Relationship Between Liquidity, Profitability, Financial Leverage and Dividend Policy: With Special Reference to Automobile Sector in India

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Abstract: This research is going to investigate the relationship between financial ratios and dividend policy of the automotive companies in India during the period 2010 to 2021.

The Correlation, Regression, and Granger Causality Test has been used to identified the relationship between the dividend policy, liquidity, profitability and financial leverage of the Automotive Sector in India.

The result of the empirical analysis showed that company like Maruti Suzuki has a high and stable dividend policy among all other automotive companies the current ratio and debt equity ratio are significantly negatively correlated with dividend pay-out ratio. M&M shown a positive and significant relationship between dividend pay-out ratio, return on assets and return on equity. This indicated that these companies pay more dividend in case of more earnings. The result of the study has drawn a conclusion that dividend policy is a discrete decision of the management of the company. Few companies are considering factors like liquidity, leverage, return on assets and return on equity while deciding the dividend policy and some companies are considering stable dividend policy irrespective of the other mentioned factors.

Keywords: Liquidity, Profitability, Leverage, Dividend Policy.

JEL Classification Code: G11, G12, G18, G32, R32

1. INTRODUCTION

The financial market is a place where the individual who is having money can invest and get returns in terms of interest and dividend. Financial market is a place where investors can invest their money and get return. The saving and mobilizing the funds in an economy play a significant role for the development. This will help in the capital formation. This flow of money is helping the corporate to meet out the demand and grab further opportunities. There are various sources of finance like owned fund and borrowed fund. Share capital is a significant source to meet out the long-term financial requirement of the Companies. Companies issue shares and distribute profits in the form of dividend. The main function of the financial

management is to maximize the value of the firm. Now, the question is that how to maximize the value of the firm? There are various theories (Walter's Model and Gordon's Model) which has suggested that the distribution of dividend is going to put positive impact on the value of the firm, but simultaneously it is going to put impact on the liquidity and financial performance and financial liability of the company. Many financial researchers have performed on the relationship between financial performance and dividend decision. The literature has given mixed result on the topic. The result of the previous studies motivated the researcher to do further research on the mentioned topic with causality analysis as well on which very less literature available.

The thoughts of financial researcher have been divided into two categories i.e., Irrelevance and Relevance Theory. During the year 1961 Modigliani and Miller had developed a theory, which suggested that there is no impact of dividend distribution on the value of the firm as the value of share will come down after the dividend distribution and to meet out the financial requirement the company needs to issue more shares due to which the total value of the firm remains same. One the other hand another two thoughts Walter and Gordon had developed relevance theories. According to their theories dividend distribution play a significant role in the growth of the firm and put positive impact on the mind-set of the investors and due to which the share price of the company will increase.

This paper is an attempt to find out the relationship between dividend policy of the automobile companies in India with liquidity, operating cash flow, profitability, leverage and risk., so that the investors and other stakeholders can take their financial decisions. This study is based on automobile industry in India. The automobile industry in India is the world's fifth largest. India was the world's fifth largest manufacturer of cars and seventh largest manufacturer of commercial vehicles in 2019. Indian automotive industry (including component manufacturing) is expected to reach Rs. 16.16-18.18 trillion (US$ 251.4-282.8 billion) by 2026. The industry attracted Foreign Direct Investment (FDI) worth US$ 30.51 billion between April 2000 and June 2021 accounting for ~5.5% of the total FDI during the period according to the data released by Department for Promotion of Industry and Internal Trade (DPIIT).[1]

2. LITERATURE REVIEW

2.1. Dividend Policy

Lintner (1956) and Gordon (1959) proposed a bird-in-the-hand theory means preference of investors on dividend over capital gain as the risk factor is

less in the latter case. Due to this the dividend paying firm value will increase in a longer time period. Another research by Sigitas Karpavièius (2014) also in favour of Gordons Model. The results of the research stated that a firm with stable dividend policy have more value and there is a positive relationship between dividend pay-out and future performance of the firm. Ouma, O. P. (2012) also revealed the fact through their research work that there is an existence of very strong relationship between dividend pay-out and value of the firm. Financial management should focus on the dividend decision as it will augment firm performance and therefore shareholder value. Miller and Modigliani (1961) developed an irrelevance dividend theory. They argued that there is no impact of dividend decision on the value of firm.

