

INDIAN COMPANIES' DIVIDEND POLICY DETERMINANTS: AN EMPIRICAL INVESTIGATION
USING PANEL DATA ESTIMATION TECHNIQUE

Dr. Vipul Nimbalkar

Assistant Professor, Maharashtra Institute of Management, Kalamb, Pune, MH, India.

nimbalkarvipul@gmail.com

ABSTRACT:

According to some researchers, the choice of firms to pay dividends is one of the most investigated and disputed subjects in corporate finance since it has an impact on company valuation. The goal of this study is to identify key characteristics that influence Indian corporations' dividend policies. The analysis makes use of secondary time series data taken from the most recent data accessible from the CMIE Prowess database. The research was separated into three time periods: 1) 2000-01 to 2009-10; 2) 2010-11 to 2020-21; and 3) 2000-01 to 2020-21 by combining the two time periods and using the panel data regression approach. The research's findings indicate that return on assets, debt to equity ratio.

The debt to total capital ratio had a significant impact on dividend yield from 2000-01 to 2009-10 and from 2000-01 to 2020-21, respectively, whereas the results of the analysis from 2010-11 to 2020-21 found sales/size, return on assets, and debt to total equity ratio to be determinants of dividend policy. These findings support previous findings that profitability, liquidity, and leverage are critical determinants in corporate dividend payment decisions.

Keywords: Price, Dividend Policy, Indian Industries, Variance Decomposition Leveraging

INTRODUCTION:

The decision of firms to declare dividends or to retain earnings for future growth has always been dynamic. A study intends to find out the factors that act as determinants of dividend policy for 356 Indian companies under study using the panel data regression analysis technique. The analysis of this study has been divided into three time periods i.e. 2000-01 to 2009-10, 2010-11 to 2020-21, and 2021-22. One of the most difficult issues for businesses is whether or not to pay dividends. "The more we examine the dividend picture, the more it appears to be a puzzle with pieces that simply do not fit together" (Black, 1998). The conundrum is one of the top ten unresolved financial challenges. As a result, it is difficult to deconstruct the corporations' dividend policies.

A large body of scholarship on this subject reveals that characteristics such as business size, age, ownership structure, market risk, cash holdings, leverage, growth potential, net working capital, and return on assets are major predictors of dividend policy for organizations.

Banking and financial services organizations were omitted from our analysis because we believe they have distinct business practices and financial criteria than industries in other sectors.

Dividend Yield Trends

Figure 1 depicts the average dividend yield of all 356 firms studied from 2000-01 to 2009-09.

It demonstrates that the average dividend yield has been growing, albeit dropping from 2005-06 to 2008-09. This might be ascribed to the world's financial crisis, to which India was not completely immune, and as a result, firms abstained from paying dividends. However, it resumed its upward trend from that point on.

