# IMPACT OF DEBT-EQUITY AND DIVIDEND PAYOUT RATIO ON THE VALUE OF THE FIRM

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## Abstract

Among the various financial ratios Debt-equity and Dividend payout ratios are the key financial ratios and their impact on the value of the firm is either significant or insignificant, which is going to describe in the study. Wealth maximization is the ultimate object of any firm and fulfilling the object the firm has to be depend on right decision on different finance relating aspects like Debt-equity (capital structure) and Dividend payout (Dividend decision) since both are important for the values of the firms as debt-equity helps to maximize the earnings and dividend payout helps both investors and growth of the firm by using different payout ratios.

Aim of the study was to understand the Impact of Debt-equity and Dividend payout ratios on the value of the firm. Here the variables such as debt-equity, dividend payout , retention ratios and the return on equity share prices of the Indian public limited companies are studied to understand the relationship between the debt-equity & dividend payout ratios and the share prices. The objectives of the study were to describe the dividend distribution and debt-equity pattern and to find out the relationship between the debt and dividend & the return on the equity shares. The findings of the study can be used to understand the influence of capital structure and dividend decisions on the value of the firm.

A descriptive research was conducted. Convenient sample of 29 companies are selected and shares of which are traded in Bombay Stock Exchange and National Stock Exchange was studied. The relationship between the Value of the firm & capital structure and Dividend Policies of the firm is studied using Multiple Regression model.

*Key words: Capital structure; dividend policies; multiple regression model; ratios and Testing hypothesis.*

## Introduction

The objective of the firm should be to increase the shareholders value or return. the value of the firm is depending upon many factors, in which capital structure and dividend policies are significant and insignificant so there exist a conflicting views. The management of the company/firm must be good enough at making the right choice or decision regarding capital structure and dividend policies as they are impactable sources on the value of the firms individually or collectively. as co-relation between debt-equity and earnings of the firm, the variable debt-equity is needed to understand to what extent does it influence on the value of the firm and similarly what would be the impact may be taken place on earnings if dividend issued/unissued . As many reasons are there for issuing dividend and retaining profit. Higher the dividend paid lesser the retained earnings and lesser the retained earnings less scope for growth.

## Need for the Study

How share prices differ from each other? To what extent financial decisions of the management have a bearing on the share holder's wealth? These are some of the several questions arose in the minds of the investors and other stakeholders of the firm. No matter what type of industry, growth perspective, capital structure etc… of a firm the ultimate objective is maximizing share holders' wealth. Share holders' wealth or the total value of the firm being the final goal, all the decisions of the management is directed towards it. The next question arises is how to value these decisions. It is always believed that the market value of shares reflects the emotions and reaction**s** of the investors to each and every decision the management takes.

The major decision of financial management is the debt-equity and dividend payout , in the sense that the firm has to manage properly. Both are used for the purpose of maximizing the shareholders value .The decision would obviously hinge on the effect of the decision on the maximization of share holders wealth. the important financial decision is capital structure decision. Under normal conditions the earnings per share increases when the leverage is more. More debt or leverage also increases the risk of the firm. Thus it cannot be clearly said whether the value of the firm increases with leverage

## Statement of the Problem

There is a conflicting views that whether capital structure changes/affects the value of the shares or dividend policies/decisions affect the shares. Some says both have influential power on value of firm(value of shares) and some do not agree with it and rather argue that only either of the has power to affect value of shares.

The gap of this study can be stated as follows;
"To what extent do capital structure (debt-equity) and  the dividend decision affect the value of the widely held public limited companies in India?''

## Objectives of the Study

1 To Ascertain the Debt-equity and Dividend payout ratio of the samples
2 To explain the dividend distribution the debt-equity patterns of the Samples.
3 To critically examine the possible effects that a firm's dividend policy might have on the market value of the firm
4 To study the effect of capital structure decision on the value of the firm.
5 To suggest the investors to give importance to either debt-equity or dividend pattern of the company/s

## Hypothesis

**H0:** Debt-Equity & Dividend payout Ratio and Value of the firm are not depending on each other.
**H1:** Debt-Equity & Dividend payout Ratio and Value of the firm are depending on each other.

