AN EMPIRICAL ANALYSIS OF FACTORS AFFECTING THE DIVIDEND PAYOUTS OF THE PHARMACEUTICAL INDUSTRY: EVIDENCE FROM THE NSE, INDIA

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ABSTRACT

Deciding about dividend payout ratio is a very important decision, that a company has to face. Examining factors that affects dividend payouts, helps company in making correct decisions related to dividend. This article examined the pre-determined factors which affect the dividend payouts of 10 Pharmaceuticals companies which are listed on the NSE, India. This study covered the period of 2019-2020. From the previous studies, factors identified were, profitability, sales growth, tax, cash flows and debt. In this study, panel data method is used because researcher’s data consists of both cross sectional and the time series data, and to verify this F-Limer has been used. T-statistics, probability and coefficient has also been calculated to study the Impact. The result showed that factors profitability and cash flows have negative impact on dividend payouts. While, the factor debt has positive impact on dividend payouts. Other factors such as tax and sales growth did not have any impact on profitability ratio.

Key words: Cash flows, Dividend payout, F-Limer, Leverage, profitability, Sales growth, tax


1. INTRODUCTION

Dividend payment has been the topic of discussion in financial literature and a controversial issue. This is a matter of debate for Academicians and Financial Researchers. Various theoretical models have been developed by academicians and researchers to empirical examine the impact of factors on dividend payout ratios of different companies, and it is also suggested that managers should use these models while making decision for dividend payments, Grullon et al (2002). Factors such as debt, profitability, tax, retained earnings, sales growth, cash flow, size of business and leverage which affects the dividend payout ratios
should be considered by the managers while determining the size of dividend payouts for shareholders. In their paper M&M (1961), in perfect market proved that the firm’s value does not get affected by dividend decision and thus, it is irrelevant. But many Academicians and Practitioners were surprised by this conclusion because the generally accepted theory and belief indicated that these factors does’ affect the dividend payouts of companies.

**Profitability**

Profit of the company can be used in many ways. For investing in new project, purchasing securities, buy back of shares, distributing in shareholders or to pay debt. In the end, the decision of buying back shares or to distribute cash dividends depends upon the decision makers. This situation affects the company’s dividend payout ratios.

**Cash Flow**

It is the company decision to pay dividend or not pay it for various external or internal reasons. When a company distributes dividend, it reveals the financial strength of the firm, it draws investors attention for investment, it helps to manage price of the stock. The companies who does not pay dividend are understood positive when they declare dividends. Thus, the decision to pay or not pay affects dividend payouts.

**Tax**

As the tax liability, decrease or increase it has an impact on increase or decrease of dividend. If the tax liability increase, dividend payment increase. Thus, there is a positive relationship between tax and dividend payouts.

**Sales Growth**

Developing companies prefers to pay less dividends as the rest will be invested in future projects. Sales growth has a major impact on dividend payout ratio. The impact can be both negative and positive. If the company is developing or planning to grow, then relationship between sales and dividend payout will be negative.

**Debt**

Debt used as the financing capital for the company reflects the risk associated with the company. Highly developing companies need high debt and shows high dividend payouts. This indicates towards the positive relationship of debt and dividend payouts but in some case, it shows negative relation. Negative relationship is established based on risk and dividend payouts.

2. **LITERATURE REVIEW**

Khan & Ashraf (2014), studied the relationship of dividend payout ratio with the cash flow, tax, sales, debt to equity ratio and profitability. 26 companies listed on KSE were taken as sample to study their FS. It was concluded that the ratio doesn’t get affected by these variables in the Pakistan economy. But in International Market these variables do affect the dividend payout ratio.

Parker (2005), through his study stated that there is a positive relationship between earnings and dividend payouts. When the dividends are high then profits are high. High earnings attract huge dividends. Similarly, Arnott & Asness (2003), also examined the relationship of dividend payout with corporate earnings, and they concluded that the development in earnings and dividends for the company is closely correlated with the rise of the entire economy.
Tax also has an Impact on financial and administrative decisions. Lightner (2008), studied the relationship of tax with dividend payout, and result showed that, When the tax rate rises, corporation increase stock repurchase and decrease the dividends payout. Tax level and payout of dividend vary with proportion of individual investment.

John & Muthusamy (2010), studied the relationship of sales growth and dividend payout ratio, and concluded that dividend payout is negatively related to sales growth.

The debt arrangement contributes essentially to the capacity of the company to pay out dividends. It tests the ability of companies to handle capital. For manufacturing firms in Nigeria, debt to equity framework is linked positively to the dividend payout ratio. Oladipupo & Okafor, (2013).

