Determinants of Dividend Policy of South Korean Listed Firms

Dr. Arindam Banerjee
Associate Professor, Finance and Assistant Dean (Global MBA and MGB programs)
SP Jain School of Global Management, Dubai Campus
E-mail: arin_006@yahoo.com

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Abstract
Ever since publication of the seminal works of John Lintner (1956) and Miller and Modigliani (1961), dividend policy continues to be a significantly debated research topic. Among the many unanswered questions, doubt remains on the specific reasons that determine dividend policy and whether it can be structured either in a dependent or independent manner. This study aims to investigate the factors of dividend payout policy on firms listed on South Korean stock exchange (KRX). The study involves 5 distinct variables that are considered as possible causes of dividend payout policy. The study includes development of 5 research hypothesis that are used to represent the primary theories of corporate dividend payouts. Fixed-effect regression model is applied on a sample of 30 companies listed on South Korean stock exchange over a period of 4 years spanning from 2014 to 2017. The specific model was chosen to test the relationship between determinants of dividend payout policy and its subsequent impact on the same. The study expects to potentially increase domain knowledge in the research area of dividend policy with a strong notion to improve prediction as well as establish a relationship between factors that determine dividend policy and its subsequent impact on the same on South Korean firms.

Keywords: Dividend Payout Policy, South Korean Stock Exchange, Pecking Order Theory, Leverage, Return on Equity

Jel Classification: F49, F65, H54, G32, G35
1. Introduction

(Baker and Powell, 2000) defined dividends as payments that are made by firms to its shareholders. Further, studies by Seneque (1978), dividends are the share of the profits of a company which are received by the shareholders” In simple terms, dividend is part of a firm’s earnings that is distributed to its shareholders. Dividend policy denotes “the practice that firm management follows in making dividend payout decisions, or, in other words, the size and pattern of cash distributions to shareholders” (Lease et al., 2000). It is quite well established that shareholders’ wealth and a firm’s ability to retain its earnings are impacted by dividend decisions. Despite its countless research, dividend as a topic remains to be the focus of multiple debates and difficult to understand owing to its mysterious and puzzling character. Black (1976) postulated that “the harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just do not fit together”. Interestingly, the “dividend puzzle” contrasts his earlier research on why firms pay dividends and why stockholders pay attention to dividends? Among all the studies done on the subject, there is still no universal answer to what factors determine dividend policy.

2. Literature review

Owing to the popularity of the topic over the last several decades, several researchers have empirically examined the factors that determines dividend policy and its subsequent impact on firms decision-making process. The outcomes of these studies though vary broadly across geographies and their respective time periods. Lintner (1956) argued that a firm’s target is determined by its current earnings and historical dividends. Since then, significant research has been carried out on the topic of dividend payout policy. These several researches has led to establishment of further analyses of research that included tax clientele theory, signaling effect theory, firms’ life-cycle theory and agency theory that attempted to explain how companies determined their dividend payouts. Gordon (1959) found that ordinary shareholders prefer immediate profits over future profits. An increase in dividend payments posits good sign for company, thus increasing its goodwill and its reputation (Al-Hasan, Asaduzzaman, & Karim, 2013). Tsoukalas and Sil (1999) found evidence to suggest that companies stock prices typically increase as a consequence of increases profit retention and using those proceeds towards reinvestment in future investment avenues. Priya and Nimalathasan (2013) evidenced that dividend payout had a significant impact on the various parameters of a firm’s performance except for return-on-equity (ROE) and return-on-investment (ROI).

