singla and Samanta (2018) looked into how leverage and dividend policy interacted. Boshnak (2021) and Najjar and Huassainey (2009) studies both supported the argument that leverage has a detrimental effect on dividends. In contrast, Kim et al. (2007) and Amahalu et al. (2017) shown the substantial influence of leverage on dividend policy. Jabbori (2016) stated that maintaining the necessary cash level will lessen daily needs. Additionally, he said that companies with a lot of debt would rather reduce their payout. According to Das et al. (2021), reducing debt can help with agency issues and information asymmetry. As a

result, high-levered companies are less sensitive to dividend payments than low-levered companies. The following is the hypothesis:

*H<sub>2</sub>: Leverage is positively and significantly impacted to the DP.*

## Free Cash Flows

Singla and Samanta (2018) investigated the factors influencing the dividend policies of Indian construction businesses. Dividend payments had a favourable impact on the firm's size, profitability and life cycle; however, they had a negative impact on cash flow. According to Kamat and Kamat (2016), dividend payments lower FCF. The study formulates the following hypothesis to assess the effect of the FCF on dividends:

*H<sub>3</sub>: Free cash flows are positively and significantly impacted to the DP.*

## State of Economy

Kamat and Kamat (2013) sought to determine if stable dividend policies are followed by the private sector and what factors influence this. The study found that payouts were less consistent with the rapidly expanding economic environment. The stock market's performance reflects changes in DP that are mostly brought on by national macroeconomic conditions (Jabbouri, 2016). Management may alter its decisions about financing and dividends in light of the current economic situation. Furthermore, Jabbouri (2016) makes it clear that the economic climate has an impact on the signalling power of dividends. Dividend is thought to be the most effective instrument for investors to lessen the agency problem and for appropriate governance, hence the formulated hypothesis is:

*H<sub>4</sub>: State of the economy is positively and significantly impacted to the DP.*

## Board Independence

Independent directors may be essential to the effective management of the firms. Investors become more dependent on dividend payments as a result of poor managerial control over the company. According to Boshnak (2021), external directors have the power to offer a good reward for protecting the wealth of the shareholders. Mehdi et al. (2017) discovered a strong negative influence of board independence on the DP and noted that corporations may pay smaller dividends if their boards have a higher proportion of external board members. In their 2009 study, Najjar and Hussainey examined the

relationships between outside directorships and dividend policy. The analysis found an adverse association between the number of outside directors and dividend payout. The decision to pay out dividends is impacted by the fact that external directors tend to have less knowledge, experience and oversight of the company than internal directors. The hypothesis that is suggested is as follows:

*H<sub>5</sub>: Board independence is positively and significantly impacted to the DP.*

## CEO Duality

According to Boshnak (2021), adding external directors and separating the CEO's responsibilities from those of the chairman can increase the board's visibility. Duality gives the CEO undue power, which erodes control. Combining responsibilities in the emerging market is a fruitless technique for lowering expropriation risk, as indicated by the agency theory, and as a result, proven less effective in board control. According to Mehdi et al. (2017), firms with duality features have greater agency costs and smaller dividend payouts in the emerging market. The suggested hypothesis is as follows when taking the argument into account.

*H<sub>6</sub>: CEO duality is positively and significantly impacted to the DP.*

## Pandemic Crisis Period: Moderating Effect

Following the pandemic-related crises, studies have been developed to examine the behaviour of dividend during a pandemic period. The amount of dividend omissions and dividend reductions are larger during the pandemic time, according to (Ali, 2021; Tinungki et al., 2021). The outcome showed that the primary DP factors throughout the pandemic crisis time appear to be profitability, scale, prospect earnings and leverage. On the other hand, the pandemic's serious effects on business stakeholders and governmental policy may also be seen. Due to the pandemic, corporate boards are having a tough time deciding whether to declare dividends while taking into account factors such as the company's reputation, shareholder expectations, financial holdings, etc. (Paine, 2020). Knowing how the pandemic crisis influenced the debates on dividend behaviours throughout the crisis is crucial for pinpointing the factors that influence dividend policy. The suggested hypothesis is so as follows:

*H<sub>7</sub>: The pandemic crisis period negatively impacted dividend policy while moderating the effects of both firm characteristics and board composition.*

## CONTROL VARIABLES

The study also identifies the control variables in addition to the independent variables. Firm size, profitability and board size are on the list of control variables that have been established.

### Firm Size

The firm's size continues to be the primary indication for impacting the organisation's dividend policy despite the conflicting findings concentrating on the firm's size and its impact on the DP. The relationship between firm size and the DP has been the subject of numerous studies, but no consensus has been reached (Ramchandran & Packirisamy, 2010; Chintya & Akauntansi, 2020; Budagaga, 2020; Setiawan & Phua, 2013; Jabbouri, 2016). According to Chintya and Akauntansi (2020), Jabbouri (2016), and Najjar and Hussainey (2009), large companies pay their shareholders more dividends than small companies because they have a wider range of competencies, a competitive advantage over their rivals and significant economies of scale. Large investors would prefer to invest in large companies than small ones because they have lower transaction costs, are less risky and have fewer financial constraints.