Fitri et al (2016), analyzed the factors that affects the dividend payout ratio of companies listed on Jakarta Islamic Index for a period of 2009 to 2014. The findings showed that there is positive effect to Dividend Payout Ratios from ROA and DPR in a year before. The study also indicated that Asset Growth had a negative and significant effect on dividend payout. The outcome also showed no significant difference of the debt-to equity ratio to the payout ratio of dividend.

A research was carried out in the Gulf Cooperation Council (GCC) to analyze the dividend policy determinants for the listed firms for the period 1999 - 2003. The results indicate that the company's profitability has a positive and important relation to the dividend payout ratio. Whenever the company profitability increases, higher dividends are paid. Al-Kuwari (2009)

Ritha & Koestiyanto (2013), conducted an analysis to analyze the factors influencing the dividend payout ratios in the corporations listed on the stock exchange during the 2007 – 2009 period. The outcomes indicated that dividends payout ratio has a positive effect of leverage. Profitability was identified as having a negative and important impact on dividend payment. Growth performance of the business displayed negative and major impact on dividend payment.

Assets are being used for company's operating activities. Companies with high growth rates and investment opportunities would need a huge internal fund to finance such investments, so companies tend to pay a low or even no dividend. Al Malkawi et al (2013). Similarly, Fama & French (2001), claimed that dividend payout ratio gets affected by investment opportunities. They concluded that companies with bigger growth opportunities and investment have lower dividend payments. Hence, there is a negative relationship between dividend payout ratio and company’s growth and investment opportunity, concluded by the results of Ritha & Koestiyanto (2013), Alzomaia (2013) and Amidu & Abor (2006).

Gill et al (2010), extended the study of Amidu & Abor (2006) and Anil and Kapoor (2008), by using it for examining the American service & manufacturing companies. Among other factors, they noticed that the dividend payout ratio, on an modified basis, namely the ratio among the cash dividend that the net cash flow produced by the company gave rise to findings that vary from those obtained as the dependent variable with the 'normal' dividend distribution ratio. They also concluded that relationship of dependent and Independent variable is different in service and manufacturing industry.

Parsian & Koloukhi (2013), investigated the impact of different factors on dividend distribution ratio of the companies listed on TSE. For this 102 companies were chosen as sample and were investigated for a time period of 2005-2010. They used time series Regression (panel data) to check the study’s hypothesis. The results indicated that variables of cashflow and current profitability ratio have significant and negative impact on the dividend payout ratio, while the independent leverage ratio variables has a significant and positive
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impact on the payout ratios of dividends. The other factors, including company size, opportunities for growth and market risk, has no significant impact on the payout ratio of dividends.

The first person who analyzed the impact of different factors on dividend payout ratio was Lintner (1956), his research showed that both firm’s size and opportunities for investment has a opposite relationship with dividend distribution ratio for firms in Switzerland. After that, Fama & Babiak (1968), further investigated the Lintner model on 392 Industrial firms of North America for the time period of 1946 to 1964. They found out that the company increases its dividend distribution only when they can sustain dividends in future. They also added that Lintner’s model has fairly explained the changes in dividend distribution of different firms. While, Wolmarans (2003), in South Africa was not able to find any conclusion or evidence for the Lintner’s model.

Jaggi & Gul (1999) examined the relationship between opportunities for investment, dividends policy and debts in Korean companies. Their result showed that dividend policy and debt had an opposite relationship with investment opportunities. They also reported that there is a positive and significant relation between cashflow and firm’s debt with less opportunity for investment.

Truong & Heaney (2007), investigated the effect of profitability and investment opportunities on dividend payout ratio and found out that companies prefer to pay dividends when profit is huge and opportunities for investment is limited. Similarly, Denis & Osobov (2008), examined the impact of profitability, size of business, opportunity for investment, life cycle and problem of agency on dividend distribution ratio by using logit regression. Their result showed that profitability, size of business opportunity for investment, life cycle and opportunity of growth influence dividend distribution ratio.

Good management of working capital is important for the profitability of a firm and profitability is important for ability of a firm to distribute dividends to its shareholders. Agarwal (1978) in his study investigated the relationship between size (total sales) and profitability (net worth & profit/ net assets/ profit) for 7 manufacturing firms for a time period 1962-1972. In the result, a positive relationship was found between size and profitability in 5 out of 7 companies.

