DIVIDEND DETERMINANATS OF SELECT FIRMS LISTED ON NSE

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ABSTRACT
A dividend decision of a firm is an outcome of various considerations. These considerations differ across time and industry. The present study re-examines various factors that have a bearing on the dividend decision of a firm by using a two-step multivariate procedure. First factor analysis is performed on the data to extract prominent factors from various variables and then multiple regression is conducted on such factors. Results of factor analysis indicate that leverage, liquidity, profitability, growth and ownership structure are the major factors. Regression on these factors shows leverage and liquidity to be the determinants of the dividend policy for Indian companies.

Key words: *dividend policy, factor analysis, multiple regression, leverage, liquidity*

Introduction

One of the central issues of corporate finance has been the dividend decision of a firm, which has always been studied in relation to a firm's financing and investment decisions. The association amongst these two decisions has posed various questions. How much should a firm pay as dividend? How does a dividend payout policy influence the valuation of a firm? Does a firm's decision to distribute cash correspond to its financing and investing decisions? What is the outcome of changes in the dividend policy assuming steady financing and investment decisions of a firm?

Research has attempted to provide answers to these questions and many more but mystery still shrouds the dividend decision. Lintner (1956) argues that firms of developed markets target their dividend payout ratio with the help of current earnings and past dividends. In order to reach such target, various adjustments are made in the dividend policy of a firm and therefore firms should have stable dividend policies. Miller and Modigliani (1961) on the other hand feel that dividend policy is irrelevant in measuring the current worth of shares considering the irrational assumptions of market perfections, zero transaction costs, perfect certainty and indifferent behaviour of investors. However, Miller and Scholes (1982) argue that in the real world, dividend decision is inspired more by high taxes on dividends than capital gains and market imperfections.

Alli, Khan and Ramirez (1993) observe that a change in the payout policy provides information about future earnings and a further change in the value of share price. This indeed shows a strong signaling effect of the dividend decision of a firm. It is evident that over the years, no

Single viewpoint has emerged which explains the dividend policy of a firm. In India too, modest research has been carried out on various aspects of the dividend decision. The present study re-examines the impact of various factors on the dividend decision of Indian companies taking a large and latest data set. Our study contributes to the existing literature by examining as many as fifteen

financial variables. No prior Indian study has examined so many variables in the context of dividend decision using both factor analysis and regression.

Literature Review

A large number of financial and non-financial determinants of corporate dividend policy have been discussed in the work of Lintner (1956). This seminal work developed a basic model stating that most of the companies follow dividend adjustment process by applying target dividend payout ratio. Rozeff (1982) investigates the impact of two kinds of costs – transaction costs and agency costs relative to external financing on the dividend decision of a firm. He argues that a balance between transaction costs and agency costs would lead to an optimum dividend policy. Alli, Khan and Ramirez (1993) find that dividends do not convey information regarding a firm's future cash flows. They report that at beta, firm's capital expenditure and financial slack are inversely related to the dividend payout. The dividend policy behaviour is also examined by Han, Lee and Suk (1999) by considering institutional ownership under agency cost hypothesis and tax–based hypothesis. They find that tax-based hypothesis is more relevant in the case of institutional investors as they prefer a greater dividend payout. Pandey (2001) looks at the corporate dividend payout behaviour of companies listed on the Kuala Lumpur stock exchange during 1993-2000. He categorizes the sample into six industries for examining the variation in the payout ratio. He also establishes a relationship between current earnings and past dividend rate. He finds that the Malaysian companies (by following Lintner's model) exhibit unstable dividend behaviour with high adjustments in dividend payments in order to meet the target payout ratio. Myers (2004) finds strong support for earnings, profit margin, institutional ownership and debt-equity ratio on the dividend decision. Eriotis (2005) finds that Greek firms have a long-run constant dividend payout policy. He adjusts the firms' distributed earnings and size in the Lintner model and reports that an increase in the earnings does not change the dividend distribution pattern of firms. Kania and Bacon (2005) find that variables such as sales growth, expansion and insider ownership have a negative impact on dividend decision but institutional ownership has an inverse relation with dividend payout, which is contrary to the existing literature. Denis and Osobov (2008) find that the tendency for paying dividends declined for countries such as United States, Canada, United Kingdom, Germany, France and Japan during 1994-2002. They also report that the international evidence does not support the investors' preference for dividend, the signaling and the clientele interpretations as prominent variables. Rather, they go along with the distribution of free cash flow as the chief element of the dividend

