Determinants of dividend policy: A study of FMCG sector in India

Ritu Gangi1, Navita Nathani2
1Research scholar, Jiwaji University, Gwalior, India
2Professor, Prestige Institute of Management, Gwalior, India

Corresponding Author: Ritu Gangi

Abstract: The dividend decision is a complex decision; it is an outcome of various considerations or situation which varies across time and industry. This paper investigates the dividend policy of the FMCG sector. The FMCG firms which are listed on NSE 100 for the period of 10 years between 2007 and 2016. Factor analysis is applied on the data to identify the noteworthy factors and then multiple regression have been applied to identify the most significant factor used by the FMCG firms in dividend decision. Result of factor analysis concluded 5 factors i.e. profitability indicators, firm size, liquidity, growth opportunities and market value. Regression on these concluded that growth opportunities and profitability are the determinants of dividend policy.

Keywords: Dividend Policy, Factor Analysis, Growth Opportunities, Profitability.

I. Introduction

Dividend policy is an important issue in financial literature. Many researchers had identified many factors which affect dividend decision and result of the study varied across the globe. Dividend policy is one of the complex issue and very important in the business and financial market. With this context Black (1976) called the Dividend puzzle and wrote, “The harder we look at the dividend picture the more it seems like a puzzle, with pieces that just don’t fit together”. Various academicians had developed many theories which explain the reason why the firms pay dividend. Dividend is basically a benefit of shareholder in return of risk and investment. It can also be defined as the distribution of income among the shareholders in proportion of their ownership. Generally firms followed the dividend policy according to the stage of life cycle, high growth firms with few projects and large cash flows tends to pay more dividend out of its earnings. Dividend policy results from changes in growth rates, cash flows, and project investments in hand. According to the pecking theory transaction cost in external finance is more than the internal finance, so the firm retained the profit for the internal financing rather distributing as dividend.

Ross et.al (2002) Dividend is part of the profit and one of the important decisions in area of finance. Dividend decisions are important because it determine outflow of the fund to the investor and amount of the fund to be retained for future investments. Time being many factors were identified in literature and been important to be considered in deciding dividend policy. Previous studies focused mainly on developed economies and a few studies is been done to identified the dividend behavior of the corporate firms in Indian context. However still it is not clear what the payment pattern of the Indian firms. In this study we have not identified the reason why the firm pay dividend instead of this providing the valuable factors which are majorly responsible for deciding the dividend policy. This paper indentify the determinants or factors that affect the dividend payout of the Indian FMCG industry and also analyze the importance of those determinants or factors on the dividend policy or dividend decision.

About The Industry

The products which get replaced within a year are term as Fast Moving consumer goods. These are fully consumed within year, month, week or even a day. The consumers think less while purchasing the FMCG products as they are routinely used. FMCG business is relatively stable in nature. The investment required in the FMCG companies is comparatively less and due to high consumer demand of the goods the company have high stock turnover. HCL, ITC, Britannia, Nestle, Cadbury, P&G are the dominant brands in FMCG sector.

II. Literature Review

Dividend policy is one of the most complex aspects in finance and very important in the current business environment. It is basically a benefit of shareholder in return of risk and investment. It can also be defined as the distribution of income among the shareholders in proportion of their ownership.

DOI: 10.9790/487X-2002014046
Determinants of dividend policy: A study of FMCG sector in India

Lintner (1956) and Gordon (1959) proposed the theory of bird-in-the-hand in which investors prefer dividends from stocks to capital gains. They argued that the dividend yield is less risky than capital gains. As a result, value of dividend paying firm increases if dividend payment is higher.

Miller and Modigliani (1961) describes the dividend irrelevance theory. MM contended that the dividend decision had no impact on the value of the firm and shareholders wealth so it was considered irrelevant in perfect capital market.


Jensen & Johnson (1995) Jensen & Smith (1984) Lintner (1956) Dividend policy is not only influenced by the internal factors (Profitability, investment opportunity and liquidity) but external factors (Change in the taste of consumer, growth, change in technology, tax rate) also play a significant role. Brealey and Myers (2005), Brealey et.al (2008 p.973) discussed about the top ten problems in advance corporate finance which are unresolved, dividend policy is one of among those problems.

Kumar (2003) and found that there is positive relationship between dividends and earnings trend where as Debt-to-equity is found to be negatively associated with dividend payout policy in India.

