Dividend Policy at the Amman Stock Exchange:
The Stability Issue During 1995-2005

Khaldoun M. Al-Qaisi and Ghassan M. Omet*

ABSTRACT

The issue of the financing choice of firms and their dividend policies are important because the cost of capital and hence the value of firms depend on these financial choices. Based on this, one can argue for the importance of understanding dividend policy in the developing countries.

The primary objective of this paper is to determine whether or not listed Jordanian companies have stable cash dividend policy. In addition, this paper compares the cash dividend policy of the various sectors in Jordan. Based on the time period 1995 – 2005, and panel data analysis, the results indicate that listed Jordanian companies follow stable policies albeit at a lesser degree than companies which operate in advanced countries.

Keywords: Amman Stock Exchange, Dividend Policy, Stability, Industrial Sectors.

1. INTRODUCTION

Corporate finance is concerned with three long-term issues and these are capital investment, financing, and dividend policy. While the objective of the capital investment issue is to examine and determine those projects which add economic value to the firm, the issue of how firms raise the necessary funds for the proposed capital investment projects involves the determination of the “optimal” capital structure (debt to equity ratio). Finally, the issue of dividend policy involves the policy a firm uses to decide how much it will pay out of its profits to shareholders in the form of cash dividends.

Relative to the above-mentioned corporate finance issues, it is important to note that they are interrelated. For example, the fact that dividend policy affects the capital structure of firms (debt to equity ratio), it also affects their cost of capital. In other words, by affecting the cost of capital of firms, dividend policy has a direct effect on firms’ capital investment activities.

Against the above brief background, one should not really be surprised from the fact that the finance literature contains many papers which examine how firms carry-out their capital investment analysis, and determine their capital structures and dividend policies.

Some of the survey papers which examine how firms appraise their capital investment projects include Graham and Harvey (2001), Parry et al. (2001), Lazaridis (2004), Hermes et al. (2005), Truong et al. (2005), and Beattle et al. (2006). These papers examine, for example, whether or not firms use discounted cash flow methods like the Net Present Value (NPV) as opposed to simple (less sophisticated) methods such as the Payback Period (PBP) and Profitability Index (PI).


As far as the capital structure of firms which operate in developing economies are concerned, it is useful to note that following the pioneering works by Singh and Hamid (1992) and Singh (1995), a growing number of papers examine the capital structure choice in these countries. Some of these papers include Manos and Ah-Hen (2001), Pandey (2001), Mutenheri and Green (2002), Huang and Song (2002), Deesomsak et al. (2005), Tong and Green (2005), Love (2005), Klapper et al. (2006), Li...
Dividend Policy at…

Khaldoun M. Al-Qaisi and Ghassan M. Omet

et al. (2006), De Jong (2006), and Guha-Khasnobis and Kar (2006). On average, these papers report the fact that firms in developing countries rely on less debt than their counterpart firm operating in developed economies.

Finally, some of the main papers which examine dividend policy of firms include Battahcharya (1979), Gaver and Gaver (1993), Wang et al. (1993), Charitou and Vafeas (1998), Ooi (2000a), Faccio and Lang (2002), Fama and French (2001), Gugler and Yurtoglu (2003), Dhanani (2005), Mancinelli and Ozkan (2006), and many others. These papers examine the stability issue of dividend policy and or its determinants.

This paper provides answers to two main questions:
(1) Do listed Jordanian companies follow stable dividend policy?
(2) Do banking, industrial, insurance, and services companies behave in a similar fashion regarding the issue of dividend policy stability?

The rest of the paper is organized as follows. In section II, the researchers provide a brief review of the literature on dividend policy stability. In section III, the data and methodology are discussed. Finally, in sections IV and V, we present and discuss the results and summarize and conclude the paper, respectively.