## Scope of the Study

The study has been conducted to understand increase or decrease in the share price(market value of the firm) due to the different debt-equity and dividend payout ratios. Here the ratios such as debt-equity, dividend payout, retention ratios and return on the shares are studied. The findings of the study can be used to understand the influence of capital structure and   dividend decisions on the value of the firm.

## Review of Literature

### Capital Structure Vs. Firm's Value

The two principal sources of finance for a company are equity and debt. What should be the proportion of equity and debt in the capital structure of the firm? One of the key issues in the capital structure decision is the relationship between the capital structure and the value of the firm. There are several views on how this decision affects the value of the firm.

**Optimal Capital Structure Theory:** Optimal capital structure theory of Modigliani  Miller (1958) suggest there exist an optimal leverage at which the firm obtains a maximum value by minimizing its weighted average costs of capital, given the market imperfections and tax deductibility of interest costs from pre-tax income of firms.

**Durand D** (1959) identified two views; Net income approach and Net operating approach. Under the Net income approach the cost of debt and the cost equity are assumed to be independent to the to the capital structure. This approach says that the weighted average cost of capital of the firm declines and the total value of the firm rise with increased use of leverage. **Davidson N W**, et.al., (1994) in their report on "The effect of firm and industry debt ratios on market value" analyzed 183 firms and studied the effect of debt ratios to the market value of the firm. Overall conclusion of the study is that the relationship of the firm's debt level and that of its industry does not appear to be of concern to the market. **Arsiraphoongphisit O & Ariff M** (2003) in their report on "Optimal capital structure and firm value- an Australian evidence, 1991-2003" (Corporate Finance) analyzed 654 observations for a period of 1991 to 2003 in Australian market on the effect of capital structure change and firm's value. Debt policy and equity ownership structure "matter" and the way in which they matter differs between firms with many and firms with few positive net present value project (McConnel and Servaes, 1995). Leland and Pyle (1977) propose that managers will take debt-equity ratio as a signal, by the  fact that high leverage implies higher bankruptcy risk (and costs) for low quality firms. Since managers  always have  information advantage over the  outsiders, the debt structure may be considered as a signa l to the market. Ross's (1977) model suggests that the values of firms will rise with leverage, since increasing the market's perception of value.

### Relevance of Dividend

Another school of thought holds that without Modigiani and Miller's restrictive assumptions, their argument collapses. They asserted that since, in reality investors operate in a world of brokerage fees, taxes, and uncertainty, it is better to view the firm in the light of these factors. The leading proponent of the relevance of dividend theory, Gordon (1962) suggests that shareholders do have a preference for current dividends, that, in fact theme is direct relationship between the dividend policy of a firm and its market value. Gordon argues that investors are generally risk-averters and attach less risk to current as opposed to future dividends or capital gains. This 'birds r' hand" argument suggest that a firm' dividend policy is relevant since investors prefer some dividend now in order to reduce their uncertainty. When investors are uncertain about their returns they discount the firm's future earnings at a lower rate therefore placing a higher value on the firm. Another writer, Walter (1963) was of the opinion that dividend policies in most cases do affect the value of the firm. The effect of the optimum dividend policy on the relationship between the firm's internal rate of return (r) and its cost of capital (k) according to him, is a growth function of the firm where r>k, all earnings can be reinvested, hence, the firm is assumed to have sample profitable opportunities so as to maximize the value per share over and above the rate expected by shareholders. In a normal firm where r=k, dividend policy have no effect on the market value per hare since the rate of return is equal to the cost of capital.

In a declining firm where the optimum payout ratio should be 100% to enable increase in the market value per share, Walter expressed this as thus: k-dr Where P Market value of the share

E = Earnings per share
K = Cost of capital
r = Internal rate of return
d = Current dividend

This Walter theory has been criticized because r and k are not constant in real life situation. Moreover, the non-existence of external financing makes it weak. The firm's r decreases as more investment occurs and k changes directly with the firm's risk. It should be understood here that Walter's model though weak, recognizes the fact that dividend policy is relevant, according to Samuels and Wilkes (1975). The owners of a company share are entitled to a revenue stream of dividends. The value of the share corresponds to the present value of this steam of dividends payments. Obviously, there is considerable uncertainty surrounding the size of the future dividends, indeed it is as a result of change expectations about future dividends that share prices fluctuate. The owner considers his returns as accruing not just from dividend payments but from the additional gains resulting from any capital appreciation on the share. Normally he does not intend to hold the share in perpetuity, he wishes to sell the share and obtain capital 4 gains, but when he sells the share, the buyer is also simply purchasing a stream of future dividend expectations. The reason the capital gain expectation arises is because of expectation about future dividend stream rise between the time when the investor purchases the shares and when he sells them.