Aivazian, Booth and Cleary (2003) and Li and Lie (2006) concluded that dividend decision depends upon the profit, debt equity ratio and market to book value ratio. Large and profitable organization raise dividend. Therefore, a positive relationship is expected between firm’s profitability and its dividend payments.

Amidu and Abor (2006) concluded that profitability, tax and cash flow have positive significant relationship with dividend payout ratio. Market-to-book value and growth in sales had negative significant relationship with Dividend payout ratio and insignificant negative relationship with risk.

Kowalewski et.al (2007) found that large and more profitable companies had higher dividend payout ratio. The findings finally demonstrate that an increase in the TDI or its sub brings about a statistically significant increase in the dividend-to-cash-flow ratio. Also concluded that indebted and riskier firm avoids paying dividend.

Baah et.al indentified that return on equity, profit after tax and size are the important determinants of the dividend policy out of the many identified variables. Also found the insignificant and weak relation between their Dividend Payout and Share Price.

Ahmed and Javid (2008) concluded that ownership and market liquidity had positive impact where as investment opportunities and leverage had the negative impact on dividend payout policy. The dividend payout policy was also influence by market capitalization and size of the firms which showed that the firms prefer to invest in their assets rather than paying dividends to their shareholders.

Anil and Kapoor (2008) analyzed the determinants of dividend payout ratio of the Indian Information Technology sector. Liquidity and beta (year-to-year variability in earnings) were found to be noteworthy determinants of the dividend where as cash flows, corporate tax, sales growth and market-to-book value ratio do not explain the dividend payment pattern of the IT sector.

Al-Kuwar D. (2009) investigated the impact of free cash flow, growth opportunity, firm size, government ownership, growth rate, business risk, and firm profitability on dividend payout ratios. The results concluded that there were strong and direct impact of government ownership, firm size and firm profitability on dividend payout, but had negative impact of the leverage ratio. Result concluded firms pay dividends to reduce the agency problem and to maintain firms reputation, since there was limited protection for outside shareholders. To protect the reputation firm dividend policy is highly depended on the profitability of the organization, which indicates that the organization in the GCC countries believes to alter or change the dividend policy frequently and not to follow the long run target dividend policy.

Gupta & Banga (2010) applied factor analysis on the identified variables and found ownership structure, Leverage, liquidity, profitability and growth were the factor for determining dividend policy. Regression had been applied on the identified factors and result concluded that leverage and liquidity are the important factors for determining dividend policy in Indian companies.

Moradi et.al. (2010) analyzed the dividend behavior of the companies listed at the Tehran Stock Exchange between the period of 2000 and 2008. The findings shows that dividend have direct relationship between profitability and reverse relationship beta rate, P/E, and debt ratio. Size and rate of retained earning do not have meaningful relationship with dividend.

Mirza & Azfa (2010) investigated the corporate dividend behavior of Pakistan economy. Least regression was applied on the 100 companies data which were listed on Karachi stock exchange for the period between 2005 and 2007. The finding concluded that operating cash-flow and profitability were positively related to cash dividend where as individual ownership, cash flow sensitivity, size and leverage were negatively associated with cash dividend. Managerial ownership, operating cash flow, individual ownership, and size were
Determinants of dividend policy: A study of FMCG sector in India

Kapoor et al. (2010) identified 21 key variables which affect the dividend policy. Factor analysis had been done on the 21 identified variables. 6 factors were concluded which influence the dividend decision. Later multiple regression was applied among the 6 factors and DPR. The result found that dividend payout is positively related to profits, cash flows while CAPEX (capital expenditure) retained earnings, sales growth, share prices, beta, interest paid and debt equity ratio have inverse relationship.

Devaki & Kamalaveni (2012) examined the shareholding pattern of the Indian corporate hotels on dividend payout ratio. To identify the effect of shareholding pattern on dividend policy analysis had been on the panel data collected. Findings concluded that there were positive impact of earnings, sales, age of the firm, debt-equity ratio, size and institutional shareholding on dividend payout.

Mehta (2012) examined the determinants of dividend payout of all firms (except bank and investment concerns) listed Abu Dhabi Stock exchange for a period of 5 years from 2005-2009. Risk, Liquidity, Profitability, Size and Leverage of the firm were the factors which influence the dividend decision. Correlation and the multiple regression techniques had been applied on the identified factors and concluded profitability and size are the most important considerations of dividend payout decisions by UAE firms.