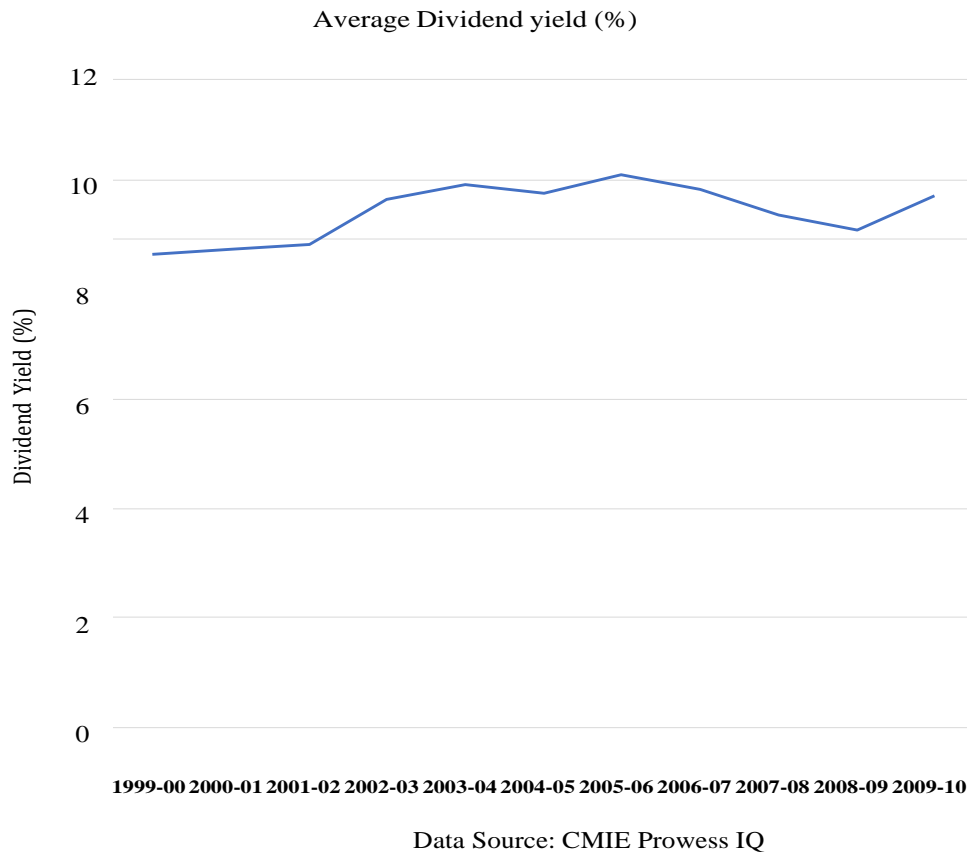
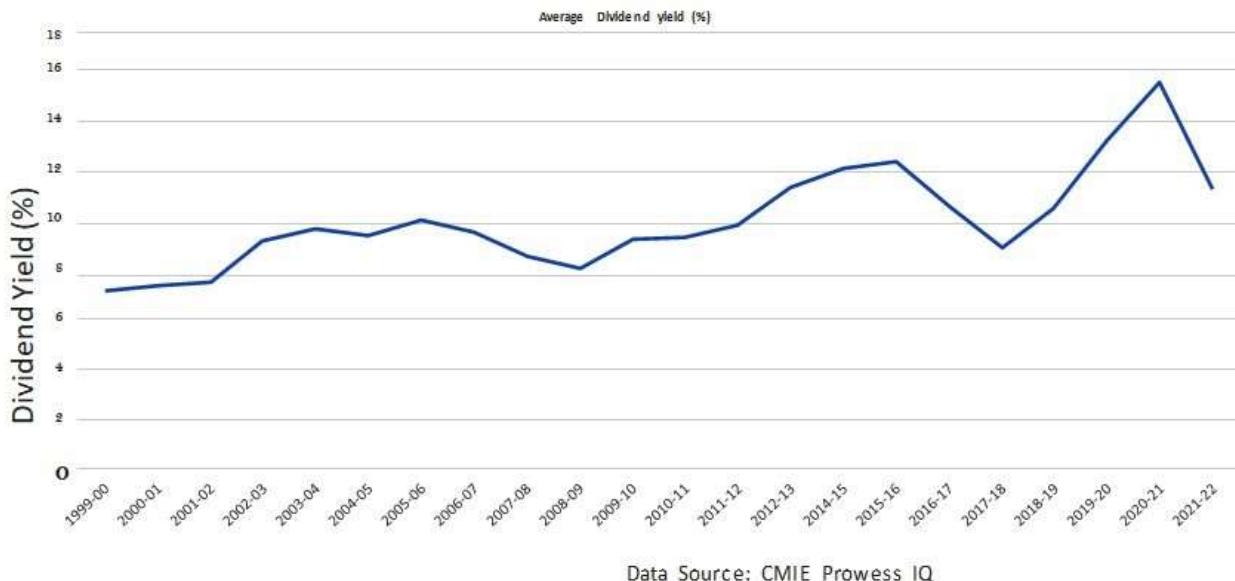


Figure 1. Above shows the average dividend yield of companies from 2000-01 to 2009-10.

The second figure shows the average dividend yield of all corporations studied from fiscal years 2010–11 through 2020–21. It also shows an increasing trend, despite being on the decline from the fiscal years 2015-16 to 2017-18, which could be attributed to major structural changes within India's economy, such as the implementation of the Goods and Services Tax (GST), the shift toward the digital economy, tax amendment laws, and so on. As a result of having to respond to these developments, the corporations stopped paying dividends once more.