2. THE STABILITY ISSUE OF DIVIDEND POLICY: A BRIEF LITERATURE REVIEW

Based on the classical paper by Lintner (1956), a number of researchers have examined the issue of dividend policy stability. In more specific terms, the empirical literature considered the following model:

\[ \text{DPS}_{i,t} = \alpha_1 + \beta_1 \text{EPS}_{i,t} + \beta_2 \text{DPS}_{i,t-1} + \epsilon_{i,t} \]  

where \( \text{DPS}_{i,t} \) is dividend per share in time period \( t \) (company \( i \)) and \( \text{EPS}_{i,t} \) is earnings per share in time period \( t \) (company \( i \)).

Based on the empirical estimation of the above model (1), it is argued that if the coefficient of the lagged dividend per share (\( \beta_2 \)) is found to be positive and significant, this signifies that companies follow stable dividend policies. In other words, firms do not change their cash dividends (increase or decrease) unless they believe that the change in their net profits is “permanent”.

The above model has been used by many international researchers including Brittain (1966), Fama and Fabiak (1968), Fama (1974), Dwenter and Warther (1998), Kato and Lowentein (1995), Lasfer (1996) Adaoglu (2000), Dhanani (2005), Mancinelli and Ozkan (2006) and others. On average, this evidence concludes that listed companies follow stable dividend policies. Indeed, the coefficient of the lagged dividend per share is found to be consistently positive and large (about +0.75).

As far as emerging stock markets are concerned, it is interesting to note that Adaoglu (2000) reported some contrasting evidence. Contrary to the empirical evidence which supports stability, his empirical results show that Turkish companies follow unstable cash dividend policies (see Table 1).

| Table 1. Lintner Model Estimation Results |
| Equation: \( \text{DPS}_{i,t} = \alpha_1 + \beta_1 \text{EPS}_{i,t} + \beta_2 \text{DPS}_{i,t-1} \) |
| Coefficient | Value | |
| \( \alpha_1 \) | 53.322 | (2.38*) |
| \( \beta_1 \) | 0.510 | (73.9*) |
| \( \beta_2 \) | 0.005 | (0.43) |
| Adjusted R\(^2\) | 0.894 | |

*t-statistic is significant at the 5percent level. Source: Adapted from Adaoglu, (2000).

Based on the results which are reproduced in Table (1), it is stated that the “significant explanatory variables are the earnings per share (\( \text{EPS}_{i,t} \)) and the positive constant term (\( \alpha_1 \)). The lagged dividends per share explanatory variable (\( \text{DPS}_{i,t-1} \)) is statistically insignificant. The statistical insignificance of \( \text{DPS}_{i,t-1} \) is the final indicator of dividend instability, since in order to follow a stable dividend policy, management has to consider the past dividends per share trend” (Adaoglu, 2000).

Other emerging stock markets have also been examined. For example, the Tunisian stock market was examined by Ben Naceur et al. (2006). The reported results (see Table 2) indicate that Tunisian companies follow stable dividend policy. However, the value of the lagged dividend per share (+0.247) is much lower than those found in advanced stock markets.

Similarly, listed Jordanian companies were also examined in terms of their dividend policy stability. Based on only a total of 26 companies, the results indicate that while Jordanian companies follow less stable policy than their Tunisian counterparts, the coefficient of the earnings per share is the more significant factor in impacting dividend per share (see Table 3).
Table 2. Dividend Stability Results
Equation: \[ \text{DPS}_{i,t} = \alpha_1 + \beta_1 \text{EPS}_{i,t} + \beta_2 \text{DPS}_{i,t-1} \]

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \alpha_1 )</td>
<td>0.677 (6.35*)</td>
</tr>
<tr>
<td>( \beta_1 )</td>
<td>0.134 (5.91*)</td>
</tr>
<tr>
<td>( \beta_2 )</td>
<td>0.247 (3.56*)</td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>0.957</td>
</tr>
</tbody>
</table>

*\( t \)-statistic is significant at the 5 percent level.
Source: Adapted from Ben Naceur et al. (2006).

