CU Global Management Review
Volume 2, Issue 1, January-June, 2013, pp. 12-21

Relationship between Dividend Policy and Value of Firm: A Study of Information Technology Industry and Pharmaceuticals Industry in Indian context

-Ms. Deepika Aggarwal
Research Fellow,
Dept. of Commerce,
Panjabi University, Patiala.
-Dr. J.S Pasricha
Professor,
Dept. of Commerce,
Punjabi University, Patiala

Abstract

The basic objective of this research paper is to study the relationship between dividend policy and value of firm in the case of Information Technology and Pharmaceuticals industries in India from the year 2001 to 2010. To study the relationship between dividend policy and value of firm multiple regression method are used by taking D_t (Dividend Payouts) as independent variable and VF_t (Value of Firm) as dependent variable. To determine the proportion of explained variation in the dependent variable, the co-efficient of determination (R^2) has been tested with the help of F value. The study shows that hypotheses predisposed in our study are accomplished to a greater extent as dividend payouts are having considerable bearing and positive relationship with the value of firms.

Introduction

It is accepted fact that the issue of dividend policy is considered as one of the most puzzling contests since the existence of the modern commercial corporations. It remains the most debated issue in finance for the professionals, academicians and practitioners as well a number of attempts have been made by the researchers to study several issues pertaining to dividends and formulate theories and models to explain corporate dividend behaviour. Submissively, it is deduced that dividend enigma has not only been an enduring issue in finance but also remains unresolved. The present study shows the relationship between dividend payments and value of firm. The dividend policy of a firm determines what proportion of earnings is paid to shareholders by way of dividends and what proportion is ploughed back in the firm for reinvestment purposes.

According to **Desai, Foley and Hines Jr. (2001)**, "A major impediment to understanding corporate dividend policy is the availability of multiple plausible explanations for observed behaviour". Continuing the pace of clarifying this contentious issue, **Bebczuk (2004)** viewed that, "Among the principal explanations stressed by modern theories include agency and other informational problems between owners and managers".

Unanimity exists on the fact that dividend policy and dividend payouts are not only most important from the viewpoint of the company but also from that of the shareholders, consumers, workers, regulatory bodies, government etc. "The relative importance of this policy stems from

the fact that it is a pivotal policy around which other financial policies rotate, hence, central to the performance and valuation of firms", **Bebczuk, (2004)**. According to **Olowe (1998)**, "financial managers make inter-alia three decisions pertaining to financing, investment and dividends simultaneously. While financing decision is influenced by the dividend decision through retained earnings, the investment decision depends on the amount of retained earnings and the amount that can be raised externally".

Unequivocally, it is accepted fact that dividend policy is an important financial decision for the management. While determining dividend policy, the management must consider to what extent dividend policy would influence share prices because the objective of financial management is to maximize owners' wealth. The payment of dividend should be preferred if it leads to the maximization of wealth of the owners. But if it does not, then the firm should retain the profit and should not

The Value of the Firm

Distribute dividend. It is generally accepted fact that the objective of the firm is to maximize the shareholders utility which can be expressed by the maximization of the firm's value. There are numerous researches both theoretical and empirical that focus upon to the relationship between the value of the firm and its dividend policy.

Thus, there is a lot of controversy and existence of dilemma with regard to the influence of dividend on share prices and on value of the firm. In the theoretical context, ***two schools of thoughts*** came up with their suggestions. ***One school of thought advanced by Miller and Modigliani (1961) referred to as the "dividend irrelevance theory" believes that dividend is irrelevant and has no effect on the valuation of the firm or on value of shares.*** They viewed that the value of firm depends solely on its earnings power and is not influenced by the manner in which its earnings are split between dividends and retained earnings. ***The second school of thought is advanced by Lintner (1956), Gordon (1962) and Walter (1963) referred*** **to as the "dividend relevance theory".** They hold a view that there is a direct relationship between dividend policy of the company and value of firm. They viewed that dividend is relevant to the valuation of firm, as measured by market price of shares.

Review of Literature

Miller and Modigliani (1961) in their study "Dividend Policy Growth and the Valuation of Shares," advanced the view that the value of a firm depended solely on its earnings' power and was not influenced by the manner in which its earnings were divided between dividends and retained earnings. **Dhrymes and Kurz (1967)** analyzed the influence of Investment Decision and Financing Decision on Dividend Policy .They concluded that dividend decision affected investment decision as well as financing decision.