### Irrelevance Of Dividend

Dividend irrelevance approach implies that the value of the firm is unaffected by the distribution of dividends and is determined by the earning power and risk of its assets.

### MM Hypothesis (Modigliani and Miller, 1961)

Modigliani and Miller argued that the dividend decisions have no effect on the share prices of the firm and therefore no consequence.

### Others

Gragg & Malkeil in their paper on "Expectations and Structure of Share Prices" present the results of an empirical study of year-end common stock prices from 1961 to 1965. The ratios of market prices earnings are related to such factors as earnings growth, dividend payout, and various proxy variables designed to measure the quality of the return..
David & Julio (2004) University of Illinois and Urbana Champaign in their paper on "Reappearing Dividends" studied the reappearing phenomenon on United States of America.

## Methodology

### Type of Research

Type of research is Descriptive research, which is Quantitative in nature.
Indian Public Limited Companies and The Equity Shares of companies are traded in Indian Stock Exchanges. (BSE & NSE)

### Sampling Technique

A sample is a portion of the population that has been selected to represent the population of interest. Here in this study 29 companies are selected which are listed in Bombay stock exchange and National stock Exchange, India. Sampling technique used here is convenient sampling.

### Sample

The sample size is 29. The companies studied are the followings.

- Associated Cement Company Ltd.
- Bajaj Auto Ltd.
- Bharat Heavy Electricals Ltd.
- Cipla Ltd.
- Dr.Reddy's Laborotaries Ltd.
- Grasim Industries Ltd.
- Ambuja Cements Ltd.
- Housing Development Finance Corporation Ltd.
- Hero Honda Ltd.
- Hindalco Ltd.
- Hindustan uniLever Ltd.
- Hindustan Petrolium Corporation Ltd.
- Infosys Technologies Ltd.
- Indian Tobacco Company Ltd.
- Larsen & Toubro Ltd.
- Ranbaxy Laboratories Ltd.
- Reliance Industries Ltd.
- Satyam Computers Ltd.
- Tata Motors Ltd

- Tata Power Ltd.
- Tata Iron and steel Company Ltd.
- Wipro Ltd.
- Zee Telefilms Ltd.
- ABB Ltd.
- Bharat Petrolium Corporation Ltd.
- Britannia Industries Ltd.
- Colgate Palmolive Ltd.
- Mahindra & Mahindra Ltd.
- Steel Authority of India Ltd.

The shares of the aforesaid companies are actively traded in the stock exchange for the period under study ie; 2000/01-2009/10.

### Data Collection
*Secondary Data*
- Income statements of companies under study
- Balance sheets
- Historical stock prices

*Data obtained*
- Figures and facts⬜
- Unclassified raw data

### Statistical Analysis
- Descriptive Statistics is used to describe the pattern of Debt equity, dividend payout and the return on shares.

Five Year Moving Average is used to estimate the expected Debt-equity, Dividend payout and Retention Ratio of the successive years. This approach is used to estimate the values incorporating its behavior for the past five years. Expected Value for the Year 6 = (Y5+Y4+Y3+Y2+Y1) / 5

- Statistical model used: The model used here is multiple - regression model. The regression equation for the study is as under.

  Y = a + b1 X1 + b2 X2

  Y = Actual Return on Equity (For the year)

  X1 = Expected Debt-Equity Ratio (Moving average for five years)

  X2 = Expected Dividend Payout (Moving average for five years)

- For Cross sectional Regression analysis the above variables X1 and X2 for ten years are converted into five year moving averages.
- For time series analysis the actual data for the years are taken.
- "t" test significance at 5% level is used to accept or reject the hypothesis
- Adjusted R2 and F value are used to find out the proper relationship between variables.

