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Impact of Elimination of Dividend Distribution Tax on Indian Corporate Firms Amid COVID Disruptions

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Abstract: Economic fallouts from COVID-19 have been unprecedented across all industries, with a handful of exceptions. The present study attempts to capture the impact of dividend distribution tax elimination, introduced through the Indian Finance Act 2020, on corporate dividend behavior in India. It explores the determinants of dividend payouts, changing payout decisions, dividend behavior of regular payers, and the prevalence of factors associated with changing payouts. Out of the top 1000 firms, based on their market capitalization at the Bombay Stock Exchange, 509 non-financial firms pursuing consistent dividend payments from 2015 to 2019 are analyzed. The study also examines the dividend behavior of regular payers exhibiting a stable or step-up payout from 2015 to 2019. COVID's impact on the firm's financial performance and sentiments seems to dominate, suppressing investors' expectations of enhanced payouts associated with dividend distribution tax advantages, with considerable reductions in payouts and omissions shown by regular and irregular payers in 2020 and 2021 vis-à-vis the preceding years. The findings signify that the dividend payouts of sample firms are positively associated with the firms' size, MBV ratio, and past dividends, and negatively allied with free cash flows and the EBITDA margin. Regular payers are observed to be more sensitive to past dividends. The study lends credence to the conservatism and prevalence of signaling and catering theories in the dividend behavior of Indian corporate firms.

Keywords: DDT amendment; Indian Finance Act 2020; dividend payout; regular payers; COVID-19 economic disruptions; dividend cuts; omission



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1. Introduction

Dividend distribution is a crucial corporate financial decision, likely to have significant implications for a firm's growth and shareholder value. The dividend constitutes the part of corporate earnings distributed to shareholders after making provisions for investment requirements and targeted capital structure (Higgins 1972; Walter 1963). Virtually, firms are free to decide on the level of profits to be distributed as dividends (Aleknėviciene et al. 2015). However, the dividend is a complex decision attributable to numerous factors and pragmatic considerations across regions, sectors, industries (Ramaratnam et al. 2012; Singla and Samanta 2019), and environmental situations (Gangil and Nathani 2018; Ghose and Kabra 2016). Moreover, the firm's payout flexibility is constrained to legal requirements (Al-Najjar and Kilincarslan 2017), debt covenants, available liquidity (Thaiyalnayaki and Reddy 2018), agency relationship (Jensen 1996), board composition, ownership structure (Rajput and Jhunjhunwala 2019; Juhmani 2020), viable investment opportunities, firm growth rate (Walter 1963), and investors' expectations (Baker and Wurgler 2004; Bilel and Mondher 2021).

The literature provides numerous theories supporting the varied dividend-paying behavior seen in the corporate sector. While traditional Walter, Gordon, and Modigliani approaches postulate dividend decision-making to be an idealistic situation of the perfect capital market. Behavioral theories posit the influence of investors' market sentiments and agency issues in firms' payout decisions. As per the Walter approach (Walter 1963), dividends are the product of a firm's rational choices based on viable investment opportu-

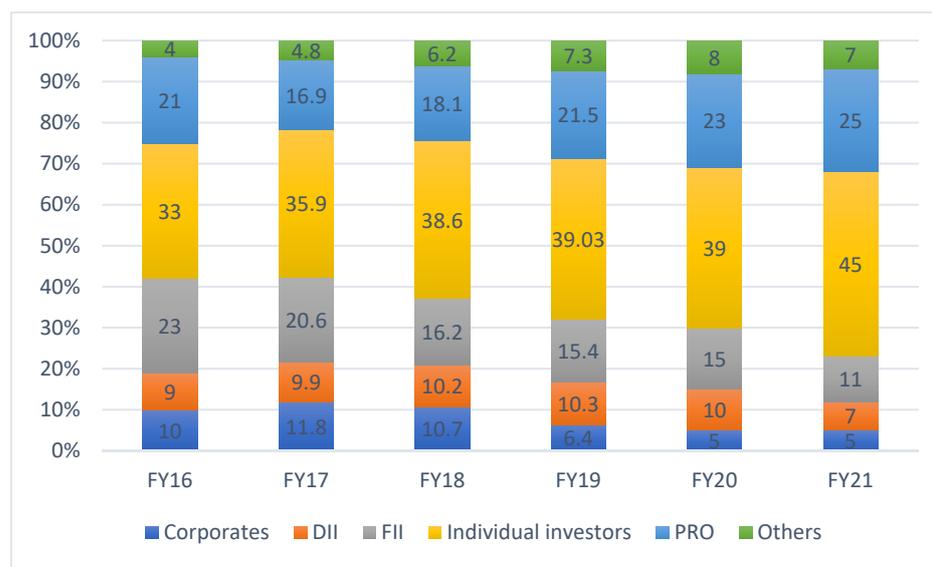
nities and growth rate. At the same time, Gordon (Gordon 1959) relates dividend income to investor's expectations. According to Gordon's 'a bird in the hand is worth two in the bush' justification, investors prefer a current stream of income in the form of dividends, and therefore any postponement of payout is subject to adverse repercussions, discounting share prices (Bhattacharya 1979). Signaling and information theories also lend credence to the dividend as an important indicator of a firm's profitability and well-being (Miler and Rock 1985; Mohd and Zaharudin 2019). As the firms' sizes and scattered shareholdings start to grow, agency theory starts to become significant—the proponents of the theory advocate payouts as the redressal for minimizing agency conflicts (Rozeff 1982; Tran 2020; Jensen 1999).

The theories above have been empirically examined by a large number of studies (Dixit et al. 2020; Tran 2020; Baker and Weigand 2015), exploring corporate dividend behavior across sectors (Kapoor et al. 2010), regions (Dewasiri et al. 2019), and in varied settings, firm-, industry- or environment-specific, corroborating varied determinants for payout decisions and their impact on the value of firms (Martono et al. 2020; Mahenthiran et al. 2020). Despite these extensively explored aspects, the literature remains inconclusive in explaining the factors and theories guiding the firms' behavior regarding dividends (Shetty and Rao 2020).

The Indian economy is among the fastest-growing economies in the world. Since liberalization, the Indian economic and financial system is transitioning towards a development into a self-sustained system, facilitating balanced growth across all sectors and segments. Beginning with the delicensing of some sectors (in 1990), India's market capitalization at present accounts for three quarters of its nominal GDP¹. About 8000 listed companies exist, channelizing the investment of millions of Indian and foreign investors. The increase in investors' participation in the Indian capital market at NSE in recent years is provided in Figure 1. As shown, there has been a consistent rise in participation by retail individuals, proprietary firms, partnership firms, LLPs, Trust/Societies, AIF, Depository receipts, PMS clients, Statutory, FDI, OCB, FNs, OFIs, VC Funds, NBEF, etc. (Figure 1). As for the Security and Exchange Board of India, in the last decade, there has been a 100% increase in the Demat accounts, from 19 million in 2011 to 40.8 million in March 2020. Since the opening of the Indian Stock market for foreign investors, there has been a consistent rise in FDIs. With the onset of the pandemic, global financial conditions tightened sharply, precipitating a selloff by portfolio investors, unprecedented both in scale and pace. As per the RBI Financial Stability Report 2020, due to the lack of liquidity in debt markets, mutual funds (MFs) faced high redemption pressures during Q1:2020–21. However, the market started reviving from June 2020 onwards following improved sentiments, the weakening of the US dollar, and increased global monetary and fiscal stimulus. In November 2020, net FPI inflows were recorded at an all-time high, valued at USD 9.8 billion. During April–December 2020, net FPI inflow in equities were valued at USD 30.0 billion vis-à-vis USD 6.0 billion in the preceding year; mutual fund schemes witnessed net inflows of ₹2730 billion.² Despite pandemic disruptions, during which developed economies across the globe noticed a significant decline in FDI, the Indian market has witnessed a 13% rise in the pandemic-battered year 2020.³

To ensure investor protection and fair and transparent corporate practices, the Indian regulatory authorities, through the Companies Act, SEBI, Income Tax Act, and relevant agencies, consistently monitor and amend the rules on a time-to-time basis. One such amendment has been introduced recently through the Finance Act 2020, wherein the dividend distribution tax (DDT) is eliminated, effective from 1 April 2020, shifting the incidence of tax from the distributing companies to the recipient shareholders. Taxes are evidently the dominating factor influencing corporate dividend decisions (Mahenthiran et al. 2020). These taxes act as discouraging factors for dividend distribution (Lintner 1956; Fama and French 1998; Brennan 1970). The increased corporate tax rates, achieved by reducing the earnings after tax, weaken companies' capabilities to pay dividends (Singla and Samanta 2019). The DDT is levied on the distributed dividend, which is the constituent of after-

tax profit. This involves double taxation, first in the form of tax on corporate earnings and, second, retaxing the same earnings when distributed as dividends, thus enabling the shareholders to receive a dividend net of DDT. Higher dividend tax rates, vis-à-vis capital gains taxes, result in unfavorable implications in the form of higher payouts on share prices (Brennan 1970; Deslandes et al. 2015; Fama and French 1998). The unfavorable consequences of DDT often make it a legitimate rationale for conservative payout decisions (Brennan 1970; Elayan et al. 2009; Ismail et al. 2018; Edgerton 2013; Chang and Rhee 1990; Labhane and Mahakud 2018; Karjalainen et al. 2020).



Source: National Stock Exchange, India

Note: DII: Domestic Institutional Investors, FII: Foreign Institutional Investor, prop traders, proprietary traders, individual investors, individual domestic investors, NRIs, sole proprietorship and HUFs. Others: partnership firms, LLP, trust/society, AIF, depository receipts, PMS clients, statutory bodies, FDI, OCB, FNs, OFCIs, VC Funds, NBFC, etc.

Figure 1. Share of client participation in the capital market at National Stock Exchange (NSE) India.

The literature studies are replete with evidence authenticating dividend cuts as signaling firms' dimmed growth prospects. Therefore, managers are often reluctant for dividend reductions and appreciate step-up dividend payouts, portraying the typical dividend payment as naively following reported profits (Krieger et al. 2020). However, the economic fallout of the pandemic has compelled the corporate firms to drastically reduce dividends. The trend was in vogue across the globe (Wang and Guarino 2020), and Indian firms were no exception. The abolishment of DDT, *Ceteris Paribus*, was deemed to enhance the payouts by the Indian corporate firms, which earlier were discouraged or adjusted with share repurchase or bonus issues. However, amid dented profitability and cashflows of the firms across most sectors, coupled with uncertainty hovering in this milieu, the expectation of enhanced dividends associated with the elimination of DDT seems far-fetched. Given the drastic dividend cuts by the corporate pragmatism across the globe, COVID-19 is a unique event experienced from a dividend perspective. The changes in dividend policy amid COVID-19, and its consequences on companies' performances and future dividends, is worth analyzing. The dividend distribution tax, albeit an essential element influencing dividend behavior, has not received much attention in the literature. Additionally, with the COVID-19 pandemic immediately following the Indian Financial Act 2020, the Indian corporate dividend behavior study is certainly worth exploring.

The present study examines the impact of the amended dividend tax and economic disruption of COVID on the dividend decision of Indian corporate firms. The study universe consists of the top 1000 non-financial firms, based on their market capitalization at BSE; inter se, 509 firms that have consistently distributed dividends from 2015 to 2019

form the final sample. The study contributes to the literature by capturing the impact of DDT elimination along with the consequences of COVID. The study also examines the influence of financial determinants postulated by existing theories and literature on the dividend decisions of Indian firms.