2.1 Country experiences

Research by Deehani and Talla (2003) investigated the primary factors that determined dividend policy of Kuwaiti firms with specific focus towards existing dividend rates and changes in earnings, their studies suggested that those firms preferred random fractional dividend adjustments in place of predetermined payout ratios and the surpluses post financing its positive net present value projects. Further studies by Awad, B. (2015) found that the various determinants of dividend policy in firms listed in Kuwait stock exchange had direct dependence on factors such as leverage, risk level and firm size. According to Echchabi et.al. (2016) only net cash flow and market to book value have substantial impact on the dividend
payout and external factors do not substantially influence disbursement of dividends amongst the Tunisian registered businesses Trang (2012) established that the determinants of dividend policy is directly related on profitability and inversely related on business risk. According to Benavides et.al (2016), determination of dividend payout ratio is clearly linked to profitability, governance pointers, similarly it is negatively linked with historical indebtedness and investment opportunities. In a developed and emerging stock market such as Nepal, there are many crucial determinants of dividend policy such as profitability, size and liquidity. Adhikari (2015). From studies conducted in Indonesian capital market, it is evident that shareholders perceive the rise in surplus payments by a firm as an indicator of positive forecast for money flow and signaling theory that effects price of shares, Werner (2010). Studies of dividend policy of firms in Kenya suggest been impacted by transaction fees, various leverage ratios, firm size, firm’s revenue reinvestment and market-to-book ratios. King’waro (2015). Okoro et.al (2018) concluded that in Nigeria, dividend payout of businesses registered in the Nigerian Stock Exchange are dependent upon firm’s market value and prior year’s historical dividend. Dividend policy in the MENA region is determined by corporate governance, expense of arranging debt, and is evident there is a positive connection between dividend plan and business governance and negative connection between the condition of business governance and price of arranging debt. Imad. (2015). Evidences from African countries suggest that firms are more likely to pay dividends if GDP per capita is not high, similarly dividend disbursement have a substantial positive association with cost-effectiveness, investments prospects, size of organization and negative association with financial leverage, fraud, gross domestic product per capita. Adusei (2016). Evidences from GCC Market reveals that dividend policy is influenced by investment decision, organizations needs higher capital expenditure which have a constant growth rate and fix lower dividend disbursement. Liquidity is a significant factor of dividend disbursement strategy. Kumar (2014). Evidences from Saudi Arabia reveals that the Saudi registered non-financial organizations depend on current earnings per share and previous dividend per share of the organization to fix their dividend disbursements. Khadhiri (2013). Studies specific to the United States points towards factors such as sales growth, earnings margin, tax effect and debt-to-equity ratio impacting dividend payout ratios. Similarly, when it comes to service companies, dividend payout ratio focuses towards sales growth, profit margin and debt-to-equity ratio. Similar studies done for production companies suggests factors such as market-to-book ratio and earnings margin as prominent factors impacting dividend policy decisions. Gill et.al (2010). Studies done for Australian multi-national and domestic corporations reveals that factors such as profitability, diversification, firms specific hazard, length, financial slack and collateral value of property are some of the major factors that explains the distinctions in cash dividend payout ratios. Akhtar (2017). Study conducted on the determinants of dividend payout ratios in Ghana revealed that profitability, the square of profitability, board length, board independence, leverage, and audit kind are critical determinants of dividend payout. Nuhu, (2014). The factors impacting a Swedish firm’s dividend policies are length, liquidity and investment possibilities. Whereas profitability and leverage of a company can't explain dividend changes in Sweden. Larger firms, extra liquid firms and companies with greater investment possibilities have better dividend bills.
Studies on Indian companies suggest that dividend payout ratio differs across sectors but primarily relate to existence of increased free cash flow, with larger, mature and more profitable firms paying more dividends in contrast to firms with more debt and better investment opportunities paying less dividends. Das et al. (2015). A study done on the non-financial firms listed on the Nairobi Securities Exchange reveals that dividend pay-out of non-financial firms depend upon profitability, growth, current earnings, and liquidity. Additionally, return on equity, current earnings and firms ‘growth activities institute a positive association to dividend disbursements. Musiega et al (2013). Studies conducted in the Turkish market established that factors such as profitability, firm size, net income, retained earnings and level of debt as the primary factors of dividend payout. Fredynandy. (2017). Evidences from select UAE companies shows that several of the known determinants of dividend policy in developed markets are not relevant to the UAE companies. Size of the organization is the most significant factor in the dividend disbursement of UAE firms, Mehta (2019). Studies over a sample of Jordanian companies pointed out that a certain percentage of stocks owned by firm’s senior officials or directors and state possession significantly impact the volume of dividend payment and its subsequence disbursement. The study further reveals that Jordanian firm’s decisions in paying dividend are mostly influenced by the firm’s profitability, age and size, Malkawi (2009). Rehman (2012) established a positive relationship between current ratio, debt-to-equity ratio, profitability and corporate tax and its subsequent impact on dividend payout ratio and at the same time established a negative relationship between market-to-book fee and operating cash flow per share. The vast bases for dividend pay-out ratio are profitability, debt equity ratio and market to book value ratios in Pakistan.

A Study done on listed private commercial banks listed on Dhaka Stock Exchange Limited showed that dividend payout ratio has a positive and significant relation with liquidity, organization growth, prior year’s dividends and a negative relation with leverage and profitability. The dividend payments were not simply influenced by the size of the firm, risk of the firm and ownership structure. Hence, Leverage, liquidity, company growth, preceding year’s dividends, and profitability were the key determinants of dividend payout of the indexed non-public commercial banks in Bangladesh. Hosain (2016). Studies conducted amongst Malaysian firms advocates that growth opportunities, size, profitability, business risk, free cash flow and market-to-book value have positive relation with dividend payout ratio and thus a positive correlation between dividend payout ratios and factors such as return-on-assets, earnings per share, return-on-equity, free cash flow, market capitalization and market-to-book value (Ayman, 2015).