## Analysis and Interpretations

### Section-1 Cross Sectional Regression Analysis:-

| Table no.1  Cross sectional regression values for the year 2005/06 | | | | |
|---|---|---|---|---|
| | | Moving average for 2000/01 to 2004/05 | | |
| Company | Return 05/06 | Debt-equity | Dividend payout | Retention |
| ACC Ltd | 0.03 | 1.26 | 0.46 | 0.54 |
| Bajaj Auto Ltd | 0.33 | 0.23 | 0.35 | 0.65 |
| BHEL Ltd | 0.21 | 0.14 | 0.24 | 0.76 |
| Cipla Ltd | -0.25 | 0.09 | 0.25 | 0.75 |
| Dr.Reddy's lab | -0.08 | 0.19 | 0.13 | 0.87 |
| Grasim ltd | 0.3 | 0.66 | 0.24 | 0.76 |
| Ambuja ltd | 0.24 | 0.95 | 0.48 | 0.52 |
| HDFC Ltd | 0.18 | 7.53 | 0.44 | 0.56 |
| Hero Honda Ltd | -0.05 | 0.14 | 0.57 | 0.43 |
| Hindalco  Ltd | 0.08 | 0.29 | 0.18 | 0.82 |

| | | | | |
|---|---|---|---|---|
| HUL Ltd | 0.04 | 0.07 | 0.65 | 0.35 |
| HPCL Ltd | -0.07 | 0.42 | 0.41 | 0.59 |
| Infosys Ltd | -0.12 | 0 | 0.38 | 0.62 |
| ITC  Ltd | 0.09 | 0.09 | 0.33 | 0.67 |
| L and T Ltd | -0.1 | 0.88 | 0.46 | 0.54 |
| RIL Ltd | 0.15 | 0.74 | 0.18 | 0.82 |
| Satyam Ltd | -0.18 | 0.09 | 0.2 | 0.8 |
| Tata motors Ltd | 0.14 | 0.69 | 0.25 | 0.75 |
| Tata power Ltd | 0.1 | 0.56 | 0.27 | 0.73 |
| TISCO Ltd | 0.19 | 1.02 | 0.39 | 0.61 |
| Wipro Ltd | 0.11 | 0.02 | 0.29 | 0.71 |
| Zee Ltd | 0.27 | 0.09 | 0.21 | 0.79 |
| ABB Ltd | 0.28 | 0.02 | 0.26 | 0.74 |
| BPCL Ltd | -0.11 | 0.8 | 0.36 | 0.64 |
| Britannia Ltd | -0.09 | 0.41 | 0.23 | 0.77 |
| Colgate Ltd | 0.15 | 0.03 | 1.03 | -0.03 |
| M and M Ltd | 0.24 | 0.61 | 0.44 | 0.56 |
| SAIL Ltd | 0.21 | 3.05 | 0.04 | 0.96 |
| Ranbaxy Ltd | 0.03 | 0.13 | 0.48 | 0.52 |

Cross sectional regression values for the year 2006/07, 2007/08, 2008/09 and 2009/10 carried out as done above.

| Table No.2 | | | | | |
|---|---|---|---|---|---|
| Cross Sectional Regression Results | | | | | |
| Model Y=a+b1X1+b2X2 | | | | | |
| Year | A | b1 | b2 | adjusted r2 | f-value |
| 2005/06 | 0.065 (-0.99) | 0.021 (1.002) | -0.009 (-0.056) | -0.037 | 0.506 0.609 |
| 2006/07 | 0.164 (1.473) | 0.036 (1.164) | -0.21 (-0.766) | -0.22 | 0.971 0.392 |
| 2007/08 | -0.481 (5.391) | -0.008 (0.317) | 0.585 (2.661) | 0.155 | 3.574 0.043 |
| 2008/09 | 0.277 (3.645) | 0.002 (0.097) | -0.051 (-0.28) | -0.073 | 0.043 0.958 |
| 2009/10 | (1.393) | 0.019 (0.788) | 0.211 (1.1981) | 0.006 | 1.082 0.354 |

The numbers in the brackets shows "t" value. It shows the "t" value calculated is more than 1.96 and significant at 5% level.