### Profitability

Evidently, profitability is consistently seen as one of the key factors affecting the DP (Jabbouri, 2016). The substantial influence of profitability on the dividend policy has been

established by numerous researches, including Singla and Samanta (2018) and Najjar and Hussainey (2009). Profitability was identified by Budagaga (2020) as the primary aspect of a bank that affected the dividend decision.

### Board Size

The impact of board size on lowering agency conflicts varies across theories. According to agency theory, large company boards result in inefficient decision-making, subpar firm performance and inadequate supervision. Contrarily, according to the resource dependence theory, a big board size gives external resources more clout and allows firms access to strong capabilities (Mehdi et al., 2017; Najjar & Kilincarlan, 2016; Waheed & Malik, 2021). As a result, increased monitoring and management specialisation result in a decrease in the number of dividends needed for monitoring. Additionally, the modest size of boards in developing nations minimises agency problems and the demand for huge dividend payouts.

## CONCEPTUAL FRAMEWORK

The purpose of the study is to evaluate how the board's characteristics and firm characteristics affect the DP. Additionally, the pandemic crisis period is included in the study as a moderator to assess its influence on the link between business characteristics and board composition on the DP. In addition to this, the study makes use of the control variables to see how they affect dividend policy. A conceptual framework is suggested in Fig. 1 to show the relationships examined in the study.

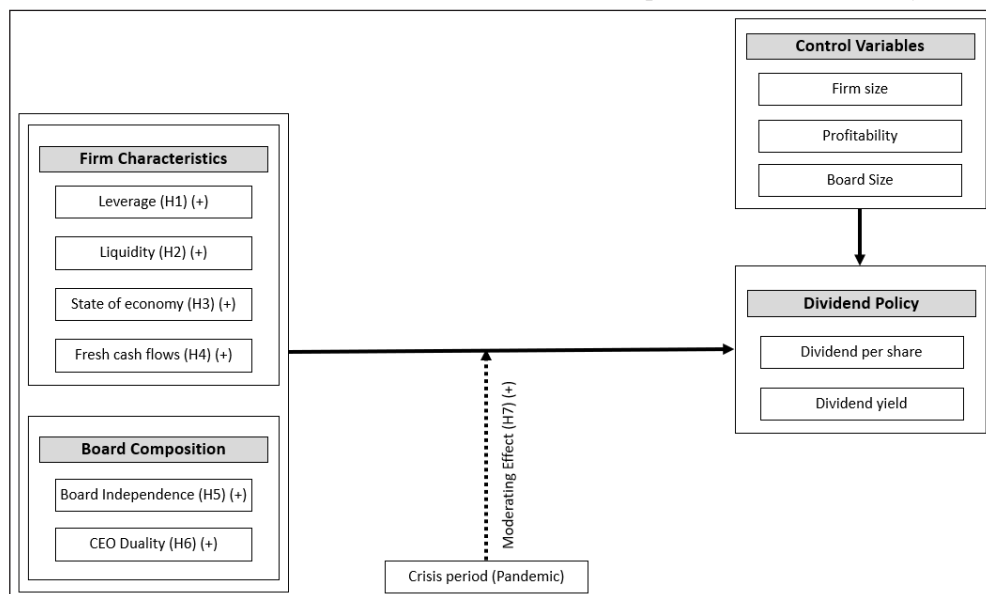


Fig. 1: Conceptual Framework

## RESEARCH METHODOLOGY

This section describes the quantitative and empirical research design, including sampling and data collecting using constructs for independent and dependent variables.

### Research Design

The purpose of the current study is to evaluate moderating role of pandemic on dividend policy and its determinants associations using the BSE (A group) listed companies of India as a sample. Since listed firms must adhere to corporate governance principles, they are chosen for analysis. They perform well in terms of revenue growth as well. Out of

732 listed firms, 241 were chosen for the study based on the availability of consistent data and the continuation of dividend payments for the chosen period (i.e., 2017–2021). The study period is spanning before and after two years of the pandemic. Accordingly, a time period of 5 years is taken into account for the study, which is not too long but sufficient to capture the recent changes' impacts on the local economy.

Secondary data from the ACE equity and Prowess IQ have been gathered for analysis purposes. The dividend yield ratio, which is acceptable in a number of ways, has utilised in the current study in addition to dividend per share, in order to, ensure the robustness of the outcome. An appropriate model has been found using the Hausman test. The study has also examined the multi-collinearity among the independent variables.