We observed the impact of COVID to be significant and superseded the possibility of high payouts associated with DDT abolishment. Dented financials have perhaps compelled the regular payer, as well as the non-regular payer firms for significant dividend cuts or omissions. Regression results establish the free cash flows, profitability, investment opportunities, growth rates, past dividends, and firms' sizes as significant determinants influencing the payouts of Indian firms, with free cash flows, profitability, growth rate, and investment opportunities as the negative predictors and lag dividends as positive predictors influencing the dividend payouts. Findings reflect conservatism in the payout behavior of firms. We have also noted the significant transformation of the positive association of leverage and payout to negative insignificant relationship, post 2016. Perhaps the recognition of preference share capital as debt under Ind AS-32, effective from 1 April 2016, has made the firms more risk-averse and sensitive towards leverage. Findings lend credence to the dominance of the Walter, signaling, and catering theories in the dividend behavior of Indian corporate firms.

The following section deals with the literature review and derivation of research variables and hypotheses followed by research design, empirical results, concluding observations and implications, and future directions.

2. Literature Review

A dividend decision is a crucial financial decision relating to the distribution of corporate earnings to the shareholders. The dividend is the reward that a shareholder receives from a company's profits on his shareholding (Singhania and Gupta 2012). Theoretically, dividend policy, i.e., the amount of profit to be distributed and retained in the business, is at the pure discretion of management. Indeed, the dividend is a complex decision attributable to numerous factors. Extant literature is replete with empirical evidence and theories underpinning corporate dividend behavior (Livoreka et al. 2014). However, despite this extensively explored aspect, the literature remains inconclusive in unfolding the factors and theories reinforcing the firms' payouts (Shetty and Rao 2020; Frankfurter and Wood 2002).

The present study captures the change in dividend policy of the Indian corporate firm's impact on the DDT elimination amid the economic disruption COVID. Secondly, the study examines the association of the firms' financial traits, corroborated by traditional theories and extant literature, on corporate dividend behavior. The relevant literature supporting the research variables and hypotheses is provided as follows.

2.1. Profitability

Profitability is a prime constituent and crucial determinant of dividend decisions of a company (Lintner 1956; Lambrecht and Myers 2012; Anil 2008; Al-Najjar and Kilincarslan 2017; Pruitt and Gitman 1991). Lintner (1956) has found the change in earnings level to be the prime contributor driving the changes in the firm dividend policy, barring the exceptional circumstances (Lintner 1956). Studies across regions and sectors posit a positive association between the firms' profitability and dividend decisions (Banerjee and De 2015; Abdulkadir et al. 2016; Lotto 2020a; Dewasiri et al. 2019; RóJ 2019; Mehta 2012). Profitable firms with large reserves and free cash flows are deemed to afford higher payouts (Danil et al. 2020).

2.2. Free Cash Flow

The dividend is the residual profit paid from the free cash flow available at the firm after meeting the CAPEX and working capital requirements (Baker et al. 1985). Therefore, liquidity is a crucial factor in influencing the dividend payout. Extant studies establish the fact (Suliman Al-Fasfus 2020; Budagaga 2018; Rifat et al. 2020; Le et al. 2019; Rajesh Kumar

and Sujit 2018; Chadha and Sharma 2015). Some studies suggest a positive relationship between the firm's free cash flow and the dividend payout ratio (Baker and Weigand 2015; Rochmah and Ardianto 2020). In contrast, others posit a negative association between free cash flows and payouts (Utami and Inanga 2011).

Agency theory also associates dividends with free cash flows. The proponents of the agency theory postulate payouts as disciplinary moves to prevent the irrational spending of firms' cash flows by the management, and empire-building in their narrow interests (John and Knyazeva 2006; Jensen 1999; Floyd et al. 2015; Driver et al. 2020). Management inertia for initiating dividends represents a unique agency concern (Smith and Pennathur 2019). The firms with free cash flows and low investment opportunities are more likely to attract agency conflicts (Jensen 1986; Wang 2010). Therefore, the firms countering agency problems are deemed to disseminate cash flows more promptly via dividend payouts, buybacks, or unproductive acquisitions (Jensen 1996).

2.3. Financing and Investment Decisions

Dividend, financing, and investment decisions are crucial corporate finance decisions which influence a firm's value (Daas et al. 2020). The proponents of residual theory avow the dividend as a passive residual (Brav et al. 2005; Higgins 1972). Dividend policy, according to these authors, entails decisions relating to the distribution of the residual earnings among its shareholders (Rójí 2019). Theoretically, the dividend is more of a financing decision determined by a firm's investment requirements (Walter 1956; Brav et al. 2005). After meeting the investment requirements and adjusting the desired capital structure, residual earnings are distributed as dividends (Smith and Watts 1992; Miller and Modigliani 1961). Thus, the dividend disbursement to ordinary shareholders is contingent on the firm's financing needs, the viable investment opportunities, and the growth rate (Ardestani et al. 2013). Research studies establish this fact.

2.4. Growth Rate

As per Walter's model, the degree of appreciation in share value is allied with the proportion of earnings retained and their profitable utilization (Walter 1956). A firm with lucrative investment opportunities and the potential to earn higher returns can enhance its value by squeezing its payout to zero. Consequently, low dividend payout ratios constitute an accepted feature of growth stocks since the reinvestment into the business is presumed to be more beneficial for the shareholders. At the same time, high retention by low-earning firms may cause negative implications for share prices. Empirical studies corroborate the negative association between the firm's growth rate and dividend payouts. The firms with good investment opportunities have been observed as low dividend payers, irrespective of their earnings levels (Le et al. 2019; Danil et al. 2020; Sharma 2020; Pahi and Yadav 2021; Rozeff 1982; Dixit et al. 2020; Lu et al. 2014; Fama and French 2001; Al-Kuwari 2010). The negative association between a firm's growth rate and the propensity of payout is well supported by the agency (Al-Kuwari 2010) and the life-cycle theories (Bhattacharya et al. 2020; Yousef et al. 2021). Studies associate dividend policy with the firm's life cycle (Dixit et al. 2020; Dewasiri et al. 2019; Labhane and Das 2015; Abdulkadir et al. 2016; Moon et al. 2015). The optimal dividend policy hinges upon the firm's life cycle stage (Bulan and Subramanian 2011); fluctuating cash flows and investment opportunities with a transition in the growth stage dominates the firm's propensity of payout (Bhattacharya et al. 2020; Drobetz et al. 2015; Dickinson 2011). The mature companies with stable earnings, goodwill, and expertise maintain reasonable reserves and have better access to external capital market; therefore, they are more likely to pay dividends, compared to young firms with more investment avenues and constrained resources (Ranajee et al. 2018; El-Ansary and Gomaa 2012).

2.5. Leverage

Studies posit financial leverage as another crucial determinant influencing a firm's payout policy (Tahir et al. 2020; Santhosh Kumar and Bindu 2018; Banerjee and De 2015; Hadian 2019). Firms with a low debt ratio are pragmatic in maintaining high payouts and vice-versa (DeAngelo and DeAngelo 2007; Labhane 2017; Lotto 2020b; Banerjee and De 2015). These findings are consistent across regions (Alam 2012; Labhane 2019b) and industries (Moon et al. 2015; Gakumo and Nanjala 2017). High-levered firms carry obligations to pay out cash in future periods, and thus have constrained cash flows for capital expenditures and dividends (Walter 1963). This mitigates agency problems (Chaleeda et al. 2019), and maintains ample liquidity to promptly honor the obligations under creditors' pressure, or voluntarily compel the high-levered firms to maintain low payouts (Chevalier et al. 2020; Tse 2020).

2.6. Investors' Expectation

Catering theory postulates dividend decisions instigated by investors' preference for dividend payers in the market. Managers cater to investors by paying dividends when the market puts a premium on dividend-paying stocks (Baker and Wurgler 2004). Studies (Labhane 2020; Wang et al. 2016; Pieloch-Babiarz 2020; Lu et al. 2014; Bilel and Mondher 2020; Rochmah and Ardianto 2020) document the payout decision as positively associated with the premium that investors add on dividend-paying stocks.

For investors, dividends constitute a vital source of income and, therefore, a key component for evaluating stock price (Wang and Guarino 2020). At any time, the share price is contingent upon the investors' expectations regarding the dividend stream, the terminal market price, supplemented with their system of weighting the possible outcomes per period and through time (Walter 1963). According to Gordon's theory (Gordon 1959), investors expect a regular dividend income on their investment. Deferring dividends may invoke a sense of uncertainty among the investors, enhancing the likelihood of discounting the company's share prices (Shetty and Rao 2020; Tiwari and Pal 2020; Simoes Vieira 2011). Studies observed the significant influence of a firm's dividend payouts on market prices (Shetty and Rao 2020), price-earnings ratio, and shareholders' wealth (Saraswat 2018; Sulistiono and Yusna 2020; Baskin 1989; Mehta et al. 2014).

Signaling and information hypotheses also link the payout policy with investors' reactions (Miler and Rock 1985; Bhattacharya 1979). The decision to initiate and continue dividends possesses the predictive power to differentiate the share price returns of dividend-paying firms over non-dividend-paying firms (Labhane 2020). The dividend is expected to mirror the firm's performance (Thaiyalnayaki and Reddy 2018). They are deemed to possess vital information about the distributing firm's profitability and cash-flows (Fama and French 1998; Dionne and Ouederni 2011; Miklus and Oplotnik 2016; Lin and Lee 2021; Budagaga 2020). The dividend payout policy signals good news to investors (Tahir et al. 2020; Anand 2004). Studies document the dominance of signaling theory in a firm's dividend behavior (Baker et al. 1985; Batabyal and Robinson 2017; Daniels et al. 1997; Taleb 2019).

Managers implicitly assume dividends as unbiased signals of the firm's financial health and prospect to the investors. A decrease in payouts is expected to foreshadow a decline in the firm's prospects (Krieger et al. 2020). Studies examine the expected future earnings and pattern of past dividends as significant predictors affecting the firm's payout decisions (Qamar et al. 2014; Baker and Weigand 2015; Budagaga 2018). Corporate firms are often reluctant to deviate from the past dividends and are persistent with dividend smoothing (Mahenthiran et al. 2020; Qamar et al. 2014). Firms combating volatile earnings and high business risk, therefore, generally prefer low payouts to restore financial flexibility (Lambrecht and Myers 2012; Pinto and Rastogi 2019; Alekneviene et al. 2015; Poulsen et al. 2013; Fliers 2019; Pruitt and Gitman 1991; Krieger et al. 2020; Loukil 2020; Agrawal 2020).

2.7. Environment

Studies associate the change in the dividend behavior of the firms with the changing environment-market, political, industry, and regulatory conditions (Ranajee et al. 2018; Rifat et al. 2020; Loukil 2020; Hamed Al-Yahyaee et al. 2010; Bilel and Mondher 2021; Wang and Guarino 2020). In an Indian study, Banerjee and Das found payouts of pre-recession to be positively associated with assets' growth rates and profitability, and payouts of the post-recession period with profitability and financial leverage (Banerjee and De 2015). A comparative study of emerging market and U.S. firms (Anjali and Raju 2017) reports identical dividend behavior of firms across regions, with a significant difference in dividend determinants of U.S. firms and the emerging market. They found the U.S. firm's payouts to be more sensitive to profitability, debt, and the market-to-book ratio. In emerging economies, the asset mix is found to be more dominant due to more reliance on bank debt. An Indian study (Pandey 2007) substantiates the underdeveloped financial system to be responsible for the low payout of Indian firms. Other studies also corroborate regional factors as essential determinants influencing dividend policies (Aivazian et al. 2003). Recent studies have explored the impact of the COVID-19 pandemic on corporate dividend behavior (Adehi and Majjamaa 2020; Wang and Guarino 2020; Pettenuzzo et al. 2020; Krieger et al. 2020; Cejnek et al. 2020). Studies reveal significant dividend omissions amid the economic disruption of COVID. These findings are consistent across regions and sectors.