Wara (2015), examined the effects of 6 factors which is said to influence the dividend payout ratios of companies in Kenya, by using Tobit regression model. It was found that size of firm, debt and growth rate negatively impacts the dividend payout ratios and earnings positively affects the dividend distribution ratio. Similarly, Aivazian, Booth & Cleary (2003), observed that profitability has impact on both developing market companies and U.S Companies and higher return on equites leads to higher dividend distribution.

The study of whether different factors affects dividend payout ratio or not is very important and critical area of research area. Mehta (2012), examined the different factors such as risk, profitability, size, leverage and liquidity, impact on dividend payout ratio on the companies of different sectors, such as energy, construction, real estate, industry, health, telecommunication, (leaving the banks and investment sector) listed on UAE stock exchange, for a time period of five years (2005-2009). The methodology used to examine were the multiple regression technique and the correlation. The result clearly showed that risk, profitability and size are the most important factors for affecting the dividend payout ratio by the UAE firms. Their result was similar with the other studies done by the developing countries.

M&M (1961), in perfect market gave the dividend irrelevance theory, without transaction cost and tax. M&M proved that the firm’s value does not get affected by dividend decision.
and thus, it is irrelevant. They stated that wealth of shareholder’s does not get affected by dividend policy and that also without considering tax.

Malkawi (2007), for a time period of 1989 to 2000 examined the factors that affects the dividend payout ratio of companies in Jordan. His result showed that size of the company, profitability and age of the company were the important factors which affects the dividend payout ratio of companies in Jordan.

Hellstrom & Inagambaev (2012), conducted a study related to the factors affecting the companies’ dividend distribution ratios and mainly focused on the medium and large enterprises listed on Stockholm stock exchange. They wanted to examine whether large and medium enterprises have any difference regarding the effects of different factors on companies’ dividend payout ratios. Based on the previous studies, they decided to examine the factors such as, size, risk, growth, profit, leverage and cash flow with the dividend distribution ratio on 6 companies for a time period of 2006 to 2010. Their study followed a deductive approach with quantitative research method and was based on the agency theory, the dividend irrelevance theory, the signaling theory and the bird in hand theory. Tobit regression and OLS were conducted to determine the relationship within the factors and dividend payout ratios. To make sure that no multicollinearity affects the result of study Multicollinearity test was also done. The outcomes indicated that these factors do affects the dividend payout ratios and they affect the large and medium enterprises differently. The dividend payout ratio of both large and medium enterprise has significant and different relationship with factors chosen.

Jensen (1986), also studied the determinants which affects the dividend policy of a company. A/q to him the major factor that affects the dividend payout ratios is the cash flow. Jensen stated that this is because of the agency expenses linked to free cash flows and shareholders want cash payments of dividends rather than holding the cash flows inside the company. Therefore, managers should pay excess cash flows as dividends to reduce the expense of the business.

Number of researches has been conducted in different countries to examine the relationship between companies’ dividend payout ratios and different factors affecting them. Many studies have been done on this topic but there are still some differences between the countries that which factors affects dividend payout ratios, the result differ from country to country. Rozeff (1982), investigated the factors affecting dividend payouts in U.S and found out that companies’ risk is negatively related to the dividend payout ratios. But on the contrary a study done by Al Shabibi & Ramesh (2011), in U.K indicated that risk of the company is positively related to the dividend payout ratios.

Recently Nathani & Gangil (2019), investigated the factors that affects dividend payouts of Pharmaceuticals and Automobiles companies listed on NSE, India. Their study covered the period of ten years, which was from 2006 -2007 to 2015-2016. For doing the analysis Static panel data model was used. From the previous study factors like cash flow, return on equity, profitability, leverage, tax, opportunities for investment, retained earnings, size of company and sales growth of the company were identified which has impact on dividend payouts of the companies. Their result indicated that cash flow, retained earnings, tax and investment opportunities has a significant impact on dividend payouts of Automobile sector and debt, profitability, sales growth and retained earnings has a significant impact on dividend payouts of Pharmaceutical sector.
3. OBJECTIVE OF THE STUDY
To analyze the pre-determined factors that affects the dividend payouts of Pharmaceutical Industry traded on the NSE.

4. HYPOTHESIS
H₁: There is a positive and significant relationship between dividend payout ratio and profitability of the firms.
H₂: There is a significant relationship between dividend payout ratio and sales growths by the firms.
H₃: There is a negative and significant relationship between dividend payout ratio and tax paid by the firms.
H₄: There is a significant relationship between dividend payout ratio and cash flows of the firms.
H₅: There is a significant relationship between dividend payout ratio and debt ratio (leverage ratio) of the firms.