**Section-2: Time Series Regression Analysis**

| ACC Ltd | RETURN ON SHARE | DEBT-EQUITY RATIO | DIVIDEND PAYOUT RATIO | RETENTION RATIO |
|---|---|---|---|---|
| 2000/01 | -0.00934 | 1.4 | 0.79 | 0.21 |
| 2001/02 | 0.036475 | 1.52 | 0.39 | 0.61 |
| 2002/03 | 0.172393 | 1.47 | 0.46 | 0.54 |
| 2003/04 | 0.139675 | 1.2 | 0.4 | 0.6 |
| 2004/05 | 0.197889 | 0.7 | 0.242 | 0.758 |
| 2005/06 | 0.307946 | 0.25 | 0.26 | 0.74 |
| 2006/07 | -0.02514 | 0.07 | 0.3049 | 0.6951 |
| 2007/08 | -0.33117 | 0.1 | 0.362 | 0.638 |
| 2008/09 | 0.26093 | 0.09 | 0.3143 | 0.6857 |
| 2009/10 | 0.091383 | 0.08 | 0.5961 | 0.4039 |

The time series regression analysis as displayed above for the company ACC is used for the remaining 28 companies.

Table No-3

Time Series Regression Results For 29 Companies(2001-2010)

**Model Y=a+b1X1+b2X2**

| Companies | a | b1 | b2 | adj.r2 | f-value |
|---|---|---|---|---|---|
| **ACC** | 0.189 | 0.064 | -0.362 | | 0.396 |
| | | | | -0.155 | |
| | (1.101) | (0.573) | (-0.853) | | 0.42 |
| | | | | | |
| **Bajaj** | 0.363 | -0.024 | -0.567 | -0.16 | 0.38 |
| | (1.389) | (0.054) | (-0.69) | | 0.697 |
| | | | | | |
| **BHEL** | 1.031 | -0.644 | -3.236 | -0.122 | 0.511 |
| | (0.762) | (0.305) | (-0.722) | | 0.621 |
| | | | | | |
| **HDFC** | -0.558 | 0.035 | 0.914 | 0.176 | 1.962 |
| | (-1.469) | (1.326) | (1.018) | | 0.211 |
| **AMBUJA** | **-0.296** | **-0.276** | **1.26** | | **0.157** |
| | | | | **-0.23** | |
| | **(-0.534)** | **(0.206)** | **(0.412)** | | **0.857** |
| | | | | | |
| **GRASIM** | -0.702 | -0.438 | 4.829 | 0.251 | 2.508 |
| | (-1.917) | (0.771) | (2.034)** | | 0.151 |
| **ZEE** | -0.011 | -0.254 | 0.099 | 0.277 | 0.024 |
| | (-0.044) | (0.119) | (0.161) | | 0.976 |
| **ABB** | -0.425 | 12.843 | 2.99 | -0.106 | 0.57 |
| | (-0.91) | (0.691) | (0.982) | | 0.59 |

| | | | | | |
|---|---|---|---|---|---|
| **BPCL** | -0.276 | 0.39 | 0.905 | 0.081 | 1.3897 |
| | (-1.14) | (0.314) | (0.1664) | | 0.309 |
| **CIPLA** | 0.491 | 0.758 | -2.47 | -0.003 | 0.985 |
| | (1.258) | (0.612) | (-1.379) | | 0.42 |
| **REDDY LAB** | -0.132 | -0.297 | 1.257 | 0.021 | 1.096 |
| | (-0.701) | (0.825) | (1.194) | | 0.385 |
| **HH MOTOR** | -0.094 | -0.479 | 0.304 | -0.145 | 0.431 |
| | (-0.359) | (-0.3) | (0.872) | | 0.666 |
| **HINDALCO** | 0.161 | -0.756 | 0.44 | -0.196 | 0.262 |
| | (0.182) | (-0.6) | (0.116) | | 0.777 |
| **HUL** | -0.123 | -0.054 | 0.192 | 0.37 | 3.644 |
| | (-2.108) | (0.222) | (2.617)** | | 0.82 |
| **HPCL** | -0.365 | 0.058 | 0.981 | 0.43 | 4.389 |
| | (-2.408) | (1.088) | (2.958)** | | 0.58 |
| **INFOSYS** | 0.119 | 00 | -0.376 | 0.68 | 1.659 |
| | (0.928) | | (-1.288) | | 0.234 |
| **L AND T CO** | 0.008 | 0.514 | -0.65 | -0.198 | 0.256 |
| | (0.021) | (0.578) | (-0.31) | | 0.781 |
| **SATYAM** | -0.226 | 0.173 | 0.967 | 0.078 | 1.383 |
| | (-1.913) | (0.322) | (1.649) | | 0.312 |
| **BRITANIA** | 0.26 | -0.495 | -0.38 | 0.607 | 7.958 |
| | (2.302)** | (3.626) | (-1.277) | | 0.016 |
| **ITC CO** | 0.047 | -0.276 | -0.217 | -0.262 | 0.066 |
| | (0.129) | (-0.15) | (-0.362) | | 0.937 |
| **COLGATE** | 0.194 | -5.061 | -0.006 | 0.416 | 4.199 |
| | (2.789)** | (2.438) | (-0.072) | | 0.063 |