Komrattanapanya & Suntraruk (2013) indentified the factors influence the dividend decision of all the firms listed on Stock exchange of Thailand for the period between 2006 and 2010. Tobil regression analysis technique had been used on the data and revealed that dividend payout was negatively affected by the financial leverage, investment opportunities and growth of sales, where as dividend payout is positively affected by the size of the firm. Also concluded that real estate firm prefers to pay dividend as compare to any other firms. Profitable large and small firms prefer to pay dividend as compare to medium size profitable firms.

Dada, Malomo and Ojediran (2015) studied the determinants of the dividend policy of Nigerian banking sector. Least square regression analysis had been applied on the panel data of the banks listed on Nigerian Stock Exchange for the period between 2008 and 2013. The findings concluded that leverage, performance, corporate governance and last year dividend had positive impact on dividend payment while firm's liquidity had negative impact.

Leading determinants of Dividend Policy
What are the factors which affects in determination of the dividend policy? Time being many factors identified in the literature as being important and to be considered in making dividend decisions increased substantially. The factors according to the reviews are as

Profitability
Profitability is found as one of the important determinants of dividend payout policy. Many researchers have concluded the relationship between the profitability and dividend payout as mixed. Return on Asset (ROA), Profit after Tax (PAT), Earning per share (EPS) and Return on Net worth (RONW) are the variables for measuring the profitability in this study.

Liquidity
Adequate earnings is must to declare dividend in the firm and if sufficient cash is not available in the organization cannot pay the dividend. Hence there is relationship between liquidity and dividend of the firm. Many researchers used Current Ratio and Quick Ratio (Liquid Ratio) are the variables to measure the liquidity of the firm and same is been used.

Debt Ratio
It measures the liabilities of the company relative to total assets. The balance sheet formula tells us Assets = Liabilities + Owner's Equity. By dividing liabilities by assets, this ratio provides insights into the proportion of debt used to finance the assets of the company. Firm with high debt pays less dividend as they are precommitted to make debt payments and vice versa.

Cash Flow
Brittain (1964) suggested that cash flow (net current profit after tax + depreciation) is an appropriate measure of the company's capacity to pay dividend.

Beta
It measures the systematic risk of the company. Beta is negatively related with dividend. Higher the risk less would be the dividend and vice versa.

Capital expenditure
The companies decide to finance the capital expenditure from the internal sources of the fund. So it is negatively associated to the dividend paid.

Sales growth
Increase in sales leads to increase in the working capital or increase in the investments. In order to keep the same dividend payout ratio the companies have to increase external finance. This way of financing is relatives
expensive; companies choose to decrease the dividend payout. So it can be say that sales growth is negatively associated with dividend.

**Retained earnings**
Retained earnings can be used to finance the future investment opportunities in the firm. Thus the firm will retain more from the profit and will distribute less as dividend. Retained earnings is negatively associated with dividend paid.

**Size of the firm**
The large companies can easily access to the external capital market and at low cost and are also able to offer high collateral security. Due to the lower cost of raising capital, large companies have a greater ability to pay dividends even though its current earnings are low. Natural log of total asset and market capitalization are used as proxy for measuring the size of the organization.

**Objective**
- To identify the factors responsible for dividend decision.
- To see the impact of identified factors on DPR.

**III. Research Methodology**
3.1 The study is causal in nature and secondary data will be used in the study.
3.2 Sample Design
3.2.1 Population: companies listed on NSE
3.2.2 Sampling Frame: Companies listed under indices NSE 100
3.2.3 Sampling Element: All FMCG companies listed under NSE 100
3.2.4 Sample Size: The sample selected for the study consists of all the FMCG companies which are listed on the CNX FMCG indices of the NSE. CNX FMCG captures the performance of all the FMCG companies so it can be good benchmark of the Indian FMCG companies. The CNX FMCG index is a 15 companies Index from the FMCG sector and it trade on the National Stock Exchange. The list of the sample companies, which are listed under CNX FMCG index of NSE, is as following:
1. Asian Paints Ltd.
2. Britannia Industries Ltd.
3. Colgate Palmolive (India) Ltd.
4. Dabur India Ltd.
5. Emami Ltd.
6. GlaxoSmithKline Consumer Healthcare Ltd.
7. Godrej Consumer Products Ltd.
8. Havells India Ltd.
9. Hindustan Unilever Ltd.
10. I T C Ltd.
11. Marico Ltd.
12. Procter & Gamble Hygiene & Health Care Ltd.
13. Titan Company Ltd.
14. United Breweries Ltd.
15. United Spirits Ltd.