### Variables and Descriptions

**Table 1: Variables Definition**

Variables/Category	Definition	Representative Studies	Source
<b>Dependent Variable (Criterion)</b>			
Dividend Policy (Dividend Per Share)	Natural logarithm of dividend per share	Singla and Samanta (2018); Boshnak (2021)	ACE equity
Dividend Policy (Dividend Yield)	Dividend Per Share to Price Per share	Setiawan and Phua (2013); Najjar and Hussainey (2009); Kwashie and Manu (2021)	ACE equity
<b>Independent Ratio (Predictors)</b>			
<b>Moderating Variable</b>			
Crisis	Coded "1" for the period of 2020 and 2021, and "0" otherwise	Ammari (2021)	
<b>Firm's Characteristics</b>			
Liquidity	Quick ratio has been used as proxy	Singla and Samanta (2018); Najjar and Hussainey (2009); Ransariya and Bhayani (2022)	ACE equity
Leverage	Total debt to equity ratio has been used as proxy	Boshnak (2021); Mehdi et al. (2021)	ACE equity
Free cash flows	Free cash flows/book value of total assets	Jabbouri (2016)	ACE equity
State of Economy	Yearly total return in percentage on Index has been used as proxy	Jabbouri (2016)	Prowess IQ
<b>Board Composition</b>			
Board Independence	Total number of independent directors has been used as proxy	Boshnak (2021); (Mehdi et al., 2017)	ACE equity
CEO Duality (Dummy Variable)	CEO/Chairman duality. If the role of chairman and CEO is conquered by the same person is classified as duality and coded as "1" otherwise "0"	(Boshank, 2021); (Mehdi et al. (2017)	ACE equity
<b>Control Variables</b>			
Profitability	Return on equity is a proxy variable	Singla and Samanta (2018); Najjar and Hussainey (2009)	ACE equity
Firm Size	Natural logarithm of total assets has been used as proxy	Chintya and Akauntansi (2020); Budagaga (2020)	ACE equity
Board Size	Total number of members on board has been used as proxy	(Elmagrhi, 2017); Boshnak (2021)	ACE equity

### Estimation of Equation

The panel data has been used in this study for analysis, and the following equation is framed based on the empirical investigation.

$$\text{Dividend per Share} = \beta_0 + \beta_1 (\text{Leverage}) + \beta_2 (\text{Liquidity}) + \beta_3 (\text{State of economy}) + \beta_4 (\text{Free cash flows}) + \beta_5 (\text{Board independence}) + \beta_6 (\text{CEO duality}) + \beta_7 (\text{Profitability}) + \beta_8 (\text{Firm Size}) + \beta_9 (\text{Board size}) + e \dots\dots\dots (1)$$

The basic model has added a new variable (Crisis) to the regression model in order to reflect the incremental impact of the economic slowdown caused by the pandemic in the years 2020 and 2021 (Considering the Gross Domestic Product growth rate of India). For the years 2020 and 2021, the crisis variable is 1, while it is 0 in the other years. In light of this, the revised model is:

$$\text{Dividend per Share} = \beta_0 + \beta_1 (\text{Crisis}) + \beta_2 (\text{Leverage}) + \beta_3 (\text{Liquidity}) + \beta_4 (\text{State of economy}) + \beta_5 (\text{Free cash flows}) + \beta_6 (\text{Board independence}) + \beta_7 (\text{CEO duality}) + \beta_8 (\text{Profitability}) + \beta_9 (\text{Firm Size}) + \beta_{10} (\text{Board size}) + e \dots\dots\dots (2)$$

The sample sub-group is divided into two categories: the pre-crisis period (2017, 2018 & 2019) and the crisis period (2020 & 2021) in order to measure the impact of the pandemic crisis period on the associations between firm characteristics and dividend policy as well as between the board composition and dividend policy. Therefore, the model is,

$$\text{Dividend per Share} = \beta_0 + \beta_1 (\text{Leverage}) + \beta_2 (\text{Liquidity}) + \beta_3 (\text{State of economy}) + \beta_4 (\text{Free cash flows}) + \beta_5 (\text{Board independence}) + \beta_6 (\text{CEO duality}) + \beta_7 (\text{Profitability}) + \beta_8 (\text{Firm Size}) + \beta_9 (\text{Board size}) + e \dots\dots\dots (3)$$

The moderating effect of the pandemic crisis period on the correlation between firm characteristics and dividend policy as well as between the board composition and dividend policy has been evaluated using an interaction variable analysis. Firm characteristics and the crisis period on the one hand, and board composition and the crisis period on the other, produce the interaction variables. The “1” signifies a time of crisis and the “0” otherwise. The intersecting variables understand how business attributes and board makeup affect dividend policy solely during the crisis.