In the Indian context, we found few studies that have analyzed the factors that affect the dividend decision of a firm. For example, Kevin (1992) analyzes the dividend payment behaviour of 650 Indian companies during September 1983 to August 1984 and finds that profitability and earnings of the firms are the two foremost factors determining dividends. He concludes that Indian firms strive for achieving a stable dividend rate. However, keeping in view that the time period of his study was only one year; his results cannot be taken as conclusive. Mahapatra and Sahu (1993) find that cash flows, current earnings and past dividends are prominent factors that have an impact on the dividend decision. Their results are in contrast to Lintner's model. Bhat and Pandey (1994) find that current year's earnings, pattern of past dividends, expected future earnings, changes in equity base of the firm have an impact on the dividend decision. Taking a different line of research, Narasimhan and Asha (1997) look at the changes in dividend tax regime proposed in the Indian Union Budget of 1997-98 and analyze the impact of dividend tax on a firm's dividend decision. They conclude that the burden of tax payment fell in the hands of companies rather than their shareholders. Mohanty (1999) studied more than 200 Indian companies for a period of fifteen years to understand the relationship between bonus-issuing and dividend-paying behaviour of companies. He found that in the Indian context, it is the dividend rate that is an important determinant of dividend policy in comparison to the dividend payout ratio. Reddy (2002) analyzes the trends and determinants of dividend of all Indian companies listed on two major Indian stock exchanges–The Bombay Stock Exchange (BSE) and The National Stock Exchange (NSE)

during 1990-2001. He investigates three factors viz., number of firms paying dividend, average dividend per share and the average payout. His results indicate that only few companies maintain the dividend payout rate and that firms forming a part of small indices pay higher dividend compared to firms forming a part of broad market indices. Deviations in the tax regime are also examined using the trade-off theory and it is found that this theory does not apply to the Indian corporate sector. He concludes that the omission of dividends have information content i.e. such companies expect lower earnings in the future whereas the same does not hold true in case of dividend initiations. Anand (2004) analyzes the results of Anand (2002) survey of 81 CFOs to find out the determinants of dividend policy of Indian companies. He finds that Indian companies use dividend policy as a signaling mechanism to convey information about their present and future prospects, therefore, affecting their market value. He also reports that while designing a dividend policy, companies take into consideration the investors' preference for dividends and the clientele effect.

The relationship between corporate governance and dividend payout behaviour of the Indian firms is examined by Kumar (2006) by taking into consideration their financial structure, investment opportunities, dividend history, earnings trend and ownership structure during
1994–2000. He finds a positive association of dividends with earnings and dividend trends but does not find any association between foreign ownership and growth in dividend payout. Recently, Bhayani (2008) has examined the influence of earnings and lagged dividend on dividend policy of companies listed on the BSE. He found that the current year's earnings is the foremost factor affecting the dividend behaviour of a firm and concludes that India

companies follow a stable cash dividend policy. Kanwal and Kapoor (2008) examine the dividend policies of companies in the information technology sector in India. They explore various factors such as profitability, cash flows, corporate tax, sales growth and growth opportunities that have an impact over the dividend policies of such companies. They report that only cash flows indicating liquidity and beta indicating risk are the foremost determinants. Thus over the years different strands of research have emerged in the area of dividend policy both in India and abroad.