2.8. Taxes

As per Modigliani and Miller's irrelevance theories of capital structure (Modigliani and Miller 1958) and dividends (Miller and Modigliani 1961), the capital structure and dividends are irrelevant decisions for a firm's value in a world of no taxes. Tax is an integral part of the economic policies of any economy; therefore, it is a potentially vital consideration influencing corporate decisions (MacKIE-Mason 1990). The dividend tax affects a firm's value (Fama and French 1998; Karjalainen et al. 2020; Aggarwal and Tiwary 2019). The corporate tax rate and dividend distribution tax act as the discouraging factors for dividend distribution. The primary effect of taxes results from their impact on the magnitude of net earnings, which is a primary determinant of the volume of dividends (Lintner 1956). The increase in corporate tax rates reduces earnings after tax, weakening the companies' ability to pay dividends (Singla and Samanta 2019). The DDT is levied on the after-tax income distributed to the shareholders as a dividend; this involves taxing the already taxed income and enabling shareholders to be paid the after-tax (DDT tax) amount of the actual dividend distributed by the company (Datta et al. 2014). The adverse tax implication of the DDT raises the dividend puzzle as to why management distributes dividends (Al-Najjar and Kilincarslan 2019; Dewasiri Narayanage and Yatiwella 2016; Black 1996). The mystery of dividend payments, albeit with unfavorable tax implications, remains inconclusive, with extant literature manifesting signaling, agency redressal, clientele effect, earnings quality management (Ajay and Madhumathi 2015), corporate governance (Rajput and Jhunjhunwala 2019; Nguyen et al. 2021; Pahi and Yadav 2021), ownership structure (Basu and Sen 2015; Rajverma et al. 2019), group affiliation (Labhane and Mahakud 2019), and many more justifications for dividend payments (Dewasiri Narayanage and Yatiwella 2016; Goyal 2019).

Nevertheless, the influence of the dividend tax on dividend policy cannot be overlooked. Studies establish the influence of change in capital gain and dividend taxes on corporate dividend policies (Blouin et al. 2011). The study of private companies in Finland by (Karjalainen et al. 2020) documents the willingness to pay tax-exempted dividends and avoid unnecessary company income tax as crucial elements guiding earnings management. In a study of Canadian firms (Deslandes et al. 2015), the reduction in DDT is found to have a favorable implication on firms' payouts. Findings report an increase in a firm's payouts following a tax cut; the increase was more significant for the firms where the reduced tax rate was favorable for the shareholders. Indian economy studies have established similar

findings; the study by (Pahi and Yadav 2021) found DDT to be a suppressing factor for dividend distribution. Labhane (2018) noticed high dividend distribution taxes imposed by the government to be the reason for more dividend smoothening by Indian corporate firms.

2.9. DDT Elimination in India and Dividend-Payout

The Indian economy is among the fastest-growing emerging markets and has undergone regulatory changes from time to time to make it more independent, transparent, and pro-investment. With the increased market capitalization and vast shareholders base, corporate policies have always been under the close surveillance of the Indian regulators. With the increase in the institutional investors, in the February 2020 budget, the Finance-minister announced the abolishment of the dividend distribution tax, effective from 1 April 2020.

Before 1997, India followed the classical tax system. Following in the footsteps of the western economies, the DDT was introduced in 1997. Since then, the DDT rate has undergone consistent changes (Refer Table 1). Under the old regime (before F.Y. 2020), the DDT rate was 17.65% and effectively 20.56% including the surcharge and cess 20.56 % including the surcharge and cess, enabling the shareholders to receive hardly 80 percent value of the actual dividend amount distributed by the Companies. The abolishment of DDT, prima facie, is an encouraging factor for dividend distribution by Indian corporate firms. With the exception of the institutional investors, large shareholding groups, and the recipients who fall into the high income tax slab, the new regime seems to be a win-win situation for the distributing companies, as well as the recipient shareholders.

However, given the aftermath of the pandemic, where the majority of industries suffered dented productivity, profitability, cash flows, and sustainability challenges in the new normal, the possibility of an enhanced payout expected due to DDT elimination seems far-fetched. This paper examines the changes in the payout policies of Indian corporate firms following DDT elimination under the Financial Act 2020, amid the economic disruption of COVID. Additionally, it investigates the impact of firms' financial traits, corroborated by existing theories and empirical literature, on the dividend behavior of regular and irregular dividend payers.

The following section details the research design, variables extraction, research models, data collection, and sample firms.

Table 1. Independent variables used in the study.

Variables	Underlying Theories	Proxy Measures	Formula	References	Factor Loadings
Profitability	Studies by (Lintner 1956; Fama and French 2001); Residual dividend theory; Modigliani Irrelevance theory (Miller and Modigliani 1961); Walter Theory (Walter 1963); Gordon Theory (Gordon 1959)	EBITDA	Earnings before interest, taxes, depreciation and amortization	(Jiraporn and Chintrakarn 2009; Edgerton 2013)	0.898
		EBITDAMargin	EBITDA margin = EBITDA/Net sales		0.847
		ROTA	Return on total assets = EBIT/Total assets		(Labhane and Mahakud 2018; Fama and French 2001)
Liquidity	Free cash flow theory signaling (Lang and Litzenberger 1989)	C.F.	Cash flows = EBITDA Interest Taxes Dividend paid	(Dewasiri et al. 2019; Labhane and Das 2015)	0.889
		FCF	Free cash flows = Cashflows*(1/Total Assets)	(Dewasiri et al. 2019; Lang and Litzenberger 1989; Suliman Al-Fasfus 2020)	0.810
Leverage	Residual theory (Lintner 1956; Baker and Weigand 2015)	Debt-equity	Debt–equity ratio = Total debt/Total equity	(Singla and Samanta 2019; Dewasiri et al. 2019; Banerjee and De 2015; Danil et al. 2020)	0.943
Size/tangibility	Agency theory; studies by (Endri and Fathony 2020; Lumapow and Tumiwa 2017)	LogTA	Natural log of total assets	(Dewasiri et al. 2019; Le et al. 2019)	0.894
		Networth BVS	Net worth Book value per share	(Jiang and Stark 2013)	0.972
Growth rate	Walter theory (Walter 1963; Ismail et al. 2018)	ROTA	EBITDA/TA	(Jensen et al. 2010)	0.811
		MBV	Market-to-book value ratio = Market capitalization/Net worth	(Labhane 2019b; Smith and Watts 1992; Benavides et al. 2016; Walter 1963; Lahiri and Chakraborty 2014)	0.776
Tax rate	Clientele effect (Blouin et al. 2011; Allen et al. 2000)	Tax	Provision for tax/Profit before tax	(Labhane 2019a; Allen et al. 2000; Blouin et al. 2011; Ismail et al. 2018)	0.947
Dividend premium	Catering theory (Baker and Wurgler 2004; Bilel and Mondher 2021)	MBV	Market capitalization/Net worth	(Baker and Wurgler 2004; Labhane 2019a; Stern and Willett 2019)	
Lag dividend	Signaling theory (Labhane 2018; Wu 2018)	LagDiv	LagDiv = DivPer _{t-1}	(Dewasiri et al. 2019; Dinh and Yen 2018; Qamar et al. 2014; Baker et al. 2019; DeAngelo et al. 2006)	

3. Research Methodology

3.1. Objectives

The study explored the changes in the payouts of Indian corporate firms, consequent to DDT elimination effective from 1 April 2020. It also examined the financial determinants of the changing payout behavior.

3.2. Sample Firms and Data

The top 1000 listed firms, based on their market capitalization at BSE India, formed the universe of the study. For the analysis, the non-financial firms, which have consistently paid a dividend during the Years 2015 to 2020, were considered. The sample was further sub-divided into regular and non-regular payers. Firms were categorized as regular payers if they have consistently maintained stable or increasing payouts from 2015 to 2019.

The total sample consisted of 509 firms, including 65 regular payers (details contained in Appendices A and B).

3.3. Variables of the Study

3.3.1. Dependent Variables and the Proxy Measures Used

To examine the dividend behavior of sample firms, dividend payouts, calculated as the percentage of dividend paid over earnings after-tax, were used as proxy measures for dividend policy. The measure was used in earlier studies by (Labhane 2019b; Dewasiri et al. 2019). The dividend payout ratio and dividend yield were widely accepted as measures of dividend policy. However, with the pandemic-induced exacerbation of stock prices, dividend yields were expected to exhibit a distorted view and were therefore excluded from the analysis. The study used the annual observations of dividend payout percentages.

For analyzing the impact of DDT and COVID-19 pandemic, the direction of increases and decreases in, cuts to, and the omission of, dividend payouts were considered, as used by Krieger et al. (2020). Firms were classified (via an indicator variable DivCut) as enacting a dividend cut when the dividend payout percentage in the year t declined relative to the previous year $t - 1$; DivCut = 0, if the change in the DivPer ≥ 0 ; otherwise, 1.

3.3.2. Independent Variables

Extant literature confirmed the association of the firm's financial traits with corporate dividend behavior. The firm's financial fundamentals, corroborated by empirical literature as predictors of dividend decisions, were examined through factors analysis to extract the dependent variables for the study. Upon running the exploratory factor analysis varimax rotation approach on 25 variables, we obtained eight representative variables. The variables with the highest factor loadings and deemed reasonable to affect dividend decisions were used for the analysis. Other than the extracted variables, the study also examines the impact of the lag dividend as the independent variable. Appendix C contains the results of the factors analysis. Table 1 enlists the dependent variables, the underlying theories, factor loadings, and formulae used for measuring the variables, respectively.

Explanatory variables potentially predictive of dividend change, cuts or omissions: free cash flows, profitability, leverage, market premium, growth rates, firm size, log assets, market capitalization, and sales were used to analyze the change in dividends and dividend cuts. Earlier studies (Krieger et al. 2020; Fama and French 2002; Brav et al. 2005) used these controls.

3.4. Research Model

To assess the direction of dividend change, the frequency and magnitude of dividend increase, decrease, cuts, and omission were reviewed from 2015 to 2021. To capture the influence of DDT changes (effective from 1 April 2020 onwards), the dividend payouts from 1 April 2020 onwards were considered as payouts of the year 2021. The statistical significance of changes in the dividend payout (DivPer) and DivY (Dividend yield) of 2020,

2021, and pre-2020 periods (the average of the years 2015 to 2019) were examined using a paired sample t-test.

Further, using panel data regression analysis, the determinants of dividend payouts, changes in payouts, and dividend cuts were examined. The panel data analysis was an effective approach for analyzing cross-sectional data. It aided in incorporating the effects of unobservable firm-specific and time-specific variables, along with quantifiable factors. It was a robust approach to deal with data heteroskedasticity (Wooldridge 2013). This method was extensively used in earlier studies (Bostanci et al. 2018; Kajola et al. 2015; Pinto and Rastogi 2019; Labhane and Das 2015).