$$\text{Dividend per Share} = \beta_0 + \beta_1 (\text{Crisis*Leverage}) + \beta_2 (\text{Crisis*Liquidity}) + \beta_3 (\text{Crisis*State of economy}) + \beta_4 (\text{Crisis*Free cash flows}) + \beta_5 (\text{Crisis* Board$$

$$\text{independence}) + \beta_6 (\text{Crisis*CEO duality}) + \beta_7 (\text{Board independence}) + \beta_8 (\text{CEO duality}) + \beta_9 (\text{Leverage}) + \beta_{10} (\text{Liquidity}) + \beta_{11} (\text{State of economy}) + \beta_{12} (\text{Free cash flows}) + \beta_{13} (\text{Profitability}) + \beta_{14} (\text{Firm Size}) + \beta_{15} (\text{Board size}) + e \dots\dots\dots (4)$$

### EMPIRICAL RESULTS

The study’s findings are discussed in this section. Table 2 presents the dependent and independent variables’ descriptive statistics to show the factors that influence company dividend policy. Dividends per share have a mean and standard deviation of 0.5444 and 0.55174, respectively. The high means for board independence (4.3776), profitability (15.6989), firm size (3.6614), and board size (10.6705) imply that these factors are heavily influencing India’s dividend policy.

**Table 2: Descriptive Statistics for Dividend Policy**

Variables	Mean	Std. Deviation
Dividend Per Share (in rupees)	0.5444	.55174
Dividend Yield (in percentage)	1.5332	2.15863
Liquidity (Ratio)	1.2869	1.25417
Leverage (Ratio)	0.5472	.84019
Free Cash Flows (Ratio)	0.0464	0.09552
State of Economy (in percentage)	0.9199	2.82346
CEO duality (in numbers)	0.0108	.10335
Board Independence (in numbers)	4.3776	2.06240
Profitability (in percentage)	15.6989	11.18480
Firm Size (Rs. in crore)	3.6614	.64830
Board Size (in numbers)	10.6705	2.66860
Crisis	.4000	.49010

Source: Calculated by authors.

Table 3 shows the results of a Pearson correlation analysis between a few key factors for Indian listed companies. According to analysis, dividend yield and dividend per share have a substantial positive association of 0.201014. The dividend per share is significantly associated with all of the chosen variables, according to another interesting finding. The connections with profitability (0.270899), company size (0.304575), liquidity (0.043041), free cash flows (0.227816), the status of the economy (0.02881), board size (0.192698) and board independence (0.155930) are shown in this number. Only CEO duality and leverage had a negative correlation with dividend per share (-0.045950 and -0.0347,1 respectively).

Table 3: Correlations Matrix

	Dividend Per Share	Dividend Yield	Liquidity	Leverage	Free Cash Flows	State of Economy	Profitability	Firm Size	CEO Duality	Board Independence	Board Size	Crisis
Dividend Per Share	1.000000											
Dividend Yield	0.201014	1.000000										
Liquidity	0.043041	-0.022359	1.000000									
Leverage	-0.034721	0.048939	-0.211127	1.000000								
Free Cash Flows	0.227816	0.071278	0.204286	-0.355299	1.000000							
State of Economy	0.028091	0.079645	-0.050367	-0.034305	0.043968	1.000000						
Profitability	0.270899	0.091395	0.025576	-0.011635	0.410939	0.018072	1.000000					
Firm Size	0.304575	0.196389	-0.154682	0.335293	-0.059213	0.037843	-0.110004	1.000000				
COE Duality	-0.045950	-0.029932	0.020766	-0.004413	-0.007340	-0.014786	0.011474	-0.068034	1.000000			
Board Independence	0.155930	-0.070016	-0.078179	-0.059507	0.047819	-0.041390	0.012685	0.181177	0.054869	1.000000		
Board Size	0.192698	-0.004418	-0.113804	-0.064708	0.003134	-0.019790	-0.004768	0.326525	0.040783	0.642275	1.000000	
Crisis	0.075402	0.211053	0.025438	-0.044670	0.175526	0.226109	-0.050160	0.080981	-0.030452	-0.013571	-0.053985	1.000000

Source: Calculated by authors.

Table 4: Impact of Firm Characteristics and Board Structure on Dividend Policy

(Moderating effects of crisis)