2.1. Factors Affecting Dividend Policy

A study by Nia Angelia & Nagian Toni (2017) conducted a study on factors effecting dividend policy and found that all the three factors liquidity, profitability and leverage are significant in determining the dividend policy. Another study by Rizki Rahmawatia & Narsab during the year 2020, empirically analysed the effects of operating cash flow, profitability, liquidity, and leverage towards dividend policy. The results showed there is a positive impact of operating cash flow on the dividend policy on the other hand leverage is negatively affects and there is no effect of profitability and liquidity on the dividend policy. Gupta & Banga (2010) and Mehta (2012) used factor analysis to identified factors affecting dividend policy and found that factors like liquidity, profitability, growth, leverage and ownership structure are affecting on dividend policy. Hashim et al. (2013) investigated on the determinants of dividend policy and found that liquidity is negatively correlated with dividend pay-out of the firm and high profitable firms will distribute more dividend. Gregorius Paulus Tahu & Dominicius Djoko Budi Susilo (2017) have conducted research on Effect of Liquidity, Leverage and profitability to The Firm Value (Dividend Policy as Moderating Variable) in Manufacturing Company of Indonesia Stock Exchange and revealed the fact that only profitability of the company is going to put impact on the value of the firm other factors like liquidity, leverage and dividend policy are not relevance to the value of the firm.

On the basis of available literature, it has been found that factor like liquidity, profitability, operating cash flow, risk and leverage are playing significant role in determining the dividend policy. As we know there is a wide literature available on the relationship between dividend policy and factors affecting dividend policy of a company, but still this puzzle is

unsolved that which factors affecting the dividend policy. So, the current research paper is not only to find out the relationship between dividend policy, liquidity, profitability and leverage but also find out the cause-and-effect relationship between dividend policy and financial performance of the company, if any. Most of the researches have analysed the combined relationship but this research work has conducted the research on individual company to understand the individual firm decision.

3. OBJECTIVES OF THE STUDY

- To find out the relationship between dividend policy of the automobile companies in India with liquidity, profitability and leverage.

- To find out the cause-and-effect relationship between dividend policy of the automobile companies in India with liquidity, profitability, and leverage (if any relationship exists).

4. HYPOTHESIS OF THE STUDY

- $H0_1$ There is no relationship between the dividend policy of automobile companies in India with liquidity, profitability and leverage.

- $H0_2$ There is no cause-and-effect relationship between the dividend policy of automobile companies in India with liquidity, profitability and leverage.

5. RESEARCH METHODOLOGY

5.1. Statement of the Problem

Dividend policy decision is an imperative decision for the corporates, for the existing and prospective investors. There is a necessity to apprehend the significance of dividend policy with respect to the liquidity, profitability and leverage of the company. The Indian stock market has numerous sectors like iron & steel, textile, infrastructure, automobile, pharmaceutical, technology, finance and banking etc. After the liberalization, the automotive sector is playing a noteworthy role in the economic development of the country and experienced tremendous growth. In automotive sector, India is the fourth largest auto market in the world. Investors are also looking this sector as a profitable sector and expecting a good return in the form of dividend, capital appreciation and wealth maximization. To justify the expectation of the investors it is essential to understand whether dividend distribution is related to liquidity, operating cash flow, risk, profitability and leverage of the company or not, as these factors considered important variables for taking

dividend decision. The indulgent of this model is very important for the companies and investors both for their future progression.

5.2. Scope of the Study

The current research work is an attempt to identify the relationship between dividend pay-out, liquidity, profitability and leverage of top three automotive companies in India. This research will support the several stakeholders like company management, investors, policy maker, academicians and practitioners to understand the relationship between dividend policy, liquidity, profitability and leverage and they can practise it for future decision making.