Due to the shortness of the panel, the study used linear panel models with fixed effects. To capture the impact of the pandemic and DDT elimination, two dummy variables, dummy 2020 and dummy 2021, were used.

The regression models represented by Equations (1) and (2) were used to analyze the determinants of dividend payouts, changes in payout, and dividend cuts.

$$\text{Model 1: DivPer}_{i,t} = \alpha_{i,t} + \beta_1 \text{EBITDA}_{i,t} + \beta_2 \text{LogTA}_{i,t} + \beta_3 \text{BVS}_{i,t} + \beta_4 \text{CF}_{i,t} + \beta_5 \text{FCF}_{i,t} + \beta_6 \text{ROTA}_{i,t} + \beta_7 \text{MBVR}_{i,t} + \beta_8 \text{DE}_{i,t} + \beta_9 \text{EBITDAR}_{i,t} + \beta_{10} \text{Tax}_{i,t} + \beta_{11} \text{LagDiv}_{i,t} + \varepsilon_{i,t} \quad (1)$$

Equation (1) identified the association of firm financial traits (mentioned in Table 1) on dividend payout:

$$\text{Model 2: DivPer}_{i,t} = \alpha_{i,t} + \beta_1 \text{Dummy2020}_{i,t} + \beta_2 \text{Dummy2021}_{i,t} + \beta_3 \text{FCF}_{i,t} + \beta_4 \text{EBITDAMargin}_{i,t} + \beta_5 \text{ROTA}_{i,t} + \beta_6 \text{LogTA}_{i,t} + \beta_7 \text{LogMcap}_{i,t} + \beta_8 \text{LogSales}_{i,t} + \beta_9 \text{MBVratio}_{i,t} + \beta_{10} \text{DE}_{i,t} + \varepsilon_{i,t} \quad (2)$$

Equation (2) assessed the predictors of change in dividend payout and dividend cuts. Factors potentially predictive of dividend change, cuts and omissions: free cash flows, profitability, leverage, market premium, growth rates, log assets, market capitalization, and sales, formed the explanatory variables in Equation (2).

For analyzing the dividend cuts, firms enacting a dividend cut were classified via an indicator variable DivCut; DivCut = 1, if ChgDivPer < 0; otherwise 1:

- Dummy2020 = Dummy variable for year 2020;
- Dummy2021 = Dummy variable for year 2021;
- DivPer_{i,t} = Dividend payout percentage of firm i at time period t;
- EBITDA_{i,t} = Earnings before interest, taxes, depreciation and amortization;
- LogTA_{i,t} = Natural log of total assets;
- BVS_{i,t} = Book value per share;
- CF_{i,t} = EBITDA interest taxes dividend;
- FCF_{i,t} = CF*1/Total assets;
- ROTA_{i,t} = EBITDA/Total assets;
- MBVR_{i,t} = Proxy of market premium = Market cap/Net worth;
- DE_{i,t} = Debt–equity ratio = Total debt/Equity funds;
- EBITDAR_{i,t} = EBITDA/Net sales;
- Tax_{i,t} = Corporate tax rate = Provision for taxes/Earnings before taxes;
- LagDiv_{i,t} = DivPer_{t-1};
- ε_{i,t} = Error term;
- DivCut = Dummy variable for dividend cut;

If DivPer of firm i for time period t < DivPer of t – 1, then DivCut = 1; otherwise, 0.

4. Empirical Findings

4.1. Impact of the DDT Elimination under Finance Act 2020 on the Corporate Dividend Behavior

Table 2 exhibits the paired sample t-test conducted to assess the difference between the dividend payout and yield of the F.Y. 2020–21 and the preceding years. The findings corroborate significant changes in the corporate dividend behavior in the years 2021 and 2020 vis-à-vis pre 2020 years. Significant t-values authenticate the dividend payout of the years 2020 and 2021 to be significantly different from the pre 2020 period; however,

there seems to be no substantial difference in the payout percentage of 2021 and 2020. As expected, due to the pandemic-induced exacerbation of stock prices, results exhibit a significant difference in the dividend yield of 2020 vis-a-vis the 2021 and pre 2020 periods.

Table 2. Results of paired sample t-test of dividend payouts and dividend yield for the years 2021, 2020 vis-à-vis pre 2020.

Pairs	Paired Differences					t	df	Sig. (2-Tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
DivPer21–DivPer20	29.06	896.32	48.33	–66.00	124.11	0.60	343	
DivPer21–Pre2020DivPer	87.87	529.86	28.20	32.40	143.33	3.12	352	***
DivPer20–Pre2020DivPer	72.05	707.07	33.26	6.69	137.41	2.17	451	**
DivY21–DivY20	–1.21	3.71	0.16	–1.54	–0.89	–7.37	507	***
DivY21–Pre2020DivY	–0.04	1.79	0.08	–0.20	0.12	–0.50	471	
DivY20–Pre2020DivY	1.17	3.56	0.16	0.85	1.49	7.13	470	***

*** Significant at 1%; ** Significant at 5%. DivPer21 = Dividend payout for the year 2021; DivPer20 = Dividend payout for the year 2020; Pre2020DivPer = Average payout from 2015 to 2019; DivY21 = Dividend yield for the year 2021; DivY20 = Dividend yield for the year 2020; Pre2020DivY = Average yield of 2015 to 2019.

Tables 3–5 exhibit the direction of the dividend payouts over the last six years (2015 onwards). Table 3 and Figure 2 document the number and proportions of firms enacting increases, decreases, or omissions in payouts. As portrayed in Figure 2, there are no dividend cuts by Indian corporate firms, except for the years 2020 and 2021.

The statistics of dividend cuts and omissions reflect firms' payout sensitivities to the change in tax regimes and the economic environment. As provided, there seems a considerable decline in the number of payers' firms and the upsurge in the dividend-cutting firms from 2018 onwards (Table 4). The dividend-reducing firms, which were below 20 percent till 2017, elevated to 45 percent in 2018. Perhaps, bringing the deemed dividend under the ambit of DDT, effective from 1 April 2018 (as per the Finance bill, 2018)⁴, which was hitherto taxable in the recipients' hands, is the reason for this declined payout.

The elimination of DDT, effective from 1 April 2020, was envisaged to enhance the payouts by the Indian firms. However, contrary to the expectations of enhanced dividends associated with the DDT elimination, the data manifest an increasing pattern of dividend cuts from 2020 onwards for the regular, as well as the irregular, payers. The F.Y. 2020 shows a considerable spike in the dividend cuts by the regular and irregular payers. Eighty percent of the regular payers, consistently following a stable or increasing payout pattern from 2015 onwards, endorsed dividend reduction or entire omissions in 2020. Wherein the dividend-declining firms have spiked from 46 to 56 percent from 2019 to 2020, the year 2021 exhibits dividend cuts of more than 65 percent of the companies. The regular payers unveiled a similar pattern, with the percentage of dividend-omitting firms rising from 27 to 41 percent in 2021 (Table 3).

Table 5 exhibits the dividend cuts observed across the sectors from 2015 to 2021. There seems to be an increasing pattern of dividend cuts from 2018 onwards. The COVID-affected years (2020 and 2021) unveil a spurt in dividend cuts across all the sectors, with the service industry being the most affected. The dividend cuts enacting service sector firms, which were limited to 45 percent by 2020, rose above 60 percent during 2020. Perhaps, the changing industry dynamics and sustainability challenges in this milieu compelled the management to retain the surplus cash and restore financial flexibility (Table 5).

From these findings, it is reasonable to conclude that the impact of COVID has been devastating for the Indian corporate sector. The restrictive economic activities and inflicted financials and sentiments, have instigated drastic dividend cuts by the firms, which have ignored their past practices, as well as investors' expectations, and tax advantages associated with the eliminated DDT.

Table 3. Trend of changes in the dividend payout.

	Increase	Decrease	Stable	Omission	Dividend Cut% (Omission + Decrease)
Consistent payers post 2015 (65)					
Year 2021	14	9	15	27	55.38%
Year 2020	13	33	1	18	78.46%
Changes in payouts 2021					
Payers 2020 (244)	68	112	13	51	48.77%
Payers 2019 (281)	96	54	41	90	66.19%
Payers 2018 (277)	64	65	45	103	60.29%
Payers 2017 (415)	143	93	55	124	64.34%
Payers 2016 (410)	142	88	55	125	65.12%
Payers 2015 (419)	140	87	60	132	64.92%
Changes in payouts 2020					
Payers 2019 (281)	106	140	2	33	49.47%
Payers 2018 (277)	114	115	5	43	56.68%
Payers 2017 (415)	189	174	7	45	56.39%
Payers 2016 (410)	184	170	9	47	56.34%
Payers 2015 (419)	188	175	8	48	56.32%
Changes in payouts 2019					
Payers 2018 (277)	97	161	19	0	58.12%
Payers 2017 (415)	184	193	38	0	46.51%
Payers 2016 (410)	192	186	32	0	45.37%
Payers 2015 (419)	202	179	38	0	42.72%
Changes in payouts 2018					
Payers 2017 (415)	212	192	11	0	46.27%
Payers 2016 (410)	214	184	12	0	44.88%
Payers 2015 (419)	217	192	10	0	45.82%
Changes in payouts 2017					
Payers 2016 (410)	198	77	135	0	18.78%
Payers 2015 (419)	199	74	146	0	17.66%
Changes in payouts 2016					
Payers 2015 (419)	208	71	140	0	16.95%

Consistent payers represent the sample firms with increasing or stable dividends from 2015 to 2019. Payers represents the firms that have paid increasing or stable dividends in the suffix year.

Table 4. Pattern of dividend cuts 2015 onwards.

Years	Number of Firms	%	Change in Dividend–Cut Percentage				
			Minimum	Maximum	Mean	Std. Deviation	Variance
2021	164	32.22%	−0.99	−0.04	−0.65	0.27	0.70
2020	280	55.00%	−1.00	−0.07	−0.74	0.27	0.07
2019	228	44.80%	−1.00	−0.04	−0.64	0.27	0.07
2018	232	45.60%	−0.99	−0.02	−0.68	0.25	0.06
2017	94	18.50%	−0.91	−0.02	−0.45	0.23	0.05
2016	99	19.40%	−0.97	−0.04	−0.39	0.24	0.06
2015	90	17.70%	−0.97	−0.01	−0.39	0.24	0.06

Table 5. Dividend cut trends (2015) onwards across sectors.