Dependent Variable: Dividend Per Share

	Model 1			Model 2			Model 3			Model 3		
	Without Crisis			With Crisis			Before Crisis			During Crisis		
	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value
C	-1.646784	-6.028421	0.0000	-1.209821	-3.839999	0.0001	-1.665590	-4.072099	0.0001	0.487993	1.261757	0.2083
Crisis	---	---	---	0.046540	2.755173	0.0060	---	---	---	---	---	---
Liquidity	0.025921	2.649622	0.0082	0.023412	2.391094	0.0170	0.026383	2.036456	0.0423	0.063822	2.950557	0.0035
Leverage	-0.067343	-2.421666	0.0156	-0.056920	-2.035059	0.0421	-0.042454	-1.200545	0.2305	-0.116436	-1.557443	0.1207
Free cash flows	0.182215	1.812180	0.0703	0.111493	1.077862	0.2814	0.036437	0.265986	0.7904	-0.050576	-0.263615	0.7923
State of economy	-0.003993	-1.603382	0.1092	-0.005611	-2.199909	0.0281	-0.006194	-1.632284	0.1033	-0.009062	-2.563024	0.0110
CEO duality	0.217021	1.750777	0.0803	0.208459	1.686991	0.0919	0.135608	0.823499	0.4106	0.223123	1.106630	0.2696
Board independence	0.017597	2.717363	0.0067	0.016912	2.618647	0.0090	0.008697	1.091511	0.2756	0.005800	0.500689	0.6171
Profitability	0.008157	9.617224	0.0000	0.008532	9.965473	0.0000	0.005065	4.959711	0.0000	0.011928	6.014562	0.0000
Firm size	0.546445	7.690023	0.0000	0.415289	4.867026	0.0000	0.550865	5.042898	0.0000	-0.023341	-0.251333	0.8018
Board size	-0.001724	-0.270200	0.7871	0.000593	0.092546	0.9263	0.005086	0.611771	0.5410	-0.002336	-0.132688	0.8946
Adjusted R-squared	0.844228			0.845300			0.876652			0.892335		
F-statistic	27.11866			27.22775			21.60782			0.878261		
Prob(F-statistic)	0.000000			0.000000			0.000000			0.000000		
Max. VIF	1.917			1.917			1.906			2.011		

Source: Calculated by authors.

The variance inflation factor (VIF) is calculated for each of the explanatory variables in order to analyse the multi-collinearity, and the maximum values of the VIF for each model are shown in Table 4. The outcome of looking at the VIF of each explanatory variable shows that the lowest value is 1.917, and the maximum value is 2.011 in the model. Thus, it may be said that multi-collinearity is not a concern for the current investigation. In order to determine which model is best for analysis (i.e., fixed or random effect), the study also has conducted the Hausman test of endogeneity for each model. The study has chosen the best approach for each unique model for analysis purposes by looking at the P-values.

In Table 4, which shows the dividend policy drivers of Indian enterprises taking into account the moderating impact of the crisis period, the results of Models 1 and 2, and sub-divisions of Model 3 are presented. The outcome demonstrates that model's adjusted  $R^2$ , which gauges the model's fitness, is 84%, which is a respectable value. This indicates that other variables, such as error terms, account for 16% of differences in calculating payouts. The table shows the positive and substantial effects of all chosen explanatory factors, including board independence, firm size, profitability and liquidity, on the DP of Indian companies. The DP is being negatively and significantly impacted by the sole variable leverage.

## DISCUSSION

Liquidity has a favourable and significant impact on the DP ( $P > 0.0082$ ). Validates hypothesis H1 and makes the case that Indian companies that are well-liquidated pay big dividends. Das (2017) and Brahmaiah et al. (2018) both support the conclusion. The study's analysis shows that leverage has a considerable detrimental impact on dividend policy. The  $P < 0.0156$  supports hypothesis H2, which Brahmaiah et al. (2018) and Das (2017) made the case that a high leverage ratio would lead to a smaller dividend payout in support of the outcome. According to Boshnak (2021), a corporation pays big dividends while its debt is low and vice versa. Investors in Indian companies with a focus on leverage conditions are allowed. Another intriguing finding of the study is that free cash flows have no influence on dividend policy. As  $P < 0.0703$  suggests the data do not support hypothesis H3. According to Jabbouri (2016), greater free cash flows raise the dividend payout to make up for poor governance, which is in contrast to the findings of Khwaja and Milan (2006). Singla and Samanta (2018) claimed that in India management can use the free cash flows for investment expansion instead of issuing dividends, which may increase the agency cost. This argument was made in opposition to the result. The study also finds that the DP

has little effect on the state of the economy. It is suggested that investors anticipate greater dividend payments during prosperous times, and vice versa. In opposition to this, it is also known that investors care less about the dividend during an economic expansion, which shows their lack of concern for governance issues (Jabbouri, 2016). The study's P-value of 0.1092 disproves hypothesis H4.

In terms of board independence and CEO dualities, the study analyses the board composition. The study provides evidence of the significant and favourable effects of board independence on the DP. The  $P < 0.0067$  indicates that the outcome supports hypothesis H5, which is stated. Mehdi et al.'s (2017) study, which focused on the emerging market, supports their findings. According to Thompson and Manu (2020), external directors are frequently thought to improve the calibre of internal oversight, which promotes managerial practices by enhancing the firm's governance. According to Albert Puni (2020), who conducted a study with a focus on developing nations, insider directors can quickly become familiar with corporate matters relating to wealth and managerial information, refuting the claim. The conclusion of the Indian corporations therefore lends credence to the study. Additionally, by looking at the CEO duality  $P 0.0803$  value, the study finds no evidence of its influence on dividend policy. As a result, the outcome does not support hypothesis H6. According to Boshnak (2021), the dual function of CEO and chairman is a useless instrument for lowering the risk of expropriation in the Indian market and less effective for board control. The study's findings lend credence to the claim that duality causes bad financial performance, which lowers dividend payments. If the same person does both tasks, Indian businesses may offer smaller dividends. The study by Mehdi et al. (2017) in the context of emerging markets, suggested that having combinations of two roles is morally risky in order to justify the conclusion. Additionally, it might result in a bad governance framework for businesses (Elmagrhi et al., 2017).