H. Gillepie II (1971) applied discriminant analysis to study whether there was a systematic difference between firms which increased their dividend payments and firms which maintained the same payment. The author concluded that firms which increased their dividend payment showed a smaller change in earnings in the period after the dividend increase than firms which maintained the same payment. **Fama (1974)** in a study of 298 American companies for the period 1946-68 testified the Modigliani and Miller's theory. He concluded that in a perfect capital market, investment decisions by a firm were separable from its dividend decisions and concluded on the

variable. The value of R^2 varies between 0 and 1. The higher the value of R^2, the closer the relationship between the variables.

Hypothesis of the study

H_1: Dividend payouts are directly proportional and have positive relationship with Value of the Firms in Indian Context.

H_2: Indian firms try to maintain consistency and assured dividend payouts to shareholders to establish value of the firm in the market.

Data Analysis
Regression Results

To establish the validity of data collected to accomplish our hypotheses i.e. dividend payouts are directly proportional and have positive relationship with the value of the firm, multiple regression technique and graphical presentation tools have been used to infer and deduce conclusions. The industry wise analysis is presented in the following tables:

Information Technology Industry

Table 1: Regression Results: Value of Firm: Dividend

$VF_t = a + b_1 D_t + U_t$					
Company Name	a	b_1	R^2	Adjusted R^2	F
H C L Technologies Ltd.	8551.174	13.307	0.303	0.216	3.486
Infosys Technologies Ltd.	33653.565	41.920*	0.412	0.339	5.615*
Moser Baer India Ltd.	-1273.229	258.614**	0.649	0.605	14.811**
Mphasis Ltd.	-77.613	103.897*	0.548	0.492	9.704*
Oracle Financial Services	8253.527	-80.209	0.036	-0.084	0.303
Software Ltd.					
Patni Computer Systems	-530.755	144.542*	0.559	0.485	7.596*
Rolta India Ltd.	-926.101	86.356**	0.687	0.642	15.342**
Tata Consultancy Services	26136.648	36.973**	0.671	0.624	14.276**
Tech Mahindra Ltd.	5861.016	-37.097	0.043	-0.076	0.364
Wipro Ltd.	28086.765	51.860*	0.531	0.472	9.040*

* Values at 5% significant level
** Values at 1% significant level

The analysis of regression results of Information Technology industry have been shown in Table 1 which provides that independent variable i.e. dividend payouts of a company have expected positive sign in 80% of the companies under study and it is statistically significant among 70% of the companies. On the contrary, results indicate that the remaining 20% companies show negative relation. It is also amply clear that R^2 is statistically significant in 70% companies under study which has the maximum value at 0.68, implying that 68% of variation in the value

of firm is explained by the dividend payment. The values of R^2 and adjusted R^2 show above average satisfactory position among the majority of the companies under study. The F-values are also statistically significant at 1% or 5% level for most of the companies.

Thus, it is evident from the table that the independent variable i.e. dividend payouts (D_t) are positively correlated with dependent variable i.e. value of firm (VF_t) in most of the companies under study. *Hence, it is deductive from the analysis that dividend payouts of a company have a positive relationship with the value of firm. Therefore, these results proved our hypothesis.*

Tabular and Graphical Presentation of Information Technology Industry *(Linear relationship at intra variable level and progressive multiple regression relationship between Equity Dividend and Value of the Firms)*

Table.1.1: Equity Dividend and Value of Firm
(Rs. in crore)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Equity Dividend	16.426	27.954	43.791	178.126	166.286	337.200	334.782	545.408	454.268	768.061
Value of Firm	13132.15	12574.48	11230.56	11299.44	22164.81	32389.67	38272.45	27770.89	20048.49	47253.33