Industry	Number of Companies	Dividend Cuts							
		2021	2020	2019	2018	2017	2016	2015	
Manufacturing	298	157	134	135	137	57	53	50	
Service sector	108	57	63	47	45	27	27	21	
FMCG	32	19	12	18	20	2	4	6	
Infrastructure	18	11	9	8	6	5	1	2	
Realty	17	10	11	5	6	2	6	4	
Diversified	9	5	3	6	6	1	-	2	
Trading	9	4	3	2	4	-	4	-	
Agri	7	3	3	2	3	-	2	2	
Diamond & Jewellery	3	2	1	1	1	-	1	-	
Electricals	4	2	3	1	1	-	-	1	
Aviation	2	1	2	1	2	-	-	1	
Miscellaneous	2	1	1	2	-	-	-	-	
Total	509	272	245	228	231	94	98	89	
DivCut%		53%	48%	45%	45%	18%	19%	17%	

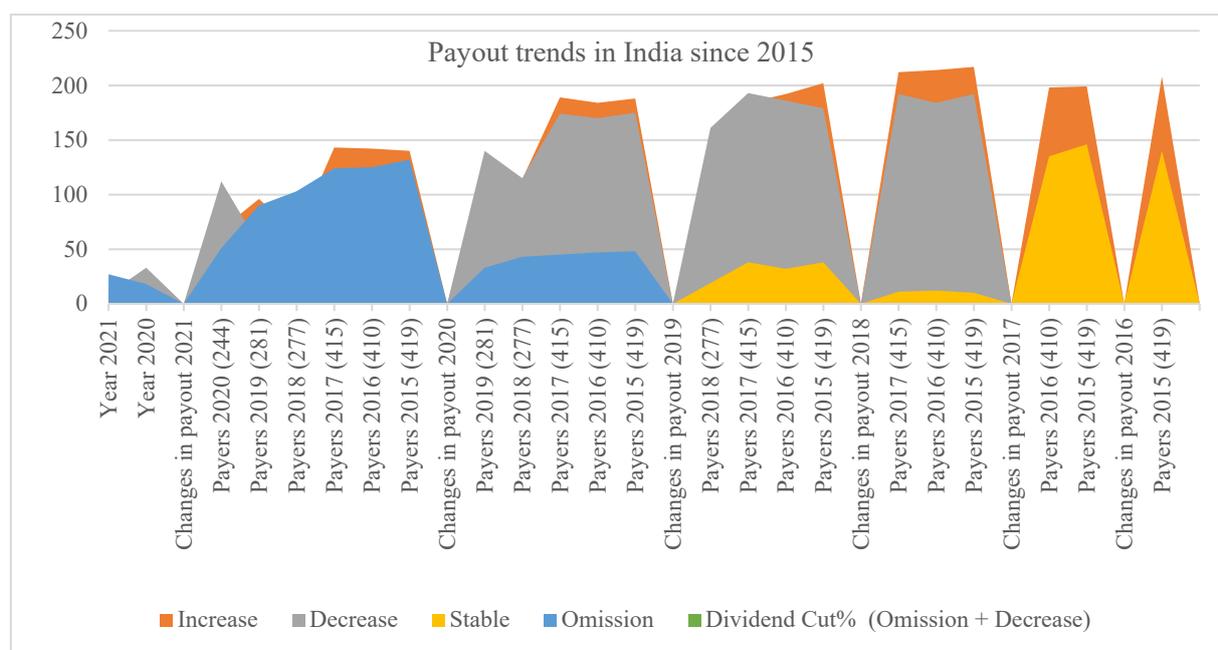


Figure 2. Changing pattern of Indian corporate payout since 2015.

4.2. Determinants of Changing Dividend Behavior

4.2.1. Determinants of Dividend Payout

This study attempts a regression analysis to trace the association of a firm’s financial traits (provided in Table 1) on their dividend payouts. Table 6 documents the parameter estimates computed as per Equation 1. The R-square value (0.75) authenticates the three-fourths influence of the explanatory variables in explaining the variance in the dividend payouts of the sample firms analyzed. Model findings confirm the firm’s size, MBV ratio, and past dividends as the positive predictors of dividend payouts. At the same time, the firm’s free cash flows and EBITDA margin are discerned as significant negative predictors influencing payouts (Table 6).

Table 6. Determinants of dividend payouts.

Variable	Coefficient	Std. Error	Significance
C	−282.12	54.864	***
EBITDA	−0.004	0.002	*
LOGTA	44.558	6.89	***
BVS	0.076	0.046	*
CFS	−0.001	0.001	
FCFS	−2.807	0.346	***
MBVRATIO	10.973	4.061	***
DEBTEQUITY	−4.263	3.319	
EBITDAMARGIN	−5.692	1.559	***
TAXRATE	0.479	0.568	
LAGDIV	0.092	0.035	***
Effects Specification			
Cross-section fixed (dummy variables)			
Root MSE	254.141	R-Squared	0.75
Mean dependent var.	209.583	Adj. R-Squared	0.71
S.D. dependent var.	508.104	S.E. of regression	274.95
Akaike info criterion	14.205	Sum squared resid	230,125,535.8
Schwarz criterion	15.205	Log likelihood	−24,787.18
Hannan–Quinn criterion	14.526	F-statistic	17.61
Durbin–Watson stat.	1.913	Prob(F-statistic)	0
Dependent Variable: DIVPER			
Method: Panel Least Squares			
Sample 2015–2021			
Periods included: 7			
Cross-sections included: 509			
Total panel (balanced) observations: 3563			
White period standard errors & covariance (d.f. corrected)			

*** Significant at 1%; * Significant at 10%.

Appendix D shows the segregated year-wise regression results from 2015–2021. Findings validate the assumed financial predictors to be significantly associated with the dividend behavior of the corporate firms. The FCF, lag dividend, growth rate, firms' sizes, and book values are prime factors pervasive in most of the years. All of the years portray the significant negative association of FCF and the positive influence of lag dividends on the dividend payouts, thus, lending credence to the conservative payout behavior of the firms with the dominance of catering theory.

It is worth mentioning that the Lag dividend and MBV, which consistently appear as significant positive predictors of dividend payouts in all the years, have been discerned as insignificant during the year 2020. The findings narrate the severity of the economic consequences of COVID-19 on the firm's financials and sentiments that compelled them to make dividend cuts, circumventing their past practices.

Findings also unearthed the changes in the leverage and dividend payout relationship after 2015. The debt–equity ratio, which seemingly shared a significant positive association with payouts during 2015, appeared to be a negative and irrelevant predictor in later years. The negative association of the debt–equity ratio with payouts reflected the risk-averse behavior of the management. Firms with a high leverage preferred low payouts to restore financial flexibility (DeAngelo and DeAngelo 2007; Banerjee and De 2015; Agrawal 2020). It was possible that firms utilized debt proceeds for paying dividends in 2015. The transition in the leverage and dividend payout association from positive to negative from 2016 onwards was due to the influence of the Indian Accounting Standards 32 (Ind AS 32), enacted in April 2016 on all listed and non-listed companies exceeding a net worth of INR 5 billion. The new standard directly recognized redeemable preference shares (RPS) as debt capital, which earlier were deemed a part of a firm's equity. The AS 32 also mandated disclosing the debt component of Optionally Converted Preference

Shares (OCPS) in the balance sheet. Preference shares were a flexible source of financing for the highly levered firms. Paying fixed preference dividends enabled the firms to restore their financial flexibility without diluting their equity control and maintaining optimal leverage. However, the AS-32 impeding the management liberty of channeling the RPS and OCPS, which diluted their debt–equity ratio, compelled the highly levered companies to cautiously utilize debt capital. Plausibly, the firms using debt funds for payouts up until 2015 became risk-averse post AS 32 enforcements.

Given the significant dividend cuts and omissions observed by the regular payer firms in 2020 and 2021 (Table 3), this study examined the payout predictors of regular payers. Here, the regular payers represented the firms that persistently followed a stable or step-up dividend payout from 2015 to 2019. Table 7 documents the key results. R-square value substantiated a ninety-five percent influence on explanatory variables in explaining the variance in the dividend behavior of the regular payers. Results corroborated the dividend payout of regular payers to be positively related to cash flows and lag dividend and negatively with EBITDA margin and free cash flows. Findings lent credence to conservative payout policy followed by regular payers with more inclination towards retaining the profits of businesses. The positive relationship between the cash flow and dividend payout exhibited the dominance of agency concern in dividend payout decisions (Table 7).

Table 7. Determinants of dividend payout of regular dividend payers.

Variable	Coefficient	Std. Error	Sig.
C	114.311	86.793	
EBITDA	0.006	0.006	
LOGTA	−8.939	14.81	
BVS	0.036	0.023	
CFS	0.004	0.001	***
FCFS	−294.114	134.497	**
MBVRATIO	−0.156	0.121	
DEBTEQUITY	−19.681	11.395	*
EBITDAMARGIN	−23.265	13.185	*
TAXRATE	−18.859	−18.954	
LAGDIV	0.672	0.265	**
Effects Specification			
Cross-section fixed (dummy variables)			
Root MSE	99.342	R-Squared	0.956
Mean dependent var.	172.501	Adj. R-Squared	0.946
S.D dependent var.	472.029	S.E. of regression	109.841
Akaike into criterion	12.399	Sum squared resid	4,065,918.282
Schwarz criterion	13.131	Log likelihood	−2479.211
Hannan–Quinn criter.	12.689	F-statistic	98.016
Durbin–Watson stat.	2.285	Prob(F-statistic)	0
Dependent Variable: DIVPER			
Method: Panel Least Squares			
Sample 2015–2021			
Periods included: 7			
Cross-sections included: 65			
Total panel (balanced) observations: 412			
White period standard errors & covariance (d.f. corrected)			

*** Significant at 1%; ** Significant at 5%; * Significant at 10%.

4.2.2. Determinants of Changing Dividend Payouts and Dividend Cuts

This study explored the determinants of changing payouts using Equation (2). The Dummy 2020 and Dummy 2021 exhibited dummy variables used to capture the influence of the years 2020 and 2021. Table 8 portrays the results of the panel regression run with fixed

effects. Findings showed dividend payouts to be significantly positively associated with firms' sizes (represented by Log TA) and MBV ratios, and negatively with FCF and EBITDA margins. Dividend payouts of regular payers were found to be negatively associated with FCFs, and positively with Log Mcap. The results authenticated the influence of the pandemic and possibly the DDT elimination (implemented from April 2021 onwards) on the payouts of the sample firms. The findings showed that the years 2020 and 2021 were significantly associated with the changing payouts. For the regular payers, the year 2021 was negatively associated with payout (Table 8).

Table 8. Determinants of changing payouts (results of panel regression with cross-section-fixed and panel-clustered heteroskedasticity).

Variable	All Firms			Regular Payers		
	Coefficient	Std. Error	Sig.	Coefficient	Std. Error	Sig.
C	−290.686	62.049	***	223.549	210.142	
DUMMY2020	44.167	16.95	***	20.938	22.475	**
DUMMY2021	49.717	27.817	*	−35.076	17.433	***
FCFS	−3.236	0.228	***	−541.842	90.132	
EBITDAMARGIN	−6.065	2.577	**	33.176	33.437	
ROTA	231.836	179.373		−538.501	406.11	
LOGTA	45.83	12.061	***	−51.485	51.005	
LOGMCAP	−7.63	4.753		10.912	5.094	**
LOGSALES	5.693	7.891		40.636	36.002	
MBVRATIO	8.685	4.184	**	−0.065	0.092	
DEBTEQUITY	−4.12	3.094		−56.928	30.335	*
Effects Specification						
Cross-section fixed (dummy variables)						
Root MSE		258.320			173.823	
Mean dependent var.		209.583			172.495	
S.D. dependent var.		508.104			471.456	
Akaike into criterion		14.238			13.517	
Schwarz criterion		15.138			14.248	
Hannan–Quinn criter.		14.558			13.806	
Durbin–Watson stat.		1.878			2.628	
R-Squared		0.741			0.864	
Adj. R-Squared		0.697			0.834	
S.E.of regression		279.475			192.143	
Sum squared resid		237,755,377.389			12,487,548.679	
Log likelihood		−24,845.283			−2716.291	
F-statistic		16.853			28.952	
Prob(F-statistic)		0.000			0.000	
Cross-sections included		509			65	
Total panel (balanced) observations:		3563			413	
Dependent Variable: DIVPER						
Method: Panel Least Squares						
Sample 2015–2021						
Periods included: 7						
White period standard errors & covariance (d.f. corrected)						

*** Significant at 1%; ** Significant at 5%; * Significant at 10%.

This study further examined the predictors of dividend cuts. Table 9 exhibits the key results. Findings portrayed dividend cuts as positively associated with FCF and negatively with ROTA, Log TA, and MBV ratio. Prima facie, these results corroborate the management's emphasis on utilizing the payout policy as a signal to control investor sentiments. The positive association of FCF with dividend cuts unveiled the management's reluctance to disseminate the free cash flows as a dividend. However, to suppress the negative signal of low growth and associated adverse investors' reactions, the Indian

corporate firms tried to avoid dividend cuts. The negative relationship between MBV and dividend cuts signaled the prevalence of catering theory in the payout behavior of Indian corporate firms. According to the catering theory, payouts were instigated by the investors' premiums for the dividend-paying shares (Baker and Wurgler 2004; Labhane 2020).