5.3. Data Collection

The top three companies (Maruti Suzuki, Tata Motors, Mahindra & Mahindra) in automotive sector have been selected based on the highest capitalization in auto segment in India as mentioned in the market capitalization table 1. Quantitative annual data has been collected from the Consolidated Balance Sheet of an individual company for the analysis purpose. To find out the relationship between dividend, liquidity, profitability and leverage following financial variables have been cast-off:

5.3.1. Dividend Policy- Dividend pay-out ratio, In place of dividend per share and dividend yield, dividend pay-out ratio has been used as suggested by most of the existing literature (By Mahira Rafique (2012) Rozeff, 1982; Lloyd,1985; Jensen et al., 1992; Dempsey and Laber, 1992; Alli et al., 1993; Moh'd et al., 1995; Holder et al., 1998; Chen et al., 1999; Saxena, 1999; Mollah et al., 2002; Manos, 2002; Travlos, 2002)[2] as DOR will not be impacted by the scale of absolute numbers for different companies.

5.3.2. Liquidity- Current ratio is representing the short-term liquidity position of the company and the literature has given mixed result about the relationship between liquidity and dividend policy, so researcher has added this variable as an independent variable.

5.3.3. Profitability- Hashim et al. (2013) and many other researchers have concluded that there is a significant positive relationship between dividend pay-out ratio and Profitability of the company. To check the same with reference of automobile sector in India two important profitability ratios i.e., Return on Equity & Return on Assets has been used in the regression model.

5.3.4. Leverage- Adelegan (2003) has determined that the firm with high debt-equity ratio also be having high dividend pay-out ratio. So, Debt-

Equity Ratio has been used to find out the impact of leverage on dividend pay-out ratio.

This research is based on secondary data that has been collected through an authorised source i.e., nseindia.com, marutisuzuki.com, tatamotors.com and mahindra.com. To reflect the true picture of the mentioned companies it is important to cover all ups and down side, so the time duration for the study has been taken from 2010 to 2021 (12 years), which has covered both boom and depression period.

Table 1: Market Capitalization of Automotive Companies in India

S. No.	*Company*	*Mkt Cap (2019-2020)*
1	Maruti Suzuki	2,28,812.01
2	Tata Motors	1,55,350.29
3	M & M	1,08,679.89

Source: compiled by author from nseindia.com

5.4. Statistical Tool used for the Study

Various tools and techniques have been used to analyse the collected data as mentioned below:

- To describe the data in a summarized manner descriptive statistic technique have been used. To know the relationship between the research variables correlation coefficient with p value has been used.

- To investigate the impact of independent variables (Liquidity, Profitability, Leverage) on the dependent variable (DPR) identified in this study of three automobile companies, the following mentioned multiple regression framework has been used:

  Dividend Policy = f (Liquidity, Profitability, Leverage) ……. eq. 1

- After understanding and calculating basic statistical result granger causality analysis has been conducted to investigate the causality between variables of the study.

5.5. Statistical Software

To conduct all the above-mentioned analysis E-views 8 software has been used.

6. ANALYSIS AND INTERPRETATION

The empirical analysis of the variable of the study represented in three summarised tables. The descriptive analysis of all the companies have been

depicted in Table 1. The summary of correlation analysis and regression analysis have been given in Table 2 and Table 3.