5. RESEARCH METHODOLOGY AND DATA
Number of factors have been identified which affects the dividend payouts of companies. In this study profitability, sales growth, tax, cash flows and debt have been identified as the factors which affects dividend payouts. For this study 10 pharmaceuticals companies listed on NSE, India have been selected, for a time period of 2019-2020 (Nathani & Gangil, 2019). In this study, panel data method is used because the researcher’s data consists of both cross sectional and time series, and to verify this F- Limer has been used. T-statistics, probability and coefficient has also been calculated to study the Impact.

By using the RRSS, Test statistics has been defined, which resulted from URSS & OLS, which resulted from regression:

\[
F = \frac{\text{RRSS} - \text{URSS}}{\frac{\text{N}-1}{\text{URSS}}} \approx F_{(N-1, NT-N-K)}
\]

While in F test, null hypothesis is against alternative hypothesis, that means pooling data method is against paneling data method. So, when null hypothesis (H₀) is rejected, alternative hypothesis (H₄) is accepted, that means paneling data method gets accepted. The obtained result of F – Limer test is 10.110 for the observations and compare with the data in table 1 which conclude that alternative hypothesis can be relatively accepted. Thus, it can be said that for testing hypothesis panel data method is the correct method. After that Hausman test was done to check the random or fixed effect of time. This test’s H₀ is based on random effect of time method, and the H₁ is based on fixed effect of time method. The H₀ which is based on random effect of time is not accepted, because of the relevant level which is measured as 0.000 for Hausman test. In other terms, this research paper put emphasis on the fixed effect of time method.
### Table I Hypothesis test result

<table>
<thead>
<tr>
<th>Variables</th>
<th>T-statistics</th>
<th>Coefficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.3981</td>
<td>0.2993</td>
<td>0.0213</td>
</tr>
<tr>
<td>Profitability</td>
<td>-2.3294</td>
<td>-0.0051</td>
<td>0.0003</td>
</tr>
<tr>
<td>Sales Growth</td>
<td>0.1982</td>
<td>0.00003</td>
<td>0.5295</td>
</tr>
<tr>
<td>Tax</td>
<td>-0.1325</td>
<td>-0.0039</td>
<td>0.4135</td>
</tr>
<tr>
<td>Cash flows</td>
<td>-2.5791</td>
<td>-1.1291</td>
<td>0.0003</td>
</tr>
<tr>
<td>Leverage ratio</td>
<td>1.3271</td>
<td>0.0084</td>
<td>0.0921</td>
</tr>
</tbody>
</table>

Durbin–Watson: -2.011  
Adjusted $R^2 = 51.32\%$  
F–statistics = 10.110  
$R^2 = 66.58\%$

**Probability**: - 0.0000


Considering the sample size, as stated in Table 1, 66.58% of the $R^2$ is adjusted by independent variable and similarly, the adjusted (coefficient determinant) $R^2$ is 51.32%. The impact of constant variable on dividend payout ratio is positive and hence significant at level of 5% error. The impact of cash flow (independent variable) on dividend payouts is -1.3974 and hence it is significant indicating that there is a significant relationship between cash flows and dividend payout. According to the results, and analysis sales growth and tax does not have any relation with dividend payouts. Debt ratio (leverage ratio) and sales growth are positive and hence significant at the level of 10% error but the profitability has significant and negative relationship with dividend payouts. However, tax variable is irrelevant. Durbin–Watson is -2.011, that means they are independent and has zero correlation between error detail. F- Limer value is 10.110 which is also according to the obtained significance level (0.0000).

### 6. CONCLUSION

This study investigates the pre - determined factors that affects the dividend payout ratios of the 10 Pharmaceuticals companies listed on NSE, India. In today’s world it is a very important topic to be discussed and many researchers have done their study to understand the impact. In this study, panel data method has been used and to verify this F- Limer has been used. T-statistics, probability and coefficient has also been calculated to study the Impact. The result shows that there is a significant and negative relationship between profitability ratio and dividend payout and cash flows (Independent variable) also and finding is consistent with Adam and Guyal (2000). Other factors such as tax and sales growth did not have any impact on profitability ratio. This research result shows that profitability ratio did not have any relation with sales growth. It has been concluded that profitability is an important factor that affects dividend payout ratios. This finding is consistent with Denis and Osbovo (2008). Finally, it is concluded that cash flow has direct and significant relationship with dividend payout ratios.

### REFERENCES


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