Table 9. Predictors estimates for dividend cuts.

Variable	All Firms			Regular Payers		
	Coefficient	Std. Error		Coefficient	Std. Error	
C	1.177	0.063	***	0.079	0.115	
DUMMY2020	0.015	0.026		0.798	0.055	***
DUMMY2021	0.037	0.046		0.548	0.069	***
FCFS	0.000	0.000	**	0.039	0.028	
EBITDAMARGIN	0.004	0.005		0.029	0.018	
ROTA	−1.41	0.179	***	−0.237	0.345	
LOGTA	−0.033	0.015	**	−0.036	0.025	
LOGMCAP	−0.012	0.006	*	0.004	0.007	
LOGSALES	−0.017	0.013		0.026	0.02	
MBVRATIO	−0.005	0.002	*	0.000	0.001	
DEBTEQUITY	0.008	0.005		0.017	0.029	
Effects Specification						
Cross-section fixed (dummy variables)						
Root MSE		0.450		0.229		
Mean dependent var.		0.524		0.191		
S.D. dependent var.		0.499		0.394		
Akaike into criterion		1.531		0.215		
Schwarz criterion		2.431		0.894		
Hannan–Quinn criter.		1.852		0.483		
Durbin–Watson stat.		2.354		2.182		
R-Squared		0.189		0.662		
Adj. R-Squared		0.051		0.597		
S.E. of regression		0.487		0.250		
Sum squared resid		720.517		23.760		
Log likelihood		−2208.147		26.032		
F-statistic		1.372		10.073		
Prob(F-statistic)		0.000		0.000		
Cross-sections included		509		65		
Total panel (balanced) observations:		3563		455		
Dependent Variable: DIVCUT						
Method: Panel Least Squares						
Sample: 2015–2021						
Periods included: 7						
White period standard errors & covariance (d.f. corrected)						

*** Significant at 1%; ** Significant at 5%; * Significant at 10%.

For the regular payers, findings project the dividend cuts to be primarily associated with the disruption of the pandemic. As provided, excluding Dummy 2020 and Dummy 2021, no significant predictor association was traced between the dividend cuts of regular payers and explanatory variables (Table 9).

5. Discussion

Effective from 1 April 2020, dividend taxation in India switched from the DDT regime to the classical system of dividend taxes. The DDT was a costly proposition for the shareholders. It involved taxing the shareholders twice, first as direct corporate taxes on earnings and secondly via imposing DDT on the after-tax earnings distributed as dividends. The new regime (classical system), eliminating the DDT, made dividend income taxable in the hands of recipient shareholders, shifting the tax incidence from the distributing

companies to the shareholders. Hitherto, the DDT rate of 15%, and effectively 20.56% including surcharge and cess, apportioned the shareholders with 79 percent of the actual dividend distributed by the companies. Therefore, the elimination of DDT was expected to foresee the enhanced payouts by Indian firms for the FY 2020–2021.

Contrary to the expectations of enhanced payouts in 2021 consequent to DDT elimination, data demonstrate the increasing pattern of dividend cuts for the regular, as well as irregular, payers across all sectors. The year 2021 has witnessed dividends cut by more than 65 percent of the companies. There was an increase in dividend-omitting regular payer firms from 27 to 41 percent from 2020 to 2021 (Table 3).

The corporate payouts in India were sensitive to the changes in the economic environment and regulations. We noticed a considerable decline in the number of payers' firms and the upsurge in dividend-cutting firms from 2018 onwards (Table 4). Endorsing DDT on the deemed dividend effective from 1 April 2018, which earlier was taxable as recipients' income, is possibly the rationale for shrinking payouts. Findings corroborate significant changes in the corporate dividend behavior during the years 2021 and 2020 vis-à-vis the pre 2020 period. The years 2020 and 2021 witnessed remarkable cuts or entire omissions of dividends by the sample firms. Eighty percent of the regular payers, demonstrating the stable or increasing payout from 2015 onwards, have endorsed the reduction or entire omission of dividends during 2020. The trend is also in vogue in 2021.

The findings revealed that the uncertainty associated with the new normal, caused by the COVID-19 pandemic, was hard-hitting for firms' financial and management sentiments. Ignoring past practices, investor reactions, and tax advantages associated with the eliminated DDT, the firms practicing stable payouts even showed drastic dividend cuts and omissions.

The study also examined the determinants of dividend payouts and the changing payout ratio. Free cash flows, lag dividend, market-to-book value, profitability, firm size, leverage, and growth rate were observed as significant predictors influencing dividend payouts, as corroborated by earlier studies (Baker et al. 2019; Kumar and Ranjani 2019; Franc-Dąbrowska et al. 2020). We found dividend payouts to be positively associated with the firm's size, MBV ratio, and past dividends, and negatively associated with free cash flows and EBITDA margins (Table 6). These findings lent credence to the conservative dividend payout behavior of Indian corporate firms with the dominance of catering theory. These findings were similar to earlier studies (Baker and Wurgler 2004; Labhane 2020).

The payouts of regular payers appeared to be positively allied with cash flows and past dividends, and negatively with EBITDA margin and free cash flows (Table 7). The negative relationship between EBITDA margins and FCFs corroborated the conservative payout behavior of Indian corporate firms, emphasizing retaining the profits of the business. The positive relationship between the cash flow and dividend payouts of regular payers authenticated the dominance of agency concern in the payout decision of the firms.

The findings exhibited the years 2020 and 2021 as significantly associated with the changing payout, *prima facie*, authenticating the influence of the pandemic and possibly the DDT elimination (implemented from April 2021 onwards). The year 2021 was found to be significantly negatively associated with payouts, corroborating the dividend omission practiced by regular payers (Table 8). The dividend cuts by regular payers were positively associated with FCFs and negatively with ROTA, Log TA, and market-to-book value (Table 9). The positive association of FCF with dividend cuts unveiled the management's conservatism in disbursing the free cash flows as dividends. At the same time, they preferred to avoid dividend cuts to suppress the negative signal of low growth and associated adverse reactions of investors. The negative relationship between MBV and dividend cuts signaled the prevalence of catering and signaling theories in the payout behavior of Indian corporate firms. The management perhaps used the payout policy as a signal to control investor sentiments. Investors were sensitive to dividend cuts; therefore, managers with unobservable solid cash earnings preferred high payouts after retaining an adequate amount, to ensure that the next period payout should not fall short vis-à-vis the

current period (Baker et al. 2016). As expected, we found the payout of regular payer firms to be significantly positively associated with the past dividends.

6. Concluding Observation

Effective from 1 April 2020, the dividend taxation in India shifted to the classical system, thereby transferring the incidence of dividend tax from the dividend-distributed companies to the recipients' shareholders. The adverse tax implications of dual taxation often make DDT a legitimate rationale of conservative payouts by corporate firms. The study attempts to examine the impact of DDT elimination on the dividend payout of Indian firms.

The economic fallout of the COVID pandemic was found to be pervasive in the payouts of Indian corporate firms. Contrary to the expected rise in payouts following the DDT elimination, Indian firms showed substantial cuts or entire omissions of dividends during 2020 and 2021. Overall results reflect the conservative payout behavior of the firms, with payouts as residual decisions negatively associated with free cash flows, profitability, growth rate, and positively related to the market premium. The findings exhibited the dominance of signaling, agency, and catering theory in the dividend payout of Indian corporate firms.

Dividend cuts and omissions were unwelcoming events for the investors in the market. Therefore, corporate firms were generally reluctant to signal pessimism by reduced payouts (Jensen et al. 2010). However, with the advent of the economic crisis, dividend cuts were the flexible sources of managing the liquidity crunch and uncertainty (Iyer et al. 2017). The economic disruption of COVID-19 was pervasive across all the sectors, bar a few (Laing 2020), and the dividend cuts behavior was logical and in vogue across economies (Wang and Guarino 2020; Krieger et al. 2020). With the resurgence of COVID-19, with more severity than the previous wave, the investors may foresee more dividend changes in the coming years. However, with the elimination of DDT, shares of the Indian companies practicing a stable dividend policy are worth investing in from the perspective of regular dividend income.

This paper's findings have practical implications for managers and investors. The dividend payout is a crucial decision likely to affect firms' growth prospects and stability. Apart from constituting the return on the stock investment, the dividends are vital signals of firms' performances and profitability to their investors. Using the significant determinants explored in the study, managers can formulate a stable dividend policy equilibrating the firm's requirements and investors' expectations.

The dividend payouts are not necessarily informative of the firm's profitability and cash flows. For the investors expecting a stable dividend income, the shares of regular dividend-paying firms are a better investment alternative.

With the increasing Indian and foreign investors base, regulatory policies ensuring transparency in dividend decisions can aid in resolving the information asymmetry associated with dividend policies.

The present analysis is limited to the financial factors; incorporating the qualitative traits can perhaps facilitate a widened view of the current and future development of dividend policy.

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Appendix A. Sample Firms Analyzed

1	Carborundum Universal Ltd.
2	Grindwell Norton Ltd.
3	Bombay Burmah Trading Corporation Ltd.
4	Gujarat Ambuja Exports Ltd.
s5	Tata Coffee Ltd.
6	GM Breweries Ltd.
7	United Breweries Ltd.
8	Alicon Castalloy Ltd.
9	Apollo Tyres Ltd.
10	Atul Auto Ltd.
11	Automotive Axles Ltd.
12	Bajaj Auto Ltd.
13	Banco Products (India) Ltd.
14	Endurance Technologies Ltd.
15	Escorts Ltd.
16	Exide Industries Ltd.
17	Gabriel India Ltd.
18	GP Petroleums Ltd.
19	Hindustan Composites Ltd.
20	Hi-Tech Gears Ltd.
21	Jamna Auto Industries Ltd.
22	JK Tyre & Industries Ltd.
23	JTEKT India Ltd.
24	LG Balakrishnan & Brothers Ltd.
25	Lumax Auto Technologies Ltd.
26	Maharashtra Scooters Ltd.
27	Mahindra & Mahindra Ltd.
28	Man Industries (India) Ltd.
29	Panama Petrochem Ltd.
30	Rico Auto Industries Ltd.
31	Sandhar Technologies Ltd.
32	Shanthi Gears Ltd.
33	Sterling Tools Ltd.
34	Swaraj Engines Ltd.
35	Tide Water Oil Company (India) Ltd.
36	Timken India Ltd.
37	TVS Srichakra Ltd.
38	Wabco India Ltd.
39	AIA Engineering Ltd.
40	Alphageo (India) Ltd.
41	Apar Industries Ltd.
42	Bharat Electronics Ltd.
43	Engineers India Ltd.
44	GMM Pfaudler Ltd.
45	Graphite India Ltd.
46	Ingersoll-Rand (India) Ltd.
47	Kirloskar Brothers Ltd.
48	Orient Abrasives Ltd.
49	Orient Refractories Ltd.
50	Rites Ltd.
51	Thermax Ltd.
52	Vesuvius India Ltd.
53	Aarti Industries Ltd.
54	Akzo Nobel India Ltd.
55	Alkyl Amines Chemicals Ltd.
56	Apcotex Industries Ltd.
57	Balaji Amines Ltd.