The second figure shows the average dividend yield of firms between 2010-11 and 2020-21.

Figure three shows the average dividend yield of all 356 corporations from fiscal year 2000-01 to fiscal year 2020-2021 by combining the aforementioned two time periods. The average dividend yield indicates a minor growing tendency with a few ups and downs.

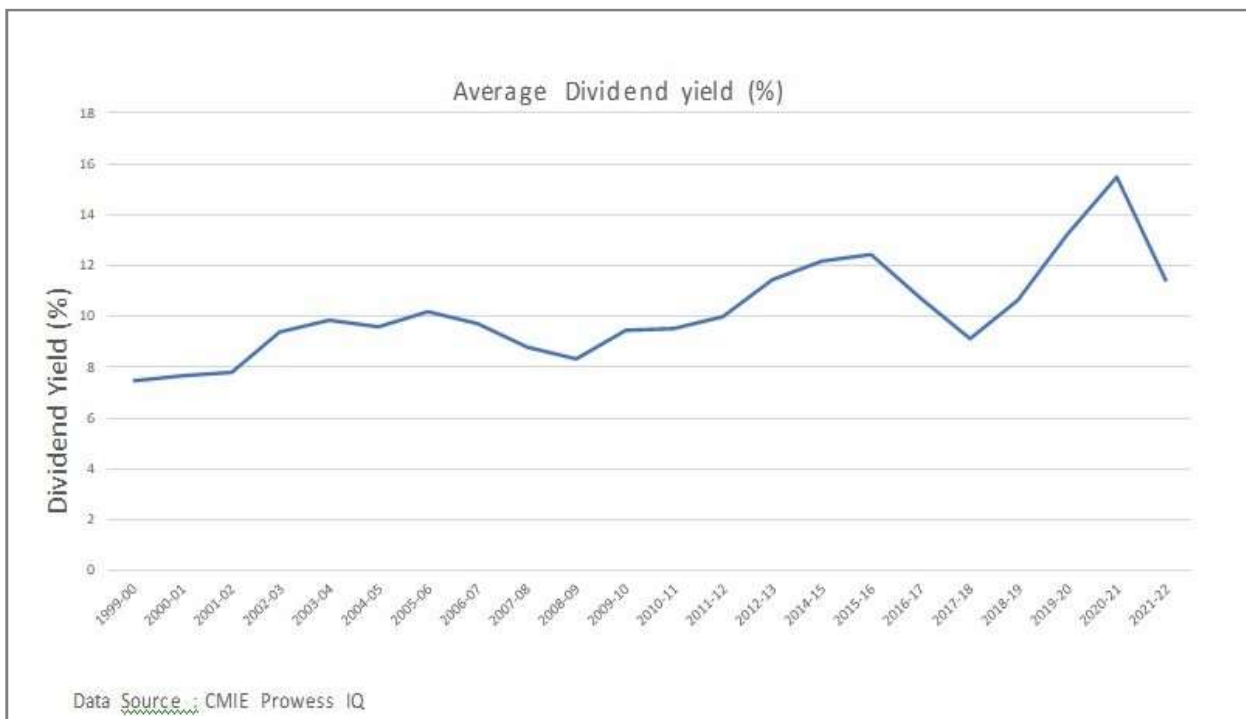


Figure three shows the average dividend yield of firms from 2000-01 to 2020-21.

REVIEW OF THE LITERATURE:

According to a few scholars, the decision to pay a dividend has an essential bearing on the valuation of firms, even as others believe that dividend choices are inappropriate and do no longer have any effect on variables affecting firms. A dividend decision is irrelevant in the absence of taxes, transaction charges, or different market imperfections, and the funding choices of a company are not laid low by its dividend policy (Miller & Modigliani, 1961). Furthermore, many studies have found that dividends have no significant relationship with size or enterprise class, but have an inverse relationship with corporate growth. In America, Canada, the United Kingdom, Germany, France, and Japan, the propensity to pay dividends is better amongst larger and extra worthwhile companies (Denis & Osobov, 2008). Also, profitable corporations with extra stable internet income, possession awareness, and marketplace liquidity have a superb impact on dividend payout policy. The study executed in Pakistan to discover determinants of dividend policy using the dynamic panel information evaluation approach discovered that stable net earnings, liquidity, and possession concentration have high quality consequences while investment opportunity and leverage have terrible consequences on dividend price decisions by means of groups (Yusof & Ismail, 2009). Also, the results obtained in Sri Lanka for 191 companies and 1337 corporations yr remark the use of binary logistic regression and fixed effect panel statistics techniques found that past dividend decisions, profits, funding opportunities, profitability, free cash flow (FCF), corporate governance, country ownership, firm length, and enterprise influence as the important determinants of propensity to pay dividends. In addition to past dividends, investment possibilities, profitability, and dividend class are identified as the determinants of dividend payout. According to a study conducted for U.A.E. (United Arab Emirates) corporations, the most important factors in dividend payout decisions are profitability and size. In another look at finished for 799 groups in 15 countries over 14 years, the key massive determinants of dividend payout selections have been observed to be loose cash drift, growth, liquidity, profitability, and length (Madra-Sawicka & Ulrichs, 2020). Also, a few different pieces of the literature propose that liquidity, length, and profitability have a fantastic courting with dividend fee selections by means of the businesses. The look at done in the Indian context shows that inside the car region, liquidity/coins flow, dividend distribution tax, funding opportunities, and retained profits are the huge elements that impact the dividend payout ratio, whereas in the pharmaceuticals area, profitability, debt to equity ratio, sales increase, and retained earnings are the significant aspects for finding out the dividend payout ratio (Nathani & Gangil, 2019). Profitability, liquidity, leverage, risk, firm size, and inflation were also discovered to be the most important determinants of dividend coverage of NSE (National Stock Exchange) indexed firms in India (Brahmaiah et al., 2018). Investment possibility, monetary leverage, length of the company, business threat, firm existence cycle, profitability, tax, and liquidity were found to be the essential determinants of the dividend policy for Indian agencies (Labhane & Mahakud, 2016). The observe carried out using pooled regular least rectangular and stuck impact panel facts method observed that length, profitability, and interest insurance ratios have a significant fantastic relation to dividend policy, and commercial enterprise hazard and debt level have a appreciably bad courting with fee of dividends (Pinto & Rastogi, 2019).

METHODOLOGY AND DATA

Variables List

The following is the list of variables with their definitions used in this have a look at —

Dividend Percent/Dividend Yield—It is a monetary ratio that suggests the proportion of dividends a company will pay out relative to its share price within the financial year (Dividend/Share price). It is used as an established variable.

Sales: It is defined as the activity of selling products or services. It is also taken as a proxy for the size of the agency in this study.

Return on Belongings: It is received as "net earnings after tax divided by its overall belongings" of a business enterprise, which shows the profitability of an agency.

Current Ratio: It is the liquidity ratio and is acquired as all "present-day belongings divided by the modern liabilities of a organisation".

A quick ratio, also known as an acid test ratio, is a company's quick-time period or term liquidity role. It is calculated as "present-day assets minus stock divided by the means of contemporary liabilities".

Debt to equity ratio: It is a ratio used to evaluate a company's monetary leverage and is calculated as the "enterprise's general liabilities divided by using its shareholders' equity".

Net cash flow from operating activities to general asset ratio: It is acquired as "net cash flow generated from running activities of a business divided by its total belongings".

Cash & Cash Equivalents Cash and coin equivalents are a line item on the stability sheet declaring the amount of all coins or other belongings that are conveniently convertible into coins.

Retained profits to total fairness ratio, this ratio measures how much retained earnings an organization keeps in comparison to its general equity.

Debt to Total Capital Ratio: It is calculated as "interest-bearing overall time period liabilities (quick and long time) divided with the aid of total capital (general debt + shareholder's fairness)". It shows the economic leverage of the business enterprise.

In this study, evaluation is carried out for 356 corporations throughout 3 time durations – 1) from the economic year 2000-01 to 2009-2010; 2) from the economic year 2010-2011 to 2020-2021; and 3) from the monetary year 2000-01 to 2020-2021 with the aid of combining the above two time intervals. Banking and economic services providing organizations have been excluded from the examination because we believe they differ in business practices (lending and borrowing) and have different economic parameters than industries in other sectors.