OBJECTVES OF THE STUDY

To identify the key determinants of Corporate Dividend Policy
To analyze the financial variables affecting Dividend Payout.
To study the impact of Leverage on Dividend Payout
To identify the relationship between liquidity position and Dividend Rate of the firms under study.
To reexamine the effect of profit rate and Dividend Payout.
To Study whether, the firms with high growth rate distribute high dividends

DATA AND RESEARCH METHODOLOGY

Data and Sample Selection

The necessary data have been sourced from the Prowess database of Centre for Monitoring Indian Economy (CMIE) The sample companies are drawn from the broad based NSE NIFTY Index[2]. The period of the study is seven years from January 1, 2011 to December 31 2015. We only included those companies in the sample that had continuously paid dividend during the study period and have excluded financial institutions/finance companies and government owned companies. Only final cash dividends paid by companies have been considered as usually Indian companies pay only one dividend during a year. We have also ignored stock dividends and stock repurchases by companies and

have examined only cash dividend. This process gave us a final sample of 30 companies from 10 industries.

Description of Variables

Over the years researchers have employed numerous financial variables that have a possible impact on the dividend policy (A list of such variables is provided in Annexure 1). Out of such variables, the present study considers fifteen variables to examine their effect on the dividend decision. The justification for choosing such variables is as follows. Liquidity is an important determinant of dividend decision. Liquidity and dividend payment behaviour of a company have a direct relationship (Benito and Young, 2001). If a company has adequate cash flows, it would like to distribute cash dividend in order to keep its shareholders happy. Moreover, firms have to make their dividend payments in cash therefore they have to be liquid enough to distribute dividends and also to remain solvent. Current ratio (CR) and cash from operations (CFO) are the indicators of the liquidity position of a firm. Thus, CR and CFO become the first and second variable respectively. Another significant factor is leverage. A firm with high leverage means large fixed payments for external financing, which indeed is a substitute for the dividend payments. High leverage increases the transaction costs and the risk of the firm (Rozeff, 1982). Contrarily, higher the earning retention rate, lower the chances for external borrowing and vice-versa. Hence we take debt-equity ratio (DER) and ratio of retained earnings to equity (REE) as proxies for financial leverage exhibiting a negative relationship with the dividend decision. Hence, DER and REE become the third and fourth variable respectively.

Further, the relationship between ownership structure and dividend payment behaviour of a firm is also valuable. The control of the firm may lie with the directors or the promoters (insider owners), institutions (institutional owners) or with foreign investors. The insiders would like to avoid excess payment of dividend whereas institutional owners are usually more dividend demanding (Han, Lee and Suk, 1999). Thus, promoters' shareholding (PS), institutional shareholding (IS) and foreign institutional investors shareholding (FIIs) represent the fifth, sixth and seventh variables respectively. Profitability has always been considered as the foremost determinant for dividend payment as more profit means more dividends. It becomes essential to consider variables for short-term and long-term profitability of a firm (Myers, 2004). We take net profit ratio (NPR), return on investment (ROI) and ratio of profit before interest & tax to total assets (PTA) as their proxies and therefore, they become the eighth, ninth and tenth variables respectively. In addition, growth opportunities play an important role. Higher the operational growth and growth in profits of a firm, higher shall be the dividend payments by the firm (Kania and Bacon, 2005). The growth factor is represented by annual sales growth (ASG), return on net worth (RONW) and earnings per share (EPS) growth. The growth rates of ASG, RONW and EPS are taken as the eleventh, twelfth and thirteenth variables respectively. Market capitalization (MC) corresponds to the size of the firm and is the fourteenth variable. Tax effect is another significant determinant as the rates of taxation influence the need for dividend by the investors. High tax paying investors would prefer to postpone receiving dividends and thus, would like to retain their earnings with the firm in order to avoid heavy taxes whereas investors in lower tax brackets would prefer higher dividends (tax clientele effect)[3]. For this purpose we take ratio of corporate tax to profit after tax (T) as a proxy and the fifteenth variable. A detailed definition of these variables is given in Annexure 2.