The sample period of the study is 2007-2016 and the company of which the data is not available has been excluded from the study. The analysis has been carried on 11 companies

3.2.5 Sampling Method: Probability purposive sampling technique and Quota sampling technique was used in the study.
3.3 Method for Data Collection
Data was been collected from the Annual report of the individual companies. Website like www.nse.com, www.moneycontrol.com and www.yahoofinance.com are used for collecting data of the study.
3.4 Tools Used For Data Analysis
- Factor analysis was used to evaluate the underlying factors of different variables.
- KMO test was used for check the sampling Adequacy.
- Multiple regression was applied to check the impact of underlined variables on DPR.
IV. Result and Discussion

Kaiser Meyer Olkin and Bartlett’s Test of Sphericity

KMO (Kaiser-Meyer- Olkin) and Bartlett’s Test of sphericity was calculated using PASW 18 to identify sampling adequacy as well as sphericity in the data collected on the measure.

KMO and Bartlett’s Test

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</th>
<th>Bartlett's Test of Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. Chi-Square</td>
<td>1494.472</td>
</tr>
<tr>
<td>Df</td>
<td>171</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
</tbody>
</table>

KMO measure of Sampling Adequacy--
The Kaiser Meyer Olkin (KMO) measure of sampling adequacy is an index to examine the appropriateness of factor analysis. High value (between 0.5 and 1.0) indicates factor analysis is appropriate. Values below 0.5 imply that data used for factor analysis may not be appropriate. The Kaiser Meyer Olkin measure of sampling Adequacy value .628 indicating that the sampling size was adequacy to consider the data suitable for factor analysis.

Bartlett’s Test of Sphericity

Bartlett’s test of Sphericity is a test statistics used to examine the hypothesis that the variables are uncorrected in the population. The Bartlett’s Test of Sphericity was tested through Chi – square value having value 1494.472 which was significant at 0% level of significance. Therefore, the above hypothesis is rejected, indicating that the item correction matrix is not an identity matrix and hence the data for Dividend policy was suitable for factor analysis.

Factor Analysis –

Principle component factor analysis with varimax rotation was applied to find out the underlying factor of the dividend Policy. All variables converted into seven factors. The descriptions of the factors are given below.

<table>
<thead>
<tr>
<th>Factor Name</th>
<th>Eigen Value</th>
<th>Variables</th>
<th>Loading Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability Indicators</td>
<td>3.088</td>
<td>RONW, ROA, Cash flow to sales ratio, EPS</td>
<td>.896, .848, .714, .630</td>
</tr>
<tr>
<td>Firm Size</td>
<td>3.051</td>
<td>Ln of total assets, Market Capitalisation, Lag dividend, ICR</td>
<td>.941, .940, .729, .441</td>
</tr>
<tr>
<td>Liquidity</td>
<td>2.555</td>
<td>LR, CR, PAT to sales ratio</td>
<td>.895, .864, .796</td>
</tr>
<tr>
<td>Growth Opportunities</td>
<td>1.224</td>
<td>Sales Growth, Ŗap Exp, RRC</td>
<td>.472, .403, .349</td>
</tr>
<tr>
<td>Market Value</td>
<td>2.021</td>
<td>Log AACP, P/E, Beta, Market to book value, D/E</td>
<td>.764, .605, .291, .232, .129</td>
</tr>
</tbody>
</table>

Factor Pattern Matrix

1. Table provides the factor loadings from the Principal Component Analysis (PCA). An analysis of the factor pattern matrix portrays that the variables like RONW, ROA, Cash flow to sales ratio and EPS have significant positive loadings on factor 1. Factor 1 is labeled as factor of profitability Indicators. Lintner (1956) Dada, Malomo and Ojediran (2015), Aivazian, Booth and Cleary (2003), Li and Lie (2006), Kapoor et.al. (2010) Dividend carries a signal of firm’s prosperity. Higher the profitability, higher is the dividend payout of the firm.

2. Ln of total assets, market capitalization, lagged dividend and Interest coverage ratio have significant positive loading on factor 2. Factor 2 is labeled as firm size. Larger is the firm size higher is the dividend payout.
3. Current ratio, Liquid ratio and Profit after tax have significant positive loading on factor 3. Factor 3 is labeled as liquidity. Higher is the firm’s liquidity more will be the cash available to pay the dividend. Lintner (1956) Ahmed and Javid (2008) Gupta & Banga (2010) liquidity is important factor which influence the dividend decision.