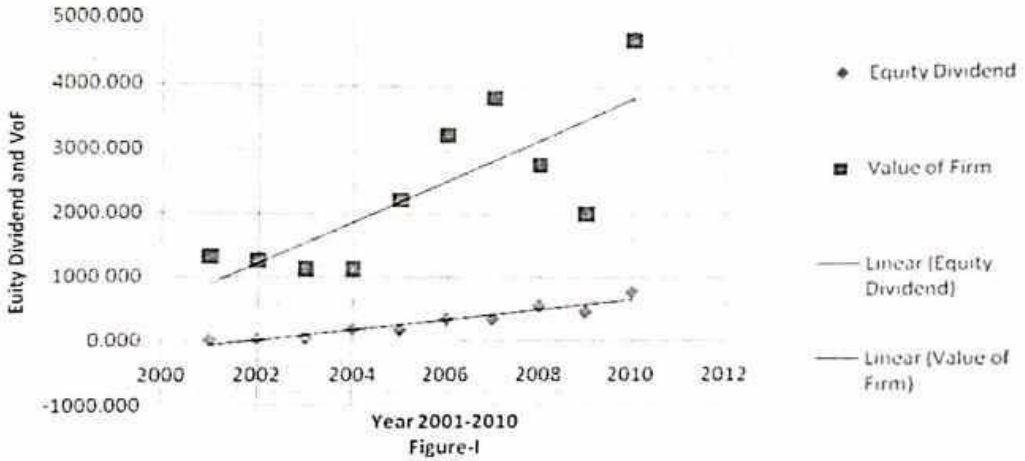


Figure-I

N.B: Figures of equity dividend have been plotted in the graph on actual basis while figures of value of firm (being very large) have been taken at 1/10th of the actual figures of this graph.

From the table 1.1 and figure-I, it is evident that equity dividend and value of the firms have shown progressive growth with linear relationship at intra variable levels during the period 2001 to 2010 baring two years i.e. 2008 & 2009 when there was a decline in the value of a firm whereas equity dividend shown exceptionally fall in the year 2009 which may be taken as an exception otherwise in majority of years consistence growth was shown; yet worth quoting that among all the firms dividend payouts have been gradually growing over a span of 10 years except the year 2009 and relatively value of the firms has also shown growth. Hence, it is deductive that dividend payouts and value of the firm has cohesive relationship which is according to hypothesis of our study.

(B) Pharmaceuticals Industry

Table 2: Regression Results: Value of Firm: Dividend

$$VF_t = a + b_1 D_t + U_t$$

Company Name	a	b_1	R^2	Adjusted R^2	F
Aurobindo Pharma Ltd.	736.963	101.753	0.26	0.168	2.814
Cadila Healthcare Ltd.	-1626.554	114.611**	0.887	0.873	63.107**
Cipla Ltd.	-1270.273	129.389**	0.778	0.751	28.079**
Dr. Reddy'S Laboratories Ltd.	4083.553	84.459**	0.765	0.736	26.113**
GlaxoSmithKline Pharmaceuticals Ltd.	1656.859	29.366**	0.777	0.749	27.891**
Lupin Ltd.	-459.337	90.615**	0.715	0.679	20.028**
Piramal Healthcare Ltd.	-1568.123	87.268**	0.846	0.827	43.877**
Ranbaxy Laboratories Ltd.	12008.491	13.162	0.104	-0.007	0.933
Sterling Biotech Ltd.	-338.411	321.802**	0.851	0.833	45.865**
Sun Pharmaceutical Inds. Ltd.	1106.641	107.828**	0.869	0.852	52.884**

* Values at 5% significant level
** Values at 1% significant level

Analysis of regression results in respect of pharmaceuticals industry have been presented in Table 2. It is revealed from the table that the coefficient of explanatory variable has positive relation in all the companies. This coefficient of independent variable is statistically significant in 80% of the companies under study in this industry. The values of R^2 are statistically significant among 80% of the companies. The maximum value of R^2 is 0.88 which implies that 88% of the variation in value of firm is explained by the independent variable i.e. dividend payment. The values of R^2 and adjusted R^2 show above average satisfactory position among the majority of the companies. The F-values computed to test the significance of R^2 and adjusted R^2 also depict a satisfactory position in all the companies under study as the values are significant at the level of 1% among 80% of the companies. *Thus, it is concluded that dividend payments/ disbursements has positive and significant relation with value of firm in majority of the companies in Pharmaceuticals Industry.*

Tabular and Graphical Presentation of Pharmaceutical Industry

(Linear relationship at intra variable level and progressive multiple regression relationship between Equity Dividend and Value of the Firms)