Research Methodology

The present study re-examines various factors that have a bearing on the dividend decision of a firm by using a two-step multivariate procedure. We have identified fifteen variables from the extant literature that are considered while framing a dividend policy. In the first step, we perform factor analysis on the data to extract prominent factors from these fifteen variables. In the second step we perform multiple regression on the factors extracted.

Statistical Tools Used

Factor Analysis to explain correlation among the observed variables.
Kaiser-Meyer-Olkin (KMO) and Bartlett's Test - tells us whether we can reduce the variables into broad factors or not.
The Bartlett's test of Sphericity investigates whether the original correlation matrix is an identity matrix or not.
Multiple regression is carried out to examine the impact of the five independent variables on the dividend rate.

Results

Factor Analysis

The technique of factor analysis indicates those factors that explain the correlation among the observed variables. We use principal component analysis (PCA) as the factor extraction method to identify distinct clusters of observed variables (Dillon and Goldstein, 1984; Tryfos,1998). The broad factors are further subjected to equamax orthogonal rotation (Alli, Khan and Ramirez, 1993). Table 1 shows the results of Kaiser-Meyer-Olkin (KMO) and Bartlett's Test. The KMO measure of sampling adequacy tells us whether we can reduce the variables into broad factors or not. Value of less than 0.50 indicates that factor analysis would not produce distinct and reliable factors whereas any value close to one would generally indicate that this technique of analysis would be useful with the data. Our results gave a value of 0.747 indicating that the pattern of correlation amongst the variables is relatively compact and hence, Factor Analysis yields distinct and reliable broad factors (Meyers, Gamst and Guarino,
2006). The Bartlett's test of Sphericity investigates whether the original correlation matrix is an identity matrix or not. Our results show that Bartlett's test has a chi-square value of 832.58 which is significant for $p < 0.01$ confirming that factor analysis is appropriate.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling		0.747
Bartlett's Test of Sphericity	Approx. Chi-Square	832.58
	Df	105
	Sig.	0.00

Table 2 gives the Rotated Factor Matrix using Equamax Orthogonal Transformation i.e. a matrix of factor loadings for each variable upon each factor. The factor loadings of less than

0.30 have been suppressed and are not displayed.

The foreign institutional investors' shareholding (0.69) is positively correlated, institutional shareholding (-0.185) and promoters' shareholding (-0.13) is negatively correlated to the first factor i.e. **ownership structure**. The dividend payout tends to bring a decline in the stock value, thus, a conflict of interest for the insiders. A company with high insider ownership proposes for a low cash dividend payout. Whereas, institutional owners are keen to influence high payouts in order to enhance control over the management for monitoring their external financing matters (Kumar 2006, Myers, 2004, Han, Lee and Suk, 1999). Our results strongly support the findings in the literature. However, one point worth noting is that the individual shareholdings of promoters, institutions and foreign institutional investors in relation to the total shareholdings of a firm have not been taken into consideration. This can be an area for future research.

Factor 2 has negative loadings for debt-equity ratio (-0.182), return on investment (-0.261) and return on net worth (-0.268), positive loadings for taxation (0.019) and earnings per share (0.670). We term this factor as **leverage.** This suggests that firms would like to pay high dividends if they are utilizing their retained earnings (least risk attached) as compared to external financing (equity and debt). In other words, high interest payments (fixed charge) will result in lower dividend payment (Alli, Khan and Ramirez, 1993 and Rozeff, 1982). Therefore, results indicate that there exists an inverse relationship between dividend rate and leverage.

The third broad factor is expressed as **Profitability**. It includes net profit ratio (0.591), ratio of profit to total assets (-061.) and current ratio (0.087). This factor indicates that greater the profit of a firm, higher will be the dividend payout. Therefore, profitability is positively related to dividend decision (Denis and Osobov 2008, Myers 2004). Our results confirm the same.