Regarding the other control variables, the results demonstrate that profitability ( $P < 0.0000$ ) and firm size ( $P < 0.0000$ ) have a positive and significant impact on dividend policy, however board size ( $P > 0.7871$ ) has no impact on the DP. Knowing how profitability affects dividends allows one to understand how profitability affects DP. Das (2017), who conducted a study with a focus on Bangladesh, produced findings supporting the claim that companies may raise dividends in response to rising profitability and vice versa. According to Jabbouri (2016) and Najjar and Hussainey (2009), large companies pay high dividends because they have a wide range of products and services and have easy access to capital. On the other hand, it is also asserted that smaller businesses inform lenders less than large businesses.

Small businesses, however, could be able to offset the agency problem and deliver the greater reward brought on by the knowledge asymmetry. Pattiruhu and Paais (2020), who conducted research in the setting of Indonesia, support the conclusion. Boshnak (2021), who suggested that a large board is inefficient because of its coordination problems, which cannot be seen as the good side for the dividend payment, further supports the outcome of board size. The study's findings refuted the claim that a larger board would be more likely to pay dividends since it would lessen the impact of its smaller number of members (Thompson & Manu, 2020).

To assess the impact of the pandemic crisis on the DP, Model 2 incorporates crisis as a variable. The result of Model 2 demonstrates that the crisis has a beneficial and notable impact on the DP. A  $P < 0.0060$  supports hypothesis H7 and Ammari (2021); Mehdi et al. (2017) back up the outcome. The argument that board members of Indian businesses experience insecurity and risk aversion during the crisis is supported by the crisis' considerable effects. Additionally, the favourable correlations suggest that Indian companies may issue dividends during the crisis to appease the investors and restore their faith. In addition, Indian businesses choose to strengthen the governance framework and protect their shareholders during the gradual economic downturn by reinvested the maximum amount of earnings internally. The crisis variable is significantly important in explaining the dividend policy, as shown by the corrected R-square in Model 2 in Table 4, which is 85%. However, when the model's chosen variables are combined with the crisis period, the results show that liquidity ( $P < 0.0170$ ), the state of the economy ( $P 0.0281$ ), and board independence ( $P < 0.0090$ ) all have a positive and significant impact on dividend policy, while leverage ( $P 0.0421$ ) has a negative and significant impact. Furthermore, whereas board size ( $P < 0.9263$ ) has positive and insignificant relationships with dividend policy, the chosen control variables profitability ( $P < 0.0000$ ) and business size ( $P < 0.0000$ ) have positive and significant associations with the DP. It means that Indian businesses will place a greater emphasis on their profitability and ability to pay dividends during the current economic crisis. Due to the negative and strong correlation between leverage and dividend payments, Indian companies with lower debt also tend to pay higher dividends.

The pre-crisis period and the period during a crisis are two subgroups of the entire sample that make up Model 3's explanation of how the crisis period affects payout decisions. Strong correlations between a few selected variables and the crisis period and the dividend choice are shown by the adjusted R-square, which is 88% and 89%, respectively,

for the time before and during a crisis. While examining the explanatory variables, it has been found that, prior to the financial crisis, firm size, profitability and liquidity all significantly influenced the dividend policy, as opposed to the other variables. With the exception of business size and leverage, the outcomes of Models 1 and 2 are stable during the pandemic crisis period, while liquidity, the state of the economy and profitability are significantly impacted to the DP.

The study's overall conclusions show that the turbulence in the economy during the years 2020 and 2021 has weakened the relationship between free cash flows, board size, CEO duality and board independence with the dividend policy in India. In contrast, the study's findings show that liquidity, leverage, the state of the economy, profitability and firm size have an impact on the DP of Indian BSE listed companies.

The outcomes of Model 4 are shown in Table 5. The model shows how important factors including profitability, board independence, leverage, liquidity and firm size have an effect on the DP. While free cash flows and the intersecting factors, with the exception of the crisis time, have no impact on the dividend policy. The second model does away with the variable crises and the outcomes support what was predicted by the first model. As a result, the current study reveals that the DP of Indian enterprises has been positively and considerably impacted by the crisis time. Furthermore, other than free cash flows, which are used to determine dividend policy, it has no effect on business characteristics.