6.1. Descriptive Analysis: Table 2 (created by author)

Table 2: Summary of Descriptive Statistics

Maruti Suzuki	CR	DER	DPR	ROA	ROE
Mean	1.166667	0.027500	.205	10.92833	15.24083
SD	0.571956	0.033609	.1006	2.836210	3.941517
SK	0.838402	0.676258	-.0046	-0.202505	-0.19133
KU	2.616338	1.558279	1.3186	1.964011	2.041458
Mahindra & Mahindra	CR	DER	DPR	ROA	ROE
Mean	1.198333	0.174167	.3816	9.351667	16.72333
SD	0.132379	0.093756	.5356	4.018079	8.354098
SK	-0.64064	0.598826	2.829	-1.213875	-0.57503
KU	2.893771	2.443401	9.355	3.408545	2.376932
Tata Motors	CR	DER	DPR	ROA	ROE
Mean	0.544167	0.875000	.056	-1.351667	-4.8375
SD	0.085754	0.233569	.097	5.083066	16.69615
SK	-0.98999	0.631420	2.04	-0.869203	-0.96652
KU	2.830179	2.509978	6.28	2.658930	2.891459

Table 2 is reflecting the results descriptive statistics of Dividend pay-out ratio (DPR), Current Ratio (CR), Debt Equity Ratio (DER), Return on Assets (ROA) and Return on Equity (ROE). The mean current ratio of M&M (1.198333) is the highest followed by mean current ratio of Maruti Suzuki (1.166667) out of all the three automobile companies. This is affirming that over the past 10 years both the companies are enjoying good liquidity position. While observing the standard deviation, Maruti Suzuki's has the highest standard deviation (0.571956) and Tata Motors has the lowest standard deviation (0.085754), which represents the stability and less risk. Even after having high standard deviation Maruti Suzuki is enjoying high liquidity and able to maintained a stable and high dividend pay-out ratio as well. Maruti Suzuki's data is positively skewed and kurtosis is also. Tata Motors is having the highest debt equity ratio (0.875000) on the other hand Maruti Suzuki is less relying on debts (0.027500). Standard deviation of debt equity ratio of Maruti Suzuki is lowest among all the companies, represents a less risk. M&M is having the highest mean dividend pay-out ratio (0.38) and Maruti Suzuki India Ltd. has highest mean return on assets (10.92833) and M&M is having highest return on equity (16.72333) in last

10 year. This is showing a stable dividend policy and highest return to the equity shareholders of the companies. In contrast to other companies Tata Motors is having lowest current ratio (0.544167), highest debt equity ratio (0.875000), lowest dividend pay-out ratio (.056), negative return on assets (-1.3516670 and negative return on equity (-4.8375). This is indicating that Tata Motors haven't performed well in the past 10 years in comparison to other mentioned companies.

6.2. Correlation Analysis: Table 3 (created by author)

Table 3: Summary of Correlation Analysis

Variables	Maruti Suzuki	M&M	Tata Motors
DPR & CR	-0.6839	.47	-.090
	0.0067	0.1228	0.9307
DPR & DER	-0.7395	-.233	.065
	0.0072	0.3329	0.8551
DPR & ROE	0.1070	0.57	0.576
	0.5472	**0.0339**	0.0696
DPR & ROA	0.075	0.644	0.570
	0.4946	**0.022**	0.0778

Table 3 depicted the result of correlation analysis between Dividend pay-out ratio (DPR), Current Ratio (CR), Debt Equity Ratio (DER), Return on Assets (ROA) and Return on Equity (ROE) with p value for all the three companies. Current ratio has significant negative correlation with dividend pay-out ratio of Maruti Suzuki Company (-0.6839) and insignificant negative correlation with dividend pay-out ratio of Tata Motors (-0.09). There is an insignificant positive correlation between dividend pay-out ratio and current ratio of M&M (.47). There is a significant negative correlation between dividend pay-out ratio and debt equity ratio of Maruti Suzuki (-0.7395) but insignificant negative correlation between dividend pay-out ratio and debt equity ratio of Tata Motors. Dividend pay-out ratio and return on equity of M&M (0.57) is having positive significant correlation but in the case of Maruti (0.1070) and Tata Motors (0.576) positive insignificant correlation has been resulted. The same is the case for dividend pay-out ratio and return on assets relationship. Dividend pay-out ratio and return on assets of M&M (0.644) is having positive significant correlation but in the case of Maruti (0.075) and Tata Motors (0.57) positive insignificant correlation exists.