| | | | | | |
|---|---|---|---|---|---|
| **M ANAD M** | -0.429 (-0.934) | 1.008 (1.313) | -.153 (-.120) | 0.022 | 1.103 0.383 |
| | | | | | |
| **RANBAXY** | **0.045 (0.262)** | **0 (-0.002)** | **-0.085 (-0.462)** | **-0.248** | **0.107 .900** |
| **RIL LTD** | -0.285 (-0.833) | -0.761 (-1.266) | 4.878 (1.695) | 0.089 | 1.439 0.299 |
| **TATA MOTOR** | -0.427 (-0.783) | 0.536 (0.997) | 0.445 (0.575) | -0.117 | 0.528 0.611 |
| **TATA POWER** | -1.112 (-1.341) | 1.356 (1.77) | 1.665 (0.879) | 0.113 | 1.576 0.272 |
| | | | | | |
| **TISCO** | 1.239 (2.723)** | -0.757 (-1.589) | -0.813 (-0.772) | 0.24 | 2.423 0.159 |
| **WIPRO** | 0.003 (.022) | 0.319 (.615) | -0.368 (-1.136) | -.013 | .942 0.434 |

**\*\* The numbers in the bracket show the "t" value.**

     It shows that the "t" value calculated is more than 1.96 and significant at 5% level. The above tables give the regression results for each company for ten years. Here Y denotes the return on equity shares, X1 denotes the debt equity ratio and X2 denotes the dividend payout ratio. The "t" value of dividend payout ratio is significant only for three companies namely Grasim industries ltd , HUL ltd and HPCL ltd . the adjusted R2 value are 0.251 , 0.370 , 0.430 respectively. It shows that for these companies there exist a significant association between the D/p and the share value. But as a whole for the samples selected 26 samples shows no evidence of relationship between the D/p and return on equity and all the 29 samples showed no relationship between the Debt-equity and return on equity

### Cross sectional regression results interpretation

The numbers in the brackets show the "t" value.  It shows that the "t" value calculated is more than 1.96 and significant at 5% level. The above table shows the year wise regression results of all the samples Studied. Here Y denotes the return on equity shares, X1 denotes debt-equity ratio and X2 denotes dividend payout . "t" value calculated in the above table is significant only for constant and D/p in the year 2008/09 and 2007/08 respectively. The "t" value calculated for the debt-equity ratio shows no evidence of any significant association between return on equity and debt-equity ratio. The adjusted R2 which shows the extent of variation explained by the model is also very less except in the year 2007/08. Thus from this analysis we can interpret that debt-equity(capital structure) do not affect the return on equity.

## Findings of the Study
### *Cross Sectional Regression Analysis*
     The results of the Cross sectional Regression for the Five Years from 2005/06  to 2009/10 (Table No.2) Shows that for the selected samples there is no evidence of any significant relationship between Return on Equity & the Debt Equity ratio and dividend payout except in the year 2007/08

> ➢ In the year 2007/08, dividend payout ratio under cross sectional regression shows an impact on return on shares.

*Time Series regression Analysis*

The results of the Time Series Regression for the Ten-year data (2000/01 to 2009/10) as per the Table No.3 show that there does not exist any significant relationship between the Return on equity & Debt Equity and Dividend payout other than for the following samples.