The fourth factor incorporates positive loadings for cash from operations (0.230) and Current Ratio (0.790). We coin this factor as **liquidity**. A firm with high external financing would require availability of cash flows i.e. strong liquidity position to meet its financial obligations. Therefore, in order to increase liquidity, the firm shall lower its dividend payout. On the other hand, the larger the size of the firm, the greater the availability of free cash flows and the greater will be the dividend payout. A firm with large number of shareholders is expected to pay higher dividends in order to keep their shareholders happy. It has been found that high retained earnings to equity ratio (indicating propensity to pay dividend) would ensure availability of free cash flows or residual cash flows within the firm (Benito and Young,
2001). One would, therefore, expect a direct relation between liquidity and dividend payout.

The fifth factor is termed as **Growth**. It includes annual sales growth (-0.031), return on net worth (-0.058) and ratio of retained earnings to equity (-0.044) implying that growth in sales and profit is not important determinant for the payment of dividends. Our results do not support the findings of Myers (2004) who suggests that firms with high growth rate distribute high dividends in order to keep their shareholders happy.

Table 2: Rotated Component Matrix

	Components				
	Ownership Structure	Leverage	Profitability	Liquidity	Growth
IS	-0.013				
PS	-0.185				
FIIs	0.69				
ROI		-0.261			
DER		-0.182			
T		0.019			
RONW		-0.268			-0.058
EPS		0.670			
PTA			-0.061		
NPR			0.591		
CR			0.087	0.790	
CFO				0.230	
ASG					-0.031
REE					-0.044

Regression Results

In the second step, multiple regression is carried out to examine the impact of the five independent variables on the dividend rate. The dividend rate is a dependent variable constituting the dividend decision and the five factors extracted from factor analysis viz. leverage, liquidity, profitability, growth, and ownership structure are taken as the independent variables. Since the factors used in the regression model are derived through the orthogonal transformations, they are free from multi-collinearity problems (Ali, Khan and Ramirez, 1993). Further tests for normality, heteroscedasticity and autocorrelation show that data is normally distributed and there are no related problems.

Table 3 gives the results of the regression model. The R-square is 0.244 i.e. around 25 per cent of the variability in dividend rate is explained by the independent variables tested. The F- Statistic of 9.320 is significant at 1% level of significance. The Durbin-Watson statistic of
2.079 signifies that autocorrelation is not present among independent variables.

Table 3: Regression Model Summary

R-Square	F	Durbin-Watson
0.244	9.320	2.079

Table 4 gives the results of the regression. Out of the five factors analyzed, four factors viz., leverage, liquidity, ownership structure and growth have expected relationships with the dividend payout. Whereas profitability, shows a sign contrary to what was expected. In line with literature, our results show that the leverage position of a firm has a negative relation with the dividend rate (-0.239), which is significant at 5% level of significance. Higher the exposure of the firm to external financing, higher will be the risk of the firm and therefore, lower would be the dividend payout.

Table 4: Regression results

Variables	Expected sign	Standardized Co-efficients Beta	T	Sig.
Dividend Rate (Constant)	Dependent variable		3.840	.000
Leverage	Negative	-.239	-3.013	.003
Liquidity	Positive	.341	4.138	.000
Profitability	Positive	-.007	-0.086	.932
Ownership Structure	Positive	.091	1.113	.286
Growth	Positive	.041	.541	.589

Similarly, liquidity (.341) shows a positive relation with the dividend rate at 1 % level of significance. The ownership structure of a firm representing institutional owners has a positive coefficient (0.091) but is statistically not significant. Growth (.041) also shows a positive coefficient, which is not significant. Contrary to what was predicted, profitability shows a negative coefficient (-.007) but is statistically not significant. Thus, the results of our study indicate that there are two main determinants of dividend decision viz. leverage and liquidity.