4. Sales growth, RRC and Capital expenditure have the significant loading on the factor 4. Factor 4is termed as growth opportunities. Result states that sales, profit and capital expenditure are the important factors consider for determining the dividend. The result is been supported by the Lintner (1956)Myers & Bacon (2004) and Gupta & Banga (2010) who suggest that the firm with higher growth and higher growth opportunities distributes the higher amount of dividend in order to keep the shareholders satisfied.

5. P/E, Beta, Market to Book value and D/E has the significant positive loadings on the factor 5. Factor 5 is termed as market value. Market value of the firms also had impact on the dividend payout. Kapoor et.al. (2010), Moradi et.al. (2010) also concluded the negative impact of P/E, Beta and D/E ratio on dividend payout or dividend decision.

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>99.962</td>
<td>.214</td>
<td>467.465</td>
<td>.000</td>
</tr>
<tr>
<td>Profitability indicator</td>
<td>.001</td>
<td>.001</td>
<td>.005</td>
<td>1.845</td>
</tr>
<tr>
<td>Firm size</td>
<td>-3.404E-5</td>
<td>.000</td>
<td>-.280</td>
<td>.780</td>
</tr>
<tr>
<td>Liquidity</td>
<td>-.007</td>
<td>.007</td>
<td>-.002</td>
<td>-1.021</td>
</tr>
<tr>
<td>Growth opportunities</td>
<td>-.996</td>
<td>.003</td>
<td>-.998</td>
<td>-371.450</td>
</tr>
<tr>
<td>Market value</td>
<td>9.299E-5</td>
<td>.000</td>
<td>.214</td>
<td>.831</td>
</tr>
</tbody>
</table>

a. Dependent Variable: DPR

Above are the factors on which affect the dividend policy decision of the firm. Profitability indicator is the factor which is positively insignificantly associated with the dividend decision as the beta value is .005 and the p value is .068 which is significant at 10% significance level. Mirza & Azfa (2010) also reported the insignificant relationship between profitability and dividend payout. Firm size is negatively insignificantly associated with the dividend decision as the beta value is -.001 and p value .780 which is insignificant at 5 % level of significance. Liquidity is negatively insignificantly associated with the dividend decision as the beta value is -.002 and p value is .309 which is insignificant at 5 % level of significance. Growth opportunities is the factor which is negatively significantly associated with the dividend decision as the beta value is - .998 and the p value is .000 which is significant at 5% significance level. Komrattanapanya & Suntraruk (2013) also found that dividend is negatively influence by the investment opportunities. Market value is the factor which is positively insignificantly associated with the dividend decision as the beta value is .000 and the p value is .831 which is insignificant at 5% significance level.

V. Conclusion

This study examined the determinants of dividend policy of the FMCG firms listed on NSE. Many factors are identified which are negatively and positively related to the dividend decision of the firm listed on CNX NSE 100 for a period of 10 years from 2007 – 2016. Total 15 firms were listed under CNX FMCG out of that 11 firm are taken as sample for the study. Dividend payout ratio was used as dependent variable in the study. Profitability (ROA, EPS, RONW, PAT) liquidity (CR, LR), PE ratio, beta, Cash Flow to sales ratio, DE ratio, log of total asset, market capitalization, retained earnings were used as independent variables in the study. The study analyzed the determinants of dividend payout by using factor analysis and its impact on DPR by using multiple regression. The data have been taken from the website www.nse.com, www.moneycontrol.com and www.yahoofinance.com where the financial details of all the firms is available. After applying the factor analysis profitability indicator, firm size, liquidity, growth opportunities and market value are the five factors which are identified. After applying multiple regression growth opportunities is the factor which significantly affects the dividend decision. The results of the study are similar to the other studies that lesser the growth opportunities more will be the dividend payout. Profitability influences the dividend decision positively. The study has the limitation that it takes into consideration the firms listed on CNX FMCG for the period of 10 year. Financial factors are only considered for drawing the result. Other sectors may have different approach to the dividend decision and non financial factors such as company’s policies, management behavior, and shareholders attitude may have bearing on the decision making.
Determinants of dividend policy: A study of FMCG sector in India

References