Table 3. Dividend Stability Results
Equation: \[ \text{DPS}_{i,t} = \alpha_1 + \beta_1 \text{EPS}_{i,t} + \beta_2 \text{DPS}_{i,t-1} \]

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \alpha_1 )</td>
<td>0.064 (5.051*)</td>
</tr>
<tr>
<td>( \beta_1 )</td>
<td>0.310 (20.003*)</td>
</tr>
<tr>
<td>( \beta_2 )</td>
<td>0.184 (4.726*)</td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>0.834</td>
</tr>
</tbody>
</table>

*\( t \)-statistic is significant at the 5 percent level.
Source: Adapted from Omet and Khasawneh (2002).

In addition to the above-mentioned studies, it is useful to note that Aivazian et al. (2001) examined the dividend behavior of firms operating in eight developing countries as well as 100 US firms over the time period 1981-1990. Based on the empirical results, it was stated that “the coefficient estimates on lagged dividends in these countries are well below the US estimates of 0.834-0.809, ranging from 0.083-0.120 in Turkey to 0.611-0.580 in Zimbabwe. The results for Turkey are readily explained by the dividend payment regulations, while it is puzzling that among our sample of developing countries, Zimbabwe and Jordan display the “stickiest” dividends, since both countries measured very poorly on our measures of financial market development. This may be materially attributable to the relatively small sample sizes for these countries” (Aivazian et al., 2001).

As mentioned in the introduction (Section I), this paper examines whether or not listed Jordanian companies follow stable dividend policy. In addition, the paper sheds light on the difference (if any) between the banking, industrial, insurance, and services companies regarding the issue of dividend policy stability. In other words, while this paper uses the same methodology which is commonly used by others in examining the stability issue of dividend policy. In addition, it is also important to note that this paper is more comprehensive, in terms of the number of companies that enter the statistical analysis, than that published by (Omet and Khasawneh, 2002).

3. THE DATA AND METHODOLOGY: DIVIDEND POLICY STABILITY

To investigate the stability issue of dividend policy in the Amman Stock Exchange (ASE), the dividend policy of all listed companies is examined. However, based on the time period (1995 - 2005), those companies which did not have at least 8 years of cash dividends are not included in the analysis. While there is no basis for choosing 8 years as a cut-off point, it must be noted that this method is chosen to make sure that the statistical analysis is based on a “good” number of years in which cash dividends are paid (Dewenter and Warther, 1998). In other words, it does not really make any sense in including, for example, companies that had zero dividends during the examined time period. Such companies would obviously bias the empirical results.

Based on this methodology, a total of 62 listed companies are included in the analysis. In other words, this sample resulted in a total of 682 balanced observations. These companies are composed of 28 industrial companies, 9 banking companies, 13 insurance companies, and 12 services companies.

In his paper, Lintner (1956) put forward the following model:

\[ D^*_{i,t} = r_i P_{i,t} \quad (2) \]
\[ D_{i,t} - D^*_{i,t-1} = \alpha_i + c_i (D^*_{i,t} - D_{i,t-1}) + \epsilon_{i,t} \quad (3) \]

Where \( D^*_{i,t} \) is the targeted (optimum) level of dividends in time period \( t \) (company \( i \)), \( r_i \) is the target payout ratio, \( P_{i,t} \) is the level of net profit, \( D_{i,t} \) is the actual dividend payment in time period \( t \), and \( \epsilon_{i,t} \) is the error term.

Expression (3) states that dividend payments are not immediately adjusted to their optimum (target) level; they are partially adjusted in each period. The positive \( \alpha_i \) (constant) reflects that companies are reluctant to cut dividends. The coefficient (\( c_i \)) reflects the stability in dividend changes and signifies the fact that companies may not wish to immediately adjust dividend payments to...
the target payout ratio \((r_i)\). The adjustment factor reflects management’s response in setting dividend policy based on the change in the level of earnings \((P_{i,t})\). The greater the value of the adjustment factor, the greater is the response level to changes in earnings. In other words, if the adjustment factor is equal to +1, one can conclude that firms do not smooth dividends and if it is equal to zero, they follow maximum smoothing in their dividend policy.