Conclusion

Despite few decades of active research on a number of theories discussing determinants of corporate dividend policy, no significant judgment can be drawn. The present study re-examines the determinants of corporate dividend decision of Indian companies listed on the National Stock Exchange during the period January 1, 2011–December 31, 2015. The study uses Principal Component Analysis for analyzing fifteen variables that have an impact on the dividend decision of a firm. The results gave five broad factors viz., leverage, liquidity, profitability, ownership structure and growth. These factors were then subjected to multiple regression with dividend rate as the dependent variable. The results of the regression show that leverage, liquidity, ownership structure and growth showed expected signs whereas profitability did not show the expected sign.

Two factors viz., leverage and liquidity were found to have a strong relationship with dividend rates of Indian companies. While leverage was found to be negatively associated, liquidity was positively related. One point worth mentioning here is that our results are drawn only from the analysis of financial factors affecting the dividend policy of an Indian company. In practice some non-financial factors such as foreign collaborators' shareholding, attitude and behaviour of management, company policies, etc may also have a bearing on the dividend decision of a firm.

Summary of Findings

- The dividend payout tends to bring a decline in the stock value, thus, a conflict of interest for the insiders. A company with high insider ownership proposes for a low cash dividend payout. Whereas, institutional owners are keen to influence high payouts in order to enhance control over the management for monitoring their external financing matters (Kumar 2006, Myers, 2004, Han, Lee and Suk, 1999). Our results strongly support the findings in the literature.

- High interest payments (fixed charge) will result in lower dividend payment (Alli, Khan and Ramirez, 1993 and Rozeff, 1982). Therefore, results indicate that there exists an inverse relationship between dividend rate and leverage.

- Profitability factor indicates that greater the profit of a firm, higher will be the dividend payout. Therefore, profitability is positively related to dividend decision (Denis and Osobov 2008, Myers 2004). Our results confirm the same.

- It has been found that high retained earnings to equity ratio (indicating propensity to pay dividend) would ensure availability of free cash flows or residual cash flows within the firm (Benito and Young, 2001). One would, therefore, expect a direct relation between liquidity and dividend payout.

- Growth in sales and profit is not important determinant for the payment of dividends. Our results do not support the findings of Myers (2004) who suggests that firms with high growth rate distribute high dividends in order to keep their shareholders happy

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Annexure 1: List of variables used by various researchers for dividend policy

Researcher	Factors	Technique used
1. Myers, 2004	PE, growth, earnings strength, liquidity, financial leverage, outsider influence, insider influence,	OLS Regression
2.Eriotis, 2005	Distributed earnings, change in distributed earnings, and size as sales in a year.	Linter Model of adjustment
3.Kumar, 2006	Dividend payout, manager's shareholding (board of directors equity holding used as a proxy), institutional shareholding, foreign investor shareholding, corporate shareholding, growth in earnings, debt-equity ratio, growth in sales intensity, tax dummy, ROA, ROE.	Full adjustment model, partial adjustment model, Waud model, earnings trend model and modified model of firm level characteristics.
4. Han, Lee and Suk, 1999	Dividend yield, institutional ownership, insider ownership, profitability, sales growth, capital expenditure to assets, debt over assets.	Tobit analysis.
5. Rozeff, 1982	Dividend payout, realized growth rate (total revenue), growth of sales revenue, beta, percentage of stock held by the insiders, number of common stockholders.	Regression model
6. Lintner, 1956	Change in dividend payments, indenture provisions restricting dividends, debts to be discharged at specific dates, tight liquidity position, growth prospects of the industry, earning prospects of the firm, average cyclical movement of investment opportunities, working capital requirements, internal fund flows, long-term capital gains, current dividend income, stable or fluctuating dividend rates, speed of adjustment of competitive companies, financial strength of the firm, company policies, behaviour of retained earnings, confidence in budgets and projection of future sales.	Adjustment model
7. Pandey, 2001	Changes in earnings per share, changes in dividends per share	Multinomial logit analysis and Linter model