58	BASF India Ltd.
59	Bhansali Engineering Polymers Ltd.
60	Bharat Rasayan Ltd.
61	Chambal Fertilisers & Chemicals Ltd.
62	Coromandel International Ltd.
63	Deepak Fertilisers & Petrochemicals Corporation Ltd.
64	Dhanuka Agritech Ltd.
65	Dhunseri Ventures Ltd.
66	Gujarat State Fertilizers & Chemicals Ltd.
67	Kansai Nerolac Paints Ltd.
68	Nocil Ltd.
69	Oriental Carbon & Chemicals Ltd.
70	PI Industries Ltd.
71	Privi Speciality Chemicals Ltd.
72	Rallis India Ltd.
73	Rashtriya Chemicals & Fertilizers Ltd.
74	Sharda Cropchem Ltd.
75	Supreme Petrochem Ltd.
76	UPL Ltd.
77	Vidhi Specialty Food Ingredients Ltd.
78	Vinati Organics Ltd.
79	Ambuja Cements Ltd.
80	Century Plyboards (India) Ltd.
81	Everest Industries Ltd.
82	Greenply Industries Ltd.
83	JK Cement Ltd.
84	JK Lakshmi Cement Ltd.
85	Pokarna Ltd.
86	Ramco Industries Ltd.
87	Shree Cement Ltd.
88	Somany Ceramics Ltd.
89	The Ramco Cements Ltd.
90	Ultratech Cement Ltd.
91	Dixon Technologies (India) Ltd.
92	KDDL Ltd.
93	Symphony Ltd.
94	Hindustan Petroleum Corporation Ltd.
95	Indian Oil Corporation Ltd.
96	Oil & Natural Gas Corporation Ltd.
97	Oricon Enterprises Ltd.
98	Reliance Industries Ltd.
99	Rajesh Exports Ltd.
100	Titan Company Ltd.
101	Birla Corporation Ltd.
102	Century Textiles & Industries Ltd.
103	DCM Shriram Ltd.
104	SRF Ltd.
105	Surya Roshni Ltd.
106	Texmaco Infrastructure & Holdings Ltd.
107	Centum Electronics Ltd.
108	Maithan Alloys Ltd.
109	Avanti Feeds Ltd.
110	AVT Natural Products Ltd.
111	Bajaj Consumer Care Ltd.
112	Britannia Industries Ltd.
113	Emami Ltd.
114	Galaxy Surfactants Ltd.
115	Gillette India Ltd.

116	Godfrey Phillips India Ltd.
117	Hatsun Agro Products Ltd.
118	Heritage Foods Ltd.
119	Hindustan Unilever Ltd.
120	Jyothy Labs Ltd.
121	KRBL Ltd.
122	Marico Ltd.
123	Mirza International Ltd.
124	Relaxo Footwears Ltd.
125	Tasty Bite Eatables Ltd.
126	Tata Consumer Products Ltd.
127	VST Industries Ltd.
128	Mahanagar Gas Ltd.
129	Aarti Drugs Ltd.
130	Alembic Ltd.
131	Alembic Pharmaceuticals Ltd.
132	Aurobindo Pharma Ltd.
133	Caplin Point Laboratories Ltd.
134	Cipla Ltd.
135	Divis Laboratories Ltd.
136	Dr. Lal Pathlabs Ltd.
137	Hester Biosciences Ltd.
138	Hikal Ltd.
139	Jubilant Pharmova Ltd.
140	Lupin Ltd.
141	Natco Pharma Ltd.
142	Nectar Lifesciences Ltd.
143	Pfizer Ltd.
144	Piramal Enterprises Ltd.
145	RPG Life Sciences Ltd.
146	SMS Pharmaceuticals Ltd.
147	Strides Pharma Science Ltd.
148	Torrent Pharmaceuticals Ltd.
149	Indraprastha Gas Ltd.
150	GE Power India Ltd.
151	Indian Hume Pipe Company Ltd.
152	Ircon International Ltd.
153	J Kumar Infraproject Ltd.
154	KEC International Ltd.
155	KNR Construction Ltd.
156	Larsen & Toubro Ltd.
157	Power Mech Projects Ltd.
158	Vindhya Telelinks Ltd.
159	Maharashtra Seamless Ltd.
160	Sarda Energy & Minerals Ltd.
161	Tata Steel Ltd.
162	Tinplate Company Of India Ltd.
163	Welspun Corp Ltd.
164	Accelya Solutions India Ltd.
165	Aptech Ltd.
166	Cyient Ltd.
167	eClerx Services Ltd.
168	Hinduja Global Solutions Ltd.
169	Info Edge (India) Ltd.
170	Infosys Ltd.
171	Larsen & Toubro Infotech Ltd.
172	Mastek Ltd.

173	Mphasis Ltd.
174	Nucleus Software Exports Ltd.
175	Persistent Systems Ltd.
176	Quick Heal Technologies Ltd.
177	Sasken Technologies Ltd.
178	Adani Ports and Special Economic Zone Ltd.
179	Gateway Distriparks Ltd.
180	DB Corp Ltd.
181	Entertainment Network (India) Ltd.
182	NXT Digital Ltd.
183	Sandesh Ltd.
184	Saregama India Ltd.
185	Zee Entertainment Enterprises Ltd.
186	Coal India Ltd.
187	Gujarat Mineral Development Corporation Ltd.
188	NMDC Ltd.
189	Gravita India Ltd.
190	Hindustan Zinc Ltd.
191	National Aluminium Company Ltd.
192	Seshasayee Paper & Boards Ltd.
193	Tamil Nadu Newsprint & Papers Ltd.
194	Astral Ltd.
195	Cosmo Films Ltd.
196	EPL Ltd.
197	Mold-Tek Packaging Ltd.
198	Polyplex Corporation Ltd.
199	Time Technoplast Ltd.
200	NTPC Ltd.
201	SJVN Ltd.
202	Tata Power Company Ltd.
203	Torrent Power Ltd.
204	Care Ratings Ltd.
205	DLF Ltd.
206	JMC Projects (India) Ltd.
207	PSP Projects Ltd.
208	Sobha Ltd.
209	Sunteck Realty Ltd.
210	Cochin Shipyard Ltd.
211	Bombay Dyeing & Manufacturing Company Ltd.
212	Himatsingka Seide Ltd.
213	Jindal Worldwide Ltd.
214	Kewal Kiran Clothing Ltd.
215	Kitex Garments Ltd.
216	KPR Mill Ltd.
217	Mayur Uniquoters Ltd.
218	Page Industries Ltd.
219	Ruby Mills Ltd.
220	Swan Energy Ltd.
221	Trident Ltd.
222	Welspun India Ltd.
223	Zodiac Clothing Company Ltd.
224	Adani Enterprises Ltd.
225	Gujarat Gas Ltd.
226	Redington (India) Ltd.
227	Sakuma Exports Ltd.
228	Zuari Global Ltd.
229	Monsanto India Ltd.—(Amalgamated)
230	Wendt (India) Ltd.
231	Bannari Amman Sugars Ltd.

232	CCL Products (India) Ltd.
233	Radico Khaitan Ltd.
234	Amara Raja Batteries Ltd.
235	Balkrishna Industries Ltd.
236	Ceat Ltd.
237	Cummins India Ltd.
238	Fiem Industries Ltd.
239	Gandhi Special Tubes Ltd.
240	HBL Power Systems Ltd.
241	Hero MotoCorp Ltd.
242	India Nippon Electricals Ltd.
243	Jay Bharat Maruti Ltd.
244	JBM Auto Ltd.
245	Lumax Industries Ltd.
246	Maruti Suzuki India Ltd.
247	Menon Bearings Ltd.
248	Minda Corporation Ltd.
249	Minda Industries Ltd.
250	MM Forgings Ltd.
251	Motherson Sumi Systems Ltd.
252	Munjal Showa Ltd.
253	NRB Bearings Ltd.
254	Precision Camshafts Ltd.
255	Rane Brake Lining Ltd.
256	Savita Oil Technologies Ltd.
257	Srikalahasthi Pipes Ltd.
258	Subros Ltd.
259	Sundaram-Clayton Ltd.
260	Suprajit Engineering Ltd.
261	TVS Motor Company Ltd.
262	VST Tillers Tractors Ltd.
263	Wheels India Ltd.
264	Hindustan Aeronautics Ltd.
265	Ador Welding Ltd.
266	BEML Ltd.
267	Bharat Dynamics Ltd.
268	Elgi Equipments Ltd.
269	Genus Power Infrastructures Ltd.
270	Havells India Ltd.
271	Hercules Hoists Ltd.
272	Honda India Power Products Ltd.
273	HPL Electric & Power Ltd.
274	Igarashi Motors India Ltd.
275	Kirloskar Industries Ltd.
276	Kirloskar Oil Engines Ltd.
277	Nesco Ltd.
278	Praj Industries Ltd.
279	Shriram Pistons & Rings Ltd.
280	Siemens Ltd.
281	Skipper Ltd.
282	TD Power Systems Ltd.
283	V-Guard Industries Ltd.
284	Voltamp Transformers Ltd.
285	Asian Paints Ltd.
286	Atul Ltd.
287	Berger Paints India Ltd.
288	Bhageria Industries Ltd.
289	Deepak Nitrite Ltd.
290	Excel Industries Ltd.

291	GHCL Ltd.
292	GOCL Corporation Ltd.
293	Gujarat Alkalies & Chemicals Ltd.
294	Insecticides (India) Ltd.
295	Manali Petrochemicals Ltd.
296	Meghmani Organics Ltd.
297	Navin Fluorine International Ltd.
298	Pidilite Industries Ltd.
299	Plastiblends India Ltd.
300	Solar Industries (India) Ltd.
301	Sudarshan Chemical Industries Ltd.
302	Tata Chemicals Ltd.
303	ACC Ltd.
304	Cera Sanitaryware Ltd.
305	Deccan Cements Ltd.
306	HIL Ltd.
307	HSIL Ltd.
308	Kajaria Ceramics Ltd.
309	KCP Ltd.
310	La Opala RG Ltd.
311	Mangalam Cement Ltd.
312	Orient Cement Ltd.
313	Visaka Industries Ltd.
314	Blue Star Ltd.
315	Control Print Ltd.
316	Voltas Ltd.
317	Bharat Petroleum Corporation Ltd.
318	Oil India Ltd.
319	Thangamayil Jewellery Ltd.
320	Andhra Sugars Ltd.
321	Balmer Lawrie & Company Ltd.
322	Grasim Industries Ltd.
323	Finolex Cables Ltd.
324	KEI Industries Ltd.
325	Precision Wires India Ltd.
326	Agro Tech Foods Ltd.
327	Colgate-Palmolive (India) Ltd.
328	Dabur India Ltd.
329	Godrej Consumer Products Ltd.
330	ITC Ltd.
331	LT Foods Ltd.
332	Procter & Gamble Hygiene & Health Care Ltd.
333	VIP Industries Ltd.
334	Zydus Wellness Ltd.
335	Gujarat State Petronet Ltd.
336	Advanced Enzyme Technologies Ltd.
337	Alkem Laboratories Ltd.
338	Amrutanjan Health Care Ltd.
339	Apollo Hospitals Enterprise Ltd.
340	Bliss GVS Pharma Ltd.
341	Cadila Healthcare Ltd.
342	Dr. Reddys Laboratories Ltd.
343	Granules India Ltd.
344	Gufic Biosciences Ltd.
345	Indoco Remedies Ltd.
346	JB Chemicals & Pharmaceuticals Ltd.
347	Lincoln Pharmaceuticals Ltd.
348	Marksans Pharma Ltd.