## **ROBUSTNESS OF RESULTS**

The strength of the previous finding is evaluated in this section. The robustness of the findings has been tested using dividend yield as a proxy for the dependent variable. It compares the price per share to the dividend paid out per share. This ratio is suitable for evaluating robustness because it takes into consideration share prices at the moment, which are less affected by accounting procedures. As a result, the study re-estimates the new DP proxy variable to examine the outcome. Through the Hausman test, the appropriate model (fixed/random effect) has been chosen for each model. The study's findings are presented in Table 6, which are consistent with earlier findings regarding business characteristics and board composition in relation to dividend policy, with the exception of liquidity for all framed models. While introducing the crisis time in Model 2, the outcome is likewise intriguing. The study reports that Indian corporations pay dividends throughout the crisis period to retain their reputation, supporting the prior finding.

**Table 5: Alternative Regression to Know the Impact of Firm Characteristics and Board Composition on Dividend Policy**

Dependent Variable: Dividend Per Share

	Model 4			Model-4		
	With Crisis			Without Crisis		
	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value
C	-1.324030	-4.126980	0.0000	-1.341482	-4.197320	0.0000
Liquidity (LQ)	0.026953	2.497806	0.0127	0.025631	2.419194	0.0157
Leverage (LV)	-0.052282	-1.846289	0.0652	-0.054613	-1.944828	0.0521
Free cash flows (FCF)	-0.114143	-0.905817	0.3653	-0.116974	-0.929122	0.3531
State of economy (SE)	-0.007445	-1.858168	0.0635	-0.007607	-1.902732	0.0574
CEO duality (CEO)	0.183331	1.444615	0.1489	0.185778	1.464983	0.1433
Board independence (BI)	0.016192	2.377656	0.0176	0.015010	2.287490	0.0224
Profitability (PR)	0.008580	10.05790	0.0000	0.008557	10.04269	0.0000
Firm size (FS)	0.450709	5.217968	0.0000	0.459438	5.385890	0.0000
Board size (BS)	-0.000387	-0.060492	0.9518	-0.000799	-0.125487	0.9002
CRISIS	0.026310	0.651274	0.5150			
CRISISLQ	-0.011429	-0.665173	0.5061	-0.002821	-0.271852	0.7858
CRISISLV	-0.005919	-0.518361	0.6043	-0.007503	-0.466467	0.6410
CRISISFCF	0.541553	3.323824	0.0009	0.562179	3.518580	0.0005
CRISISSE	0.003519	0.697129	0.4859	0.004102	0.825829	0.4091
CRISISCEO	0.183708	1.160363	0.2462	0.183560	1.159784	0.2464
CRISISBI	-0.000755	-0.111719	0.9111	0.002557	0.574499	0.5658
Adjusted R-squared	0.847067			0.847160		
F-statistic	26.96322			27.08380		
Prob(F-statistic)	0.000000			0.000000		
Max.VIF	8.912			2.689		

Source: Calculated by authors.

Table 6: Firm Characteristics and board Composition Impact on Dividend Policy

(Moderating Effects Of Crisis)

Dependent Variable: Dividend Yield

	Model 1			Model 2			Model 3					
	Without Crisis			With Crisis			Pre Crisis					
	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value
C	-5.971580	-3.018044	0.0026	-0.831807	-1.337945	0.1812	-1.284993	-2.782244	0.0055	0.926085	0.816531	0.4147
Crisis				0.869914	8.792362	0.0000						
Liquidity	0.006779	0.095557	0.9239	-0.023132	-0.413288	0.6795	0.003095	0.083121	0.9338	-0.006562	-0.050790	0.9595
Leverage	0.188212	0.933378	0.3509	0.051575	0.445373	0.6561	-0.071217	-0.882874	0.3776	0.054248	0.236125	0.8135
Free cash flows	1.082737	1.482589	0.1385	-0.405900	-0.596874	0.5507	-0.193139	-0.440864	0.6594	-2.376036	-1.317130	0.1886
State of economy	0.039576	2.193599	0.0285	0.008508	0.487508	0.6260	0.008095	0.632657	0.5272	0.054594	1.378875	0.1688
CEO duality	0.546426	0.611797	0.5408	0.151764	0.222960	0.8236	-0.223608	-0.491236	0.6234	0.430057	0.270495	0.7869
Board independence	-0.019057	-0.406698	0.6843	-0.070791	-1.797270	0.0725	0.007894	0.320446	0.7487	-0.069777	-0.706512	0.4803
Profitability	0.015946	2.597230	0.0095	0.024443	4.387376	0.0000	0.012972	3.920357	0.0001	0.041835	2.636720	0.0087
Firm size	2.397922	4.654236	0.0000	0.680023	4.051250	0.0001	0.632654	5.022731	0.0000	0.404670	1.501990	0.1339
Board size	-0.154739	-3.343307	0.0009	-0.050142	-1.406031	0.1600	-0.003739	-0.159268	0.8735	-0.059473	-0.741315	0.4590
Adjusted R-squared	0.464514			0.106412			0.045381			0.169632		
F-statistic	5.187508			15.31390			4.808358			1.933875		
Prob (F-statistic)	0.000000			0.000000			0.000003			0.000004		
Max. VIF	1.917			1.917			1.905			2.011		

Source: Calculated by authors.