The panel statistics regression method has been hired to find out the variables affecting dividend payment decisions across the companies. The results are said to be primarily based on the most strong version of the panel information regression approach, i.e., the model used is powerful to traditional errors disturbances being heteroscedastic or autocorrelated, or each if the check suggests the presence of such disturbances.

The equation used the for Panel information regression method within the examine is as follows-

$$Div\ yield_{i,t} = \alpha + \beta_1 sales_{i,t} + \beta_2 Return\ on\ asset_{i,t} + \beta_3 Current\ ratio_{i,t} + \beta_4 Quick\ ratio_{i,t} + \beta_5 Debt\ to\ equity\ ratio_{i,t} + \beta_6 Net\ operating\ cash\ flow\ to\ total\ asset\ ratio_{i,t} + \beta_7 Cash\ \&\ cash\ equivalents_{i,t} + \beta_8 Retained\ earnings\ to\ total\ equity\ ratio_{i,t} + \beta_9 Debt\ to\ total\ capital\ ratio_{i,t} + \eta_i + \epsilon_{i,t}$$

Where,

η_i indicates unobservable firm consequences, $\epsilon_{i,t}$ shows the effect of unobservable pass-segment variables converting through the years. α is a steady term, and β_1 to nine are coefficients that show the significance of trade in the dependent variable because of exchange in each of the individual impartial variables respectively.

The information source used within the look at is CMIE (Centre for Monitoring India) Prowess.

Findings and Observational Outcomes

Return on property, Debt to equity ratio, Cash and cash equivalents & Debt to total capital ratio had been located to be appreciably affecting dividend yield from the monetary 12 months 2000-01 to 2009-10 (end result proven under in Table 1).

Table 1. Below indicates the results of the Panel information Regression Outcomes for the duration 2000-01 to 2009-10.

	Robust					
Divergent	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Sales	-1.58e-06	1.24e-06	-1.27	0.205	-4.02e-06	8.68e-07
ROA	15.11666	4.000729	3.78	0.000	7.243503	22.98981
Current ratio	.2063839	.4004855	0.52	0.607	-.5817434	.9945112
Quick ratio	-.4230762	.4866113	-0.87	0.385	-1.380693	.5345406
Debttoequit-o	-.0014024	.0004352	-3.22	0.001	-.0022589	-.0005459
Nocftota	1.640437	2.588111	0.63	0.527	-3.452783	6.733656
Cashandcash-s	.0000466	.0000134	3.48	0.001	.0000202	.0000729
Retototaleq-y	-.0000535	.0000495	-1.08	0.280	-.0001508	.0000439
Debttototal-o	-.0557873	.0155427	-3.59	0.000	-.0863743	-.0252003
_cons	9.28502	.5192132	17.88	0.000	8.263245	10.30679

Source: Stata 16 was used to generate the results.

The effects above in Table 1 were mentioned the usage of the "Fixed impact Cluster" variation of the panel facts

regression method in Stata 16 because the Hausman check shows the use of the fixed-impact model (Appendix A.1) and is the maximum suitable variant to be used while the estimates of the usual errors are robust to disturbances being heteroscedastic and auto-correlated (Appendix A.2 and A.Three respectively).

Sales/Size, Return on the asset, and Debt to general equity ratio became determined to be notably affecting dividend yield from the economic yr 2010-2011 to 2020-2021 (end result shown underneath in Table 2).

Table 2. Below suggests the results of the Panel data regression end result for the duration of 2010–11 to 2020–21.

	Robust				
Divergent	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Sales	8.47e-06	2.75e-06	3.08	0.002	3.06e-06 .0000139
ROA	43.52311	8.825933	4.93	0.000	26.15453 60.89169
Current ratio	1.246671	1.246429	1.00	0.318	-1.206181 3.699522
Quick ratio	-1.688633	1.592382	-1.06	0.290	-4.822287 1.445021
Debttoequit~o	.0963707	.0469315	2.05	0.041	.0040142 .1887273
Nocftota	4.653729	3.83322	1.21	0.226	-2.889675 12.19713
Cashandcash~s	-3.33e-08	.00001	-0.00	0.997	-.0000197 .0000197
Retototaleq~o	-.0043646	.0022172	-1.97	0.050	-.0087279 -1.23e-06
Debttotal~o	-.0115922	.0214151	-0.54	0.589	-.0537352 .0305507
_cons	7.251368	.8931895	8.12	0.000	5.493658 9.009078

Source: Stata 16 was used to generate the results.