> ➢ **Grasim industries Ltd.:** The Regression analysis shows that the "t" value calculated for the variable X2 i.e.; Dividend payout Ratio is 2.034. This shows that it is significant at 5% level. The coefficient of the variable of Dividend payout Ratio (b2) is 4.829; it also shows that to Grasim industries Ltd. there exist a significant relationship between the Return on equity and dividend payout.
>
> ➢ **Hindustan unilever ltd:** This sample also shows that there exist a significant relationship between the Return on the Equity and the Dividend payout Ratio. The "t" calculated value is 2.617 and the coefficient is 0.192, for Dividend payout Ratio.
>
> ➢ **Hpcl Ltd.:** The dividend payout seems to have a relationship with the Return on equity shares in this sample also. For the variable, Dividend payout Ratio the "t" calculated value is 2.958 and the Coefficient is 0.981.

**Hypothesis Testing**

**H0:** Debt-Equity & Dividend payout Ratio and Value of the firm are not depending on each other .

**H1:** Debt-Equity & Dividend payout Ratio and Value of the firm are depending on each other

The hypothesis is tested by using "t" test significant at 5%. The Cross sectional Regressions results as per table no. 6 shows the "t" value calculated for the period of analysis i.e.; 2005/06 to 2009/10. It can be seen that the "t" values calculated show no significant relationship between the return on equity & debt-equity and dividend payout. The Time series Regression results as per table no. 36 shows the "t" value calculated for each sample for ten year's value (2000/01 to 2009/10). Here also there is no evidence of relationship between return on equity share prices and debt-equity but dividend payout ratio forms some sort of Significance relation with return on equity for three companies.

Thus at 5% level of significance using "t" test H0 IS ACCEPTED, which implies there is no effect of Debt-equity and dividend payout ratios on the value of the firm or Debt-Equity & Dividend payout Ratio and Value of the firm are not depending on each other.

**Debt and Dividend Patterns**

The descriptive cross sectional tables and Time series tables explain the trend in the various ratios of the companies under study for the various periods.

> ➢ Software companies such as Infosys Technologies Ltd. , Satyam Computers Ltd. and Wipro Ltd. Are having very low debt-equity ratio and pay comparatively very low rate of dividend and most of the earnings are retained for investment in the business.
>
> ➢ FMCG companies like Hindustan uniLever Ltd and Colgate Palmolive Ltd. Pay high rate of dividend and retained earnings are less, it shows that the investment opportunities in this sector shows a decreasing trend and the growth rate is limited and as against to this two companies under same sector are Britannia and ITC are consistent in earning, retaining and distributing dividend though had a lower debt-equity
>
> ➢ The dividend payout of the Automobile companies under study ranges from .29 to 1.16 and debt-equity ranges from 0.10 to 0.85.
>
> ➢ The pharmaceutical companies under study have a dividend payout of less than 0.55. The Payout ratios are almost consistent for each company in this group except Ranbaxy laboratories It has more growth prospective, as the retention ratio is high.
>
> ➢ Out of the companies studied HDFC Ltd showed a high rate of Debt equity ratio. Its debt equity ratio is touching a very alarming rate of 10.46 for the year 2005/06.

## Summary and Conclusion

The salient findings of the study are:

> ➢ There is no significant effect of dividend payout and debt equity ratio on share prices.
>
> ➢ Out of the samples under study it can be noticed that debt-equity and share prices do not have a notable relationship between each other.
>
> ➢ Out of the samples under study only three companies were fit for formulating relation between dividend payout and return on equity.
>
> ➢ Out of the sample under study the software companies showed a deviation from others by having least Debt Equity some time even 0 for more than 5 years and least Dividend Payout Ratio and still maintaining a good rate of return on share prices.

## Limitations

> ➢ The sampling technique used is a convenient sampling technique, which limits the generalization of the findings.

> The data collected are historical data and no adjustment is made to capture the abnormal events which affect the variables under study
> Only two variables are insufficient to explain the changes in market price of equity shares

## Recommendations

> The same study can be conducted including more samples and for a longer period.
> The relationship existing between the Debt-Equity Ratio and Dividend Payout can be studied in depth.
> The number of variables can be used to understand the behavior of return on shares

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