349	Poly Medicure Ltd.
350	Shalby Ltd.
351	Shilpa Medicare Ltd.
352	Sun Pharmaceutical Industries Ltd.
353	TTK Healthcare Ltd.
354	Unichem Laboratories Ltd.
355	Advani Hotels & Resorts (India) Ltd.
356	Wonderla Holidays Ltd.
357	GAIL (India) Ltd.
358	IRB Infrastructure Developers Ltd.
359	Kalpataru Power Transmission Ltd.
360	Man InfraConstruction Ltd.
361	NCC Ltd.
362	Om Infra Ltd.
363	PNC Infratech Ltd.
364	Reliance Industrial Infrastructure Ltd.
365	Jindal Saw Ltd.
366	JSW Steel Ltd.
367	Mishra Dhatu Nigam Ltd.
368	Ratnamani Metals & Tubes Ltd.
369	Shankara Building Products Ltd.
370	63 Moons Technologies Ltd.
371	Birlasoft Ltd.
372	HCL Technologies Ltd.
373	Mindtree Ltd.
374	Newgen Software Technologies Ltd.
375	Onmobile Global Ltd.
376	Sonata Software Ltd.
377	Tata Consultancy Services Ltd.
378	Tata Elxsi Ltd.
379	Tech Mahindra Ltd.
380	Vakrangee Ltd.
381	Wipro Ltd.
382	Zen Technologies Ltd.
383	Zensar Technologies Ltd.
384	Aegis Logistics Ltd.
385	Allcargo Logistics Ltd.
386	Container Corporation Of India Ltd.
387	The Great Eastern Shipping Company Ltd.
388	Transport Corporation Of India Ltd.
389	Balaji Telefilms Ltd.
390	Navneet Education Ltd.
391	PVR Ltd.
392	Sun TV Network Ltd.
393	TV Today Network Ltd.
394	MOIL Ltd.
395	Delta Corp Ltd.
396	Hindalco Industries Ltd.
397	Vedanta Ltd.
398	Orient Paper & Industries Ltd.
399	Finolex Industries Ltd.
400	Jai Corp Ltd.
401	Jindal Poly Films Ltd.
402	Nilkamal Ltd.
403	Responsive Industries Ltd.
404	Supreme Industries Ltd.
405	Uflex Ltd.
406	CESC Ltd.
407	Gujarat Industries Power Company Ltd.

408	India Power Corporation Ltd.
409	Nava Bharat Ventures Ltd.
410	NHPC Ltd.
411	NLC India Ltd.
412	Power Grid Corporation Of India Ltd.
413	CRISIL Ltd.
414	Ajmera Realty & Infra India Ltd.
415	Anant Raj Ltd.
416	Ashiana Housing Ltd.
417	Brigade Enterprises Ltd.
418	Dilip Buildcon Ltd.
419	Prestige Estate Projects Ltd.
420	Trent Ltd.
421	Garden Reach Shipbuilders & Engineers Ltd.
422	Astra Microwave Products Ltd.
423	Bharti Airtel Ltd.
424	Indus Towers Ltd.
425	Tata Communications Ltd.
426	Century Enka Ltd.
427	Ganesh Ecosphere Ltd.
428	Garware Technical Fibres Ltd.
429	Lakshmi Machine Works Ltd.
430	Lux Industries Ltd.
431	Nitin Spinners Ltd.
432	Rupa & Company Ltd.
433	Siyaram Silk Mills Ltd.
434	Sutlej Textiles & Industries Ltd.
435	Weizmann Ltd.
436	India Motor Parts & Accessories Ltd.
437	Sundram Fasteners Ltd.
438	VenkyS (India) Ltd.
439	Som Distilleries & Breweries Ltd.
440	Castrol India Ltd.
441	Greaves Cotton Ltd.
442	Harita Seating Systems Ltd.
443	Nelcast Ltd.
444	Ramkrishna Forgings Ltd.
445	Rane (Madras) Ltd.
446	Schaeffler India Ltd.
447	Setco Automotive Ltd.
448	SML Isuzu Ltd.
449	Steel Strips Wheels Ltd.
450	Titagarh Wagons Ltd.
451	Ucal Fuel Systems Ltd.
452	Varroc Engineering Ltd.
453	Interglobe Aviation Ltd.
454	ABB India Ltd.
455	Bharat Heavy Electricals Ltd.
456	Elecon Engineering Company Ltd.
457	GE T&D India Ltd.
458	KSB Ltd.
459	Foseco India Ltd.
460	Godrej Industries Ltd.
461	Jayant Agro-Organics Ltd.
462	Vikas EcoTech Ltd.
463	Bajaj Electricals Ltd.
464	Johnson Controls—Hitachi Air Conditioning India Ltd.

465	Deep Energy Resources Ltd.
466	Rain Industries Ltd.
467	Bhartiya International Ltd.
468	DFM Foods Ltd.
469	Glaxosmithkline Consumer Healthcare Ltd.—(Amalgamated)
470	Vadilal Industries Ltd.
471	Biocon Ltd.
472	Glenmark Pharmaceuticals Ltd.
473	Indraprastha Medical Corporation Ltd.
474	Sanofi India Ltd.
475	Suven Life Sciences Ltd.
476	Asian Hotels (West) Ltd.
477	EIH Associated Hotels Ltd.
478	EIH Ltd.
479	India Tourism Development Corporation Ltd.
480	Linde India Ltd.
481	Petronet LNG Ltd.
482	Sadbhav Engineering Ltd.
483	Simplex Infrastructures Ltd.
484	APL Apollo Tubes Ltd.
485	Gallantt Ispat Ltd.
486	Tata Steel Long Products Ltd.
487	Genesys International Corporation Ltd.
488	Hexaware Technologies Ltd.
489	Take Solutions Ltd.
490	Blue Dart Express Ltd.
491	GATI Ltd.
492	HT Media Ltd.
493	Shemaroo Entertainment Ltd.
494	Crest Ventures Ltd.
495	Huhtamaki India Ltd.
496	Jain Irrigation Systems Ltd.
497	Kolte Patil Developers Ltd.
498	Mahindra Lifespace Developers Ltd.
499	Oberoi Realty Ltd.
500	Omaxe Ltd.
501	Phoenix Mills Ltd.
502	Puravankara Ltd.
503	Future Lifestyle Fashions Ltd.
504	Shoppers Stop Ltd.
505	V-Mart Retail Ltd.
506	Arvind Ltd.
507	Raymond Ltd.
508	Vardhman Textiles Ltd.
509	MMTC Ltd.

Appendix B. Regular Payer Firms

6	GM Breweries Ltd.
7	United Breweries Ltd.
12	Bajaj Auto Ltd.
18	GP Petroleums Ltd.
74	Sharda Cropchem Ltd.
75	Supreme Petrochem Ltd.
136	Dr. Lal Pathlabs Ltd.
146	SMS Pharmaceuticals Ltd.
153	J Kumar Infraproject Ltd.
163	Welspun Corp Ltd.
212	Himatsingka Seide Ltd.

213	Jindal Worldwide Ltd.
227	Sakuma Exports Ltd.
232	CCL Products (India) Ltd.
233	Radico Khaitan Ltd.
240	HBL Power Systems Ltd.
247	Menon Bearings Ltd.
250	MM Forgings Ltd.
273	HPL Electric & Power Ltd.
274	Igarashi Motors India Ltd.
279	Shriram Pistons & Rings Ltd.
283	V-Guard Industries Ltd.
295	Manali Petrochemicals Ltd.
300	Solar Industries (India) Ltd.
313	Visaka Industries Ltd.
319	Thangamayil Jewellery Ltd.
324	KEI Industries Ltd.
336	Advanced Enzyme Technologies Ltd.
338	Amrutanjan Health Care Ltd.
344	Gufic Biosciences Ltd.
347	Lincoln Pharmaceuticals Ltd.
358	IRB Infrastructure Developers Ltd.
371	Birlasoft Ltd.
375	Onmobile Global Ltd.
384	Aegis Logistics Ltd.
400	Jai Corp Ltd.
401	Jindal Poly Films Ltd.
403	Responsive Industries Ltd.
405	Uflex Ltd.
410	NHPC Ltd.
414	Ajmera Realty & Infra India Ltd.
417	Brigade Enterprises Ltd.
421	Garden Reach Shipbuilders & Engineers Ltd.
427	Ganesha Ecosphere Ltd.
430	Lux Industries Ltd.
431	Nitin Spinners Ltd.
432	Rupa & Company Ltd.
434	Sutlej Textiles & Industries Ltd.
435	Weizmann Ltd.
438	VenkyS (India) Ltd.
439	Som Distilleries & Breweries Ltd.
452	Varroc Engineering Ltd.
462	Vikas EcoTech Ltd.
464	Johnson Controls—Hitachi Air Conditioning India Ltd.
465	Deep Energy Resources Ltd.
467	Bhartiya International Ltd.
468	DFM Foods Ltd.
482	Sadbhav Engineering Ltd.
494	HT Media Ltd.
495	Shemaroo Entertainment Ltd.
498	Jain Irrigation Systems Ltd.
501	Oberoi Realty Ltd.
502	Omaxe Ltd.
505	Future Lifestyle Fashions Ltd.
506	Shoppers Stop Ltd.

Appendix C. Result of Factor Analysis Used for Extracting the Dependent Variables for the Study

Factors	Components							
	1. Profitability	2. Firm Size	3. Book Value	4. Cash Flows	5. Investment Opportunity and Growth Rate	6. Leverage	7. Operating Profit	8. Tax Rate
ShareholdersFunds	0.933							
Networth	0.931							
EBITDA	0.898							
Netsales	0.767							
Interest	0.746							
EAT	0.731			0.444				
LogTA	0.375	0.894						
LogNetworth	0.367	0.879						
LogSales	0.333	0.840						
LogMcap		0.834			0.327			
BVS			0.972					
AdjBVS			0.972					
EPS			0.644		0.441			
Currentratio			0.635				0.381	
C.F.				-0.889				
FCF				-0.810	-0.354			
NetCA	-0.537			0.603				
LagDiv				0.588				
ROTA					0.811			
MBVratio					0.776			
Debtequity						0.943		
ROE					0.506	0.769		
EBITDAmargin							0.857	
Taxrate								0.942
IntCovergae								0.313

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 7 iterations.

Notes

- 1 <https://www.ceicdata.com/en/indicator/india/market-capitalization--nominal-gdp>, (accessed on 31 December 2020).
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