Table.2.1 Equity Dividend and Value of Firm
(Rs. in crore)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Equity	24.5	36.0	53.1	71.5	86.7	99.5	111.5	131.4	130.3	140.6
Dividend	15	58	91	12	10	64	92	20	98	93
Value	255	306	298	562	642	899	975	963	869	1633
of Firm	0.70	8.97	8.83	0.95	5.02	2.83	0.61	8.30	5.82	7.58

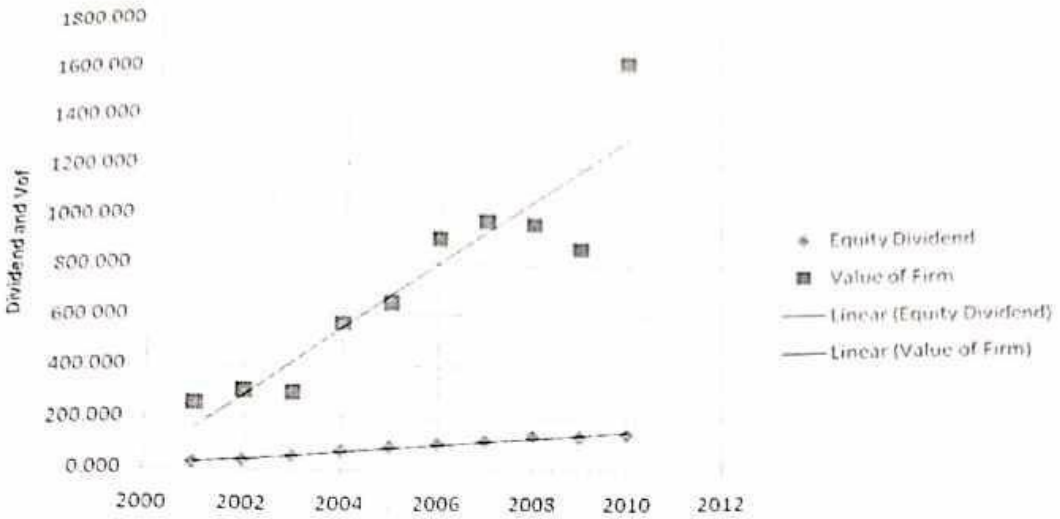


Figure-II

N.B: Figures of equity dividend have been plotted in the graph on actual basis while figures of value of firm (being very large) have been taken at 1/10th of the actual figures of this graph.

From the table.2.1 and figure-II, it is evident that from the year 2001to 2010, equity dividend and value of the firms have shown progressive growth with linear relationship at intra variable levels baring three years i.e. 2003, 2008 & 2009 when there was a decline in the value of a firms which may be taken as an exception. As a matter of fact, dividend payouts have been gradually growing over a span of 10 years with an exception of the year 2009. Hence, it is deductive that dividend payouts and value of the firm has cohesive relationship which is according to hypothesis of our study.

Conclusion

It can be concluded from the data analysis carried out in this paper that dividends refer to the amount and timing of any cash payments made to the company's stockholders/stakeholders. Dividend decision is an important element for every firm that influences its capital structure and stock price. The objective of the present study was to study relationship between dividend policy and value of firm in the case of Information Technology and Pharmaceuticals industries. It is inferred from the above discussion that the dividend payouts by the various firms have positive and considerable impact and affect on the value of firms. It is quite evident from the above discussion and analysis that hypotheses predisposed in our study are accomplished to a greater extent as dividend payouts are having considerable bearing and positive relationship with the value of firms. It is also visible from the tables that both the industries under study have especially shown decline in dividends and value of firm in the year 2009 which can be attributed to global meltdown.