3. Methodology

This study uses secondary data sources for all further empirical research. The data is gathered from financial reports that are published in the respective company websites as well as Reuters. The date used is for 4 years’ period spanning from 2014 to 2017. The methodology applied for the study is multiple regression analysis.

4. Hypothesis and Models
The primary aim of the paper is to find the determinants of dividend policy. For this research, five independent factors were chosen namely liquidity, investments, return on equity, leverage, firm size. These factors were tested to check their relation to dividend payout ratio and whether any relationship existed between them.

4.1 Hypothesis was written based on study questions as follows

**H₄₁**: Kanwal & Kapoor (2008), Ahmed & Javid (2009) stated that liquidity is one of the important factors affecting dividend policy. Research conducted by Ho (2003) points out towards the fact that firms with more accessibility towards cash has a greater potential to pay increased dividends as compared to firms with insufficient cash. Additional studies by Jensen (1986) argued that as evidenced by the agency theory of cash flow of firms that have higher cash flows potentially pays more dividends. Based on these above researches and the subsequent empirical evidences this study postulates the first hypothesis stating a positive relationship between companies’ liquidity, measured in terms of current ratio and dividend policy.

**H₄₂**: According to Myers and Majluf’s, 1994 pecking order hypothesis firms generally intend to finance its new investment opportunities using internal source of finance as a preferred means followed by available external sources if needed. Among the external sources, debt finance is considered as first priority followed by equity finance, this theory further goes on to suggest that high-growth firms typically require heavy investments and thus tend to retain more of their profits as compared to following high payout policy. Based on this empirical evidence, the pecking order hypothesis points towards a negative relationship between available investment opportunities and dividend payout ratio.

**H₄₃**: Studies by Litzenberger & Ramaswamy (1979, 1982), Bajaj & Vighs (1990), Morgan & Thomas (1998) points towards a positive correlation between stock returns and dividend policy. McManus, Gwilym & Thomas (2004) further reinforced this finding. Studies by Lamont (1998) evidence a positive correlation between stock returns and dividend payout ratio. Based on these empirical evidences this specific study hypothesizes an existence of a positive relationship between dividend policy and the firms return on equity measured in terms of net profit after tax to total equity.


**H₄₅**: The establishment of a positive relationship between dividend policy and firm size has been evidenced by several researchers. Fama and French (2002), Al Kuwari (2009), Al Malkawi (2008), and Manos (2001) established a positive relationship between firm size and dividend policy. Jensen, Solberg and Zorn, (1992), Fama and French (2001) found that large
firms distribute a higher amount of their net profits as cash dividends than small firms. Contrasting studies by Amidu and Aboh (2006) and Ahmed and Javid (2008) found a negative relationship between the said variables that implied larger sized firms paying lesser dividend. Based on these above contrasting studies, this specific study hypothesizes a positive relationship between the firm’s dividend policy and its size measured in terms of natural logarithm of total assets.

$$\text{DIV} = \alpha + b_1 \text{LIQ} + b_2 \text{INV} + b_3 \text{ROE} + b_4 \text{LEV} + b_5 \text{SIZE} + \varepsilon_i$$

Where:

$\text{DIV} =$ dividend payout ratio is dependent variable: the amount of earnings paid out as dividends. measured by dividing dividends per share by earnings per share.

$\alpha =$ Intercept

1. $\text{LIQ} =$ current ratio (current assets/current liabilities)

2. $\text{INV} =$ market to book ratio (market value of equity/book value of equity)

3. $\text{ROE} =$ return on equity (NPAT/total equity)

4. $\text{LEV} =$ leverage (total liabilities/total equity)

5. $\text{SIZE} =$ natural logarithm of total assets and

$\varepsilon_i =$ error term.

5. Findings

5.1 Empirical Study

In the following section of the study, data collected from firms listed on the Korean stock exchange was taken run through SPSS program to test the model of the study and verify the study hypothesis.