6.3. Regression Analysis: Table 4 (created by author)

Regression Model used for the study as mentioned below:

$$DPR = \beta_0 + \beta_1\, CR + \beta_2\, DER + \beta_3\, ROA + \beta_4\, ROE + e$$

Where:

DPR- Dividend pay-out ratio

CR- Current Ratio

DER- Debt Equity Ratio

ROA- Return on Equity Assets

ROE- Return on Equity

β_0: Intercept.

β 1-4: Coefficients.

e: Error term.

Table 4: Summary of Regression Result

Variable	Maruti Suzuki		M&M		Tata Motors	
	t-Statistic	Prob.	t-Statistic	Prob.	t-Statistic	Prob.
C	5.927	0.0006	-1.077	0.33	.7307	0.4925
CR	-2.617	0.034	-.5020	0.63	-.8851	.41
DER	-2.223	0.06	1.52	0.188	.9608	0.37
ROA	-0.17	0.86	2.012	0.1004	-.8236	0.44
ROE	0.065	0.84	-1.83	0.1266	1.03	0.34
R-squared	0.8208		1.00		0.488989	
Adjusted R-squared	0.7184		1.000		0.196983	
F-statistic	8.01				2.82E+28	
	1.674586					
Prob (F-statistic)	0.009				0.0000	
	0.258648					

Table 4 represents the result of regression analysis. Value of R-squared is more than value of Adjusted R-squared for all the companies and denoted the better performance of the model. It is explaining the influence of explanatory variable on the dependent variable. The regression analysis resulted that there is week and insignificant impact of all the variables on the DPR of all the companies. This indicated that in case of automobile sector the financial ratios like current ratio, Debt Equity Ratio, Return on Assets Ratio and Return on Equity Ratio are not putting much impact on dividend policy of the company. The aim of this test was to determine the strength of the relationship between the dependent variable and each independent variable for all the companies were insignificant during the period of the study. Only current ratio of Maruti Suzuki India Ltd. is significant at 5% level which indicates that there is an impact of liquidity

on the dividend pay-out ratio. It reflects that higher the liquidity lowers the dividend pay-out during the period of the study in case of Maruti Suzuki India Ltd.

6.4. Granger Causality Analysis:

The regression analysis of the study suggested that there is no significant impact of liquidity, profitability and leverage on the dividend pay-out ratio of the automobile companies during the period of the study, so there is no need to conduct cause and effect relationship between the variable.

7.   DISCUSSION AND CONCLUSION

The company like Tata Motors which has lowest current ratio, highest debt equity ratio, lowest dividend pay-out ratio, lowest return on assets and lowest return on equity. Tata Motors is not much concerned about the dividend policy and the performance of the company was also not good during the period of the study. On the other hand, in case of Maruti Suzuki which is having a high and stable dividend policy, current ratio and debt equity ratio are significantly negatively correlated with dividend pay-out ratio. M&M shown a positive and significant relationship between dividend pay-out ratio & return on assets and between dividend pay-out ratio and return on equity. This indicated that these companies pay more dividend in case of more earnings. The result of the study has drawn a conclusion that dividend policy is a discrete decision of the management of the company. Few companies are considering factors like liquidity, leverage, return on assets and return on equity while deciding the dividend policy and some companies are considering stable dividend policy irrespective of the other mentioned factors. The current research findings have also confirmed the study by Hashim et al. (2013) in which the author found that financial performance is playing significant role in determining dividend policy like in case of M&M. On the basis of various analysis and findings the researcher can conclude that dividend policy of the firm is concerned with return on assets and return on equity supporting the findings of Nia Angelia & Nagian Toni (2017).

But again, the decision of dividend distribution varies company to company and only up to some extent the variables like liquidity, profitability and leverage are going to put impact on the dividend policy decision, not in every case. So, being an investor, we need to check the past track record of the company and company policy regarding dividend to take investment decision.

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