References

1. Miller & Modigliani. (1961). *"Dividend Policy and Growth and the Valuation of Share"*. Journal of Business, 34, 411-433.
2. Dhrymes & Kurz. (1967). *"Investment, Dividend and External Finance Behaviour of Firms"*. In R.Ferber Ed. Determinants of investment behaviour, New York, National Bureau of Economic Research, 427 – 486.
3. Thomas, H.Gillespie II, D.B.A. (1971). *"The Determinants of Dividend Policy: A Discriminant Analysis Approach"*. D.A.I., 4179-A.
4. Farrelly, Gail E. and H. Kent Baker, Richard B. Edelman (1986), *"Corporate Dividends: Views of Policy makers"*, Akron Business and Economic review, 17:4 (winter), 62-74.
5. Mahapatra, R.P. and P.K. Sahu (1993), "A Note on Determinants of Corporate Dividend Behaviour in India – An Econometric Analysis", Decision, 20(1), 1-22.
6. Kao, C., & Wu, C. (1994). *"Rational Expectations, Information Signaling and Dividend Adjustment to Permanent Earnings"*. 76(3), 490-502.
7. Holder, M. E., Langrehr, F.W., & Hexter, J. L.. (1998). *"Dividend Policy determinants: An investigation of the influences of Stakeholder Theory"*. 27(3), 73-82.
8. Desai M. A, James F. F. and Hines R. (2002) *"Dividend Policy inside the Firm"*, National bureau of economic research, Working Paper 8698, http:// www.nber.org/ papers/w8698.
9. Pradhan, R. S. (2003). *"Effects of Dividends on Common Stock Prices: The Nepalese evidence."* Research in Nepalese Finance, Kathmandu: Buddha Academics, 2003, 1(13).
10. Dong, M., Robinson, C., & Veld, C. (April, 2004). *"Why Individual Investors Want Dividends."* http://ssrn.com/abstract=469021 or doi:10.2139/ssrn.469021.
11. Bebczuk, R. N. (2004): *"Explaining Dividend Policies in Argentina"* Department of Economics, Universidad National de la Plata, www.depeco.econo.uncp.edu.at
12. Adeyemi S. L. and Adewale .A. A. (2004) *"Evaluation of the Dividend Practices among Selected Nigerian Quoted Firms"*.
13. Amihud, Y., & Li, K. (May, 2005). *"The Declining information content of dividend announcements and the effects of institutional holdings"*, Forthcoming, Journal of Financial and Quantitative Analysis, FIN Working Paper No. 02-061.
14. Mackey, T. B., & Barney, J. B. (June 2005). *"Is There a Diversification Discount? Diversification, Payout Policy, and the Value of a Firm"*, Ohio State University Working Paper Series from http://ssrn.com/abstract=772806.
15. Zhang, R. (January 2005). *"The Effects of Firm- and Country-level Governance Mechanisms on Dividend Policy, Cash Holdings, and Firm Value: A Cross-country Study"*, University of Tennessee working paper.
16. Kostyuk, D. (2006). *"Dividend Payout its Impact on Firm Value."*

17. Zhou, P. & Ruland, W. (2006). *"Dividend Payout and Future Earnings Growth."* Financial Analysts Journal, 62(3), 58-69.

18. Kubo, K., & Saito, T. (November, 2006). *"Dividend Policy and Financial Incentive of Top Mangers: case in Japan."*

19. Foong, S., Zakaria, N., & Tan, H. (2007). *"Firm Performance and Dividend related factors: The case of Malaysia."* Labuan Bulletin of International Business & Finance (5), 97-111.

20. Fairchild, J. R. (August 1st, 2008). *"Dividend Policy, Signaling and Free Cash flow: An Integrated Approach."* University of Bath, from http://ssrn.com/ abstract=1194922.

21. Ghosh, S. (July 11, 2008). *"Do Leverage Dividend Policy and Profitability Influence Future Value of Firm? Evidence from India."* http://ssrn.com/abstract=1158251.

22. Anil, Kanwal, and Kapoor, Sujata, (2008), Determinants of Dividend Payout ratios- A study of Indian Information Technology sector; International Research Journal of Finance and Economics, 15, 63-71.

23. Fundamentals of Corporate Finance 13, Reprinted for Sai. k. Chakrala, Bank of America John Wiley & Sons (US), John Wiley & Sons, Inc. (c) 2009. Working Paper Series, Reserve Bank of India, http://ssrn.com/abstract=1158251.

24. Andres, C., Betzer, A., Bongard,I., Haesner,C. & Theissen, E. (March, 2009). *"Dividend announcements, Market expectation and Corporate Governance."*

25. David, I. B. (May, 2010). *"Dividend Policy Decisions."*

26. Ramli, N. M. (February, 2010). *"Ownership structure and Dividend policy: Evidence from Malaysian companies."* 6(1), 170-180.

27. Anderson, H., Chi, J., Arm, C. & Liang, L. (July, 2010). *"Stock dividend puzzles in China."*