Table 7 presents the results of Model 4. The model uses the intersection variables to know the outlier effects. It is also consistent with the previous results.

**Table 7: Alternative Regression to know the Impact of Firm Characteristics and Board Structure on Dividend Policy**

Dependent Variable: Dividend Yield

	Model 4			Model-4		
	Without Crisis			With Crisis		
	Co-Efficient	T-Statistics	P-Value	Co-Efficient	T-Statistics	P-Value
C	2.703666	1.189126	0.2347	3.593339	1.591205	0.1119
Liquidity	-0.111226	-1.473590	0.1409	-0.045575	-0.599300	0.5491
Leverage	0.230207	1.150799	0.2501	0.346961	1.738460	0.0825
Free cash flows	-0.681214	-0.758679	0.4482	-0.532365	-0.598760	0.5495
State of economy	-0.007241	-0.254105	0.7995	0.000715	0.025320	0.9798
CEO duality	0.423241	0.468338	0.6397	0.299386	0.334628	0.7380
Board independence	-0.065169	-1.397153	0.1627	-0.006631	-0.138473	0.8899
Profitability	0.023003	3.797575	0.0002	0.024123	4.021066	0.0001
Firm size	-0.083262	-0.137080	0.8910	-0.523355	-0.859863	0.3901
Board size	-0.115033	-2.534825	0.0114	-0.094549	-2.095118	0.0364
Crisis	--	--	--	1.308854	4.591891	0.0000
CRISISLQ	0.113921	1.539552	0.1240	-0.039947	-0.496069	0.6200
CRISISLV	0.459016	4.004262	0.0001	0.263328	2.173096	0.0300
CRISISFCF	1.148728	1.009202	0.3131	0.122084	0.106313	0.9154
CRISISSE	0.033623	0.950084	0.3423	0.004741	0.133236	0.8940
CRISISCEO	-0.242263	-0.251429	0.8015	-0.182609	-0.191499	0.8482
CRISISBI	0.077076	2.430731	0.0153	-0.087632	-1.838805	0.0663
Adjusted R-squared	0.493215			0.503740		
F-statistic	5.587506			5.766091		
Prob(F-statistic)	0.000000			0.000000		
Max. VIF	8.912			2.689		

Source: Calculated by authors.

## IMPLICATIONS OF THE STUDY

The current study offers a number of applications for regulators, analysts and investors. The study's findings assist analysts and investors in establishing investment plans by assisting them in projecting dividend payments. The study has also demonstrated the agency issue, making it extremely pertinent to policymakers and regulators for resolving both new and ongoing governance difficulties. If authorities have a thorough understanding of dividend conduct, they can act more effectively to protect stakeholders. Regulators should also monitor the governance practises and compliance of listed corporations. Additionally, the outcome will drive managers and board members to monitor and closely examine governance issues, which in turn will draw in investors.

## LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Like the previous research, this one has clear limitations as well. Second, the scope of this study is constrained since it only looks at firms that consistently pay dividends and are listed on the BSE of the A Group, ignoring non-dividend-paying companies for a shorter period of time. Future research can be expanded by including non-fundamental characteristics and indicators of good corporate governance, such as ownership structure, incentive compensation plans and meeting frequency affecting dividend decisions. The focus of this study is limited to the firm's fundamental characteristics and board composition. In order to understand their perspective on the DP in India, further study might be investigated by including interviews with potential investors,

representatives of financial institutions, lawmakers and regulators.

## CONCLUSION

This study enhances the existing research on dividend policy by identifying the factors that influence it with an emphasis on Indian-listed businesses. The study's chosen time frame is from 2017 to 2021, which encompasses the pandemic period that slowed the economy and disrupted businesses' financial health. In light of this, the current study makes great efforts to quantify the impact of the pandemic crisis on the relationship between business characteristics and board composition on the DP. Incorporating the pandemic crisis period as a moderator while evaluating the impact of firm characteristics and board composition on the DP, then, is the study's interesting contribution to the literature on dividend policy. Furthermore, the study also used the interaction variable to determine the effects of the outliers.

The conclusion indicates that the dividend policy in Indian listed companies is highly impacted by profitability, liquidity, leverage, firm size, and board independence. Instability in the economic climate for the years 2020 and 2021, however, has decreased the relationship between free cash flows, board size, CEO duality and board independence with the DP in India, according to the study's overall findings. The results of this study strengthened the perception of Indian businesses because they show that these businesses prefer to pay dividends during lean economic times in order to appease investors and restore their confidence. On the other hand, a relatively weak correlation between free cash flows and the health of the economy as measured by the DP is a sign of major agency issues and expropriation of the shareholder. Furthermore, a poor relationship between CEO duality and the DP could result in governance problems. The effectiveness of the governance procedures at the corporate level has also been questioned by the findings of the current study.

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