The consequences above in Table 2 have been said to the use of the equal variation of panel information regression approach because the Hausman test suggests the use of the fixed-impact version (Appendix B.1) and fashionable errors estimates are sturdy to disturbances being heteroscedastic (Appendix B.2).

Return on property, Debt to fairness ratio, Cash and cash equivalents & Debt to overall capital ratio had been once more determined to be notably affecting the dividend yield of two time periods merged from the economic 12 months 2000-01 to 2020-2021 (end result proven underneath in Table three) as constant with the findings of the primary study.

Table three. Below indicates the outcomes of Panel Statistics regression results for the period 2000-01 to 2020-21.

	Robust				
Divergent	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Sales	-1.58e-06	1.24e-06	-1.27	0.205	-4.02e-06 8.68e-07
ROA	15.11666	4.000729	3.78	0.000	7.243503 22.98981
Current ratio	.2063839	.4004855	0.52	0.607	-.5817434 .9945112
Quick ratio	-.4230762	.4866113	-0.87	0.385	-1.380693 .5345406
Debttoequit~o	-.0014024	.0004352	-3.22	0.001	-.0022589 -.0005459
Nocftota	1.640437	2.588111	0.63	0.527	-3.452783 6.733656
Cashandcash~s	.0000466	.0000134	3.48	0.001	.0000202 .0000729
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Debttotal~o	-.0557873	.0155427	-3.59	0.000	-.0863743 -.0252003
_cons	9.28502	.5192132	17.88	0.000	8.263245 10.30679

Source: Stata 16 was used to generate the results.

The effects above in Table 3 were mentioned once more the usage of the “Fixed effect Cluster” variant of the panel statistics regression method same as inside the first look at as the Hausman test shows using the fixed-impact model (Appendix C.1) and it is a robust technique to be used where the usual errors disturbances are heteroscedastic and autocorrelated (Appendix C.2 and C.3 respectively).

CONCLUSIONS:

The following 3 conclusions can be made based totally on the above consequences of this look :
 The dividend yield is immediately associated with the profitability of the companies, as is in keeping with findings in advanced studies. The more profitable the firm is, the greater its capability to pay dividends to shareholders.
 Leverage has a negative impact on the dividend rate paid by companies, which is consistent with the findings of the previous study.
 Firm liquidity has a favorable relationship with dividend yield because more liquid companies can pay cash dividends.

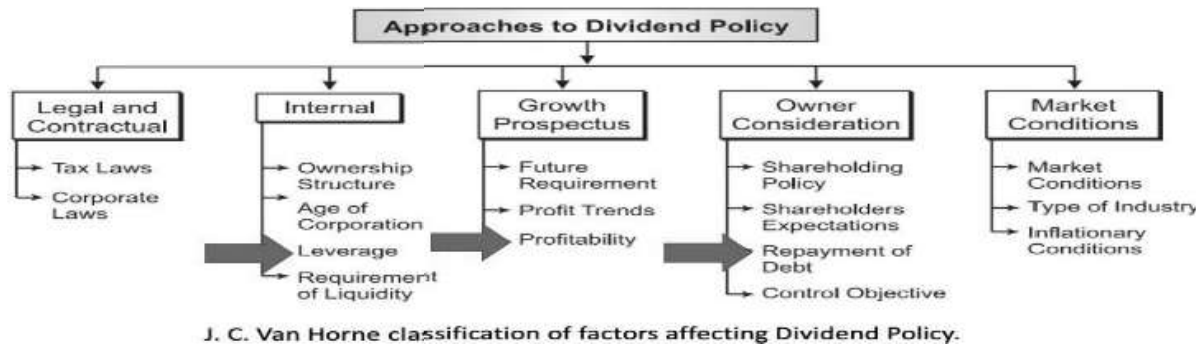


Figure 4. shows J.C. Van Horne's classification of things affecting dividend policy.

The above findings can be placed into an above-shown parent of J.C. Van Horne's type of things affecting dividend policy (proven with gray arrows).

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