5.2 Descriptive Statistic

Table 1 presents the descriptive statistics of the variables used in the analysis. The mean of DIV shows that averagely firm pays out of 34.4% (standard deviation = 1.999) of its earnings in dividends as a whole for four years. Among the independent variables, LEV has the highest standard deviation (1.533) where the data are spread around the mean (1.021). The ROE has obtained the lowest standard deviation (0.096) where its data are bunched up closely to its mean (0.064).
Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Deviation</th>
<th>Variance</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIV</td>
<td>0.345</td>
<td>0.206</td>
<td>1.999</td>
<td>3.995</td>
<td>-10.420</td>
<td>17.395</td>
</tr>
<tr>
<td>LIQ</td>
<td>2.160</td>
<td>1.616</td>
<td>1.435</td>
<td>2.058</td>
<td>0.505</td>
<td>9.072</td>
</tr>
<tr>
<td>INV</td>
<td>0.059</td>
<td>0.003</td>
<td>0.201</td>
<td>0.040</td>
<td>0.000</td>
<td>1.188</td>
</tr>
<tr>
<td>ROE</td>
<td>0.064</td>
<td>0.063</td>
<td>0.096</td>
<td>0.009</td>
<td>-0.717</td>
<td>0.425</td>
</tr>
<tr>
<td>LEV</td>
<td>1.021</td>
<td>0.737</td>
<td>1.533</td>
<td>2.352</td>
<td>0.107</td>
<td>18.454</td>
</tr>
</tbody>
</table>

Table 2 presents the pairwise correlation coefficient of all the variables used in the study.

Table 2.

| Dividend current Inventory ROE Leverage Size of the firm |
|--------------|----------------|----------------|--------|----------|----------------|
| Dividend payout ratio | LIQ  | INV  | ROE   | Leverage | Size of the firm |
| ratio        | 0.014 | -0.028 | 0.007 | 0.015 | -0.018 |
|              | 1     | -0.133 | 0.128 | -0.348 | -0.072 |
|              |       | 1      | 0.080 | -0.001 | -0.182 |
|              |       |        | 1      | -0.538 | 0.075 |
|              |       |        |        | 1      | 0.047 |

Multiple Regressions

ANOVA

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>5</td>
<td>1.872864245</td>
<td>0.374573</td>
<td>0.091615</td>
<td>0.993479807</td>
</tr>
<tr>
<td>Residual</td>
<td>194</td>
<td>793.1809088</td>
<td>4.088561</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>199</td>
<td>795.053773</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 presents the regression results of the study. The results in Table 3 indicate that the value of the R- squared and adjusted R-squared are 0.002 and -0.023 respectively.
Table 3.

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
<th>Lower 95.0%</th>
<th>Upper 95.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.770</td>
<td>1.583</td>
<td>0.487</td>
<td>0.627</td>
<td>-2.352</td>
<td>3.893</td>
<td>-2.352</td>
<td>3.893</td>
</tr>
<tr>
<td>LIQ</td>
<td>0.024</td>
<td>0.108</td>
<td>0.221</td>
<td>0.825</td>
<td>-0.189</td>
<td>0.237</td>
<td>-0.189</td>
<td>0.237</td>
</tr>
<tr>
<td>INV</td>
<td>-0.325</td>
<td>0.739</td>
<td>-0.440</td>
<td>0.661</td>
<td>-1.783</td>
<td>1.133</td>
<td>-1.783</td>
<td>1.133</td>
</tr>
<tr>
<td>ROE</td>
<td>0.608</td>
<td>1.806</td>
<td>0.337</td>
<td>0.737</td>
<td>-2.954</td>
<td>4.171</td>
<td>-2.954</td>
<td>4.171</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.049</td>
<td>0.118</td>
<td>0.414</td>
<td>0.680</td>
<td>-0.184</td>
<td>0.282</td>
<td>-0.184</td>
<td>0.282</td>
</tr>
<tr>
<td>Size of the firm</td>
<td>-0.043</td>
<td>0.121</td>
<td>-0.356</td>
<td>0.722</td>
<td>-0.281</td>
<td>0.195</td>
<td>-0.281</td>
<td>0.195</td>
</tr>
</tbody>
</table>

Regression Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.049</td>
</tr>
<tr>
<td>R Square</td>
<td>0.002</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.023</td>
</tr>
<tr>
<td>Standard Error</td>
<td>2.022</td>
</tr>
<tr>
<td>Observations</td>
<td>200</td>
</tr>
</tbody>
</table>

The results in Table 3 show that LIQ, INV, ROE, LEV and SIZE have an insignificant relationship with a dividend payout.

6. Conclusion

The objective of this paper was to examine the factors that influence the dividend policy of South Korea listed firms. As suggested by the results, the dividend decisions of the firm do not depend significantly on liquidity, investment opportunity, return on equity, leverage and firm size. All the firms were chosen were listed on the South Korea stock exchange, hence the inferences from this paper are limited and there are possible chances for additional findings in upcoming studies. In the future, more sample companies spanning increased duration may be gathered. A broader research may be done considering factors of dividend policy by aiming on the specific sector/industry.

References