Researcher	Factors	Technique used
8. Kanwal and Kapoor, 2008	Sales growth, MTBV (PB) ratio, beta, dividend payout, EBIT/total assets, cash from operations, corporate tax/PBT.	Correlation and Regression
9. Kania and Bacon, 2005	Dividend payout, ROE, sales growth, beta, cur- rent ratio, debt to total assets, insider ownership, institutional ownership, capital spending, growth in EPS	OLS Regression
10. Mohanty, 1999	Beta, dividend per share, number of transactions as proxy for liquidity.	Tobit analysis.
11. Denis and Osobov, 2007	EBIT/total assets, PAT/ equity, ratio of market value to total capital, percentage of change in total assets, book value of total assets, sales growth, ratio of retained earnings to equity, interest coverage ratio.	Logit Regression
12. Reddy, 2002	Dividend per share, dividend yield, dividend payout, EBIT/total assets, MTBV, market capitalization.	Trend analysis and logit analysis
13. Anand, 2004	Questionnaire	Survey and Factor Analysis
14. Naceur et al.	Net income, MTB V, number of majority shareholders, debt-equity ratio, total market value, EPS, DPS	Linter model
15. Ryan, Besley and Lee	Dividend yield, stock price reaction (level of information conveyed).	Cross-sectional weighted least squares regression, Tobin-q and Event study methodology.

Annexure 2: Definition of Variables

Key Variables	Variable name in the present study	Description
1. Dividend Rate	DR	It is percentage of dividend given by the company in a year. The average for seven years is used.
2. Current Ratio	CR	Calculated by dividing the amount of current assets by current liabilities. The average for seven years is used.
3. Net Profit Ratio	NPR	This is calculated by dividing net profit (amount left at the end of the accounting year for appropriations) by net sales. The average for seven years is used.
4. Debt-Equity Ratio	DER	Computed by dividing total debt of the company by its total equity. The average for seven years is used.
5. Return on Investment	ROI	Computed as ratio of profit before interest, tax and dividend by capital employed of the firm. The average for seven years is used.
6.Cash From Operations	CFO	Measured by net profit before tax and extraordinary income adjusted to non-cash charges and receipts. The average for seven years is used.
7. Annual Sales Growth	ASG	Measured by taking the ratio of change in total assets. The average for seven years is used.
8. Corporate Tax/PAT	T	Calculated by dividing tax paid by the company in an accounting period by profit after tax. Corporate tax is measured as the difference between profit after tax and profit before tax. The average for seven years is used.
9. PBIT/Total Assets	PTA	Computed by dividing Profits before interest, tax and dividend by total assets of the company for an accounting year. The average for seven years is used.
10. EPS Growth	EPS	Computed as the change in Earnings Per share (EPS) in an accounting period of the company. EPS is the ratio of profit after tax net of non-recurring transactions of the company in the most recent 12 month period to the number of shares outstanding as on that date. The average for seven years is used.

Key Variables	Variable name in the present study	Description
11.Ratio of Retained Earnings to Equity	REE	Calculated by dividing retained earnings to equity of a firm. Retained earnings are computed as net profit after tax minus dividend paid. Equity refers to the net value of paid up equity shares of a company that have been subscribed to, paid for and allotted by the company. The value is net of the value of forfeited shares. The average for seven years is used.
12. Return on Net worth	RONW	Measured as change in net worth of a company over an accounting period. The average for seven years is used.
13.Promoter's Shareholding	PS	It is the percentage of holdings of Indian promoters, foreign promoters and persons acting in concert in a company. The average for seven years is used.
14.Institutional Shareholding	IS	It is the percentage of holdings of financial institutions, banks, mutual funds and other institutions in a company. The average for seven years is used.
15. FIIs Shareholding	FIIS	It is the percentage of holdings of foreign institutional investors (FIIs) in a company. The average for seven years is used.