If we combine expressions (2) and (3), we arrive at the following model:

\[
D_{i,t} = \alpha_i + bP_{i,t} + dD_{i,t-1} + \varepsilon_{i,t} \quad (4)
\]

where \(b = cr\) and \(d = (1-c)\).

To test for dividend policy stability, the above model (4) can be re-written as follows:

\[
\text{DPS}_{i,t} = \alpha_1 + \beta_1 \text{EPS}_{i,t} + \beta_2 \text{DPS}_{i,t-1} + \varepsilon_{i,t} \quad (5)
\]

where \(\text{DPS}_{i,t}\) is dividend per share in time period \(t\) (company \(i\)) and \(\text{EPS}_{i,t}\) is earnings per share in time period \(t\) (company \(i\)).

As mentioned above, if firms follow stable dividend policy, we expect the sign of the coefficient of the lagged dividend per share \((\beta_2)\) to be positive and significant. Naturally, we also expect the sign of the coefficient of earnings per share \((\beta_1)\) to be positive and significant.

To estimate model (5), we employ the panel data methodology. In other words, we use the pooled ordinary least squares, the fixed effects model, and the random effects model to choose the more appropriate model for our sample. In addition, as the sample includes multi-year observations, we utilize the correction techniques for unknown heteroskedasticity of White (1980).

**4. THE EMPIRICAL RESULTS**

In Table (4), we report for the overall mean annual dividend per share (DPS), earnings per share (EPS) and the mean payout ratio (DPS / EPS) for our sample of firms during the time period (1994 – 2005). In addition, Table 5 reports the overall mean payout ratios for the four groups of companies. Table (4) reflects one interesting observation. During the time period 1994- 2003, the ratio of dividend per share divided by earning per share (payout ratio) reflected some consistent increase. Indeed, the overall ratios reflect the fact that on average, the payout ratio of all companies has been increasing.

**Table 4. The Overall Mean Annual Dividend Payout Ratio**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean DPS</th>
<th>Mean EPS</th>
<th>DPS / EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>0.205</td>
<td>0.758</td>
<td>0.270</td>
</tr>
<tr>
<td>1995</td>
<td>0.201</td>
<td>0.803</td>
<td>0.250</td>
</tr>
<tr>
<td>1996</td>
<td>0.203</td>
<td>0.764</td>
<td>0.266</td>
</tr>
<tr>
<td>1997</td>
<td>0.189</td>
<td>0.617</td>
<td>0.306</td>
</tr>
<tr>
<td>1998</td>
<td>0.160</td>
<td>0.407</td>
<td>0.393</td>
</tr>
<tr>
<td>1999</td>
<td>0.166</td>
<td>0.382</td>
<td>0.434</td>
</tr>
<tr>
<td>2000</td>
<td>0.172</td>
<td>0.429</td>
<td>0.401</td>
</tr>
<tr>
<td>2001</td>
<td>0.192</td>
<td>0.448</td>
<td>0.429</td>
</tr>
<tr>
<td>2002</td>
<td>0.191</td>
<td>0.439</td>
<td>0.435</td>
</tr>
<tr>
<td>2003</td>
<td>0.203</td>
<td>0.437</td>
<td>0.465</td>
</tr>
<tr>
<td>2004</td>
<td>0.170</td>
<td>0.430</td>
<td>0.395</td>
</tr>
<tr>
<td>2005</td>
<td>0.178</td>
<td>0.458</td>
<td>0.389</td>
</tr>
</tbody>
</table>

**Table 5. The Mean Dividend Payout Ratios**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Mean DPS</th>
<th>Mean EPS</th>
<th>DPS / EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking</td>
<td>0.429</td>
<td>1.813</td>
<td>0.237</td>
</tr>
<tr>
<td>Insurance</td>
<td>0.073</td>
<td>0.220</td>
<td>0.332</td>
</tr>
<tr>
<td>Industrial</td>
<td>0.175</td>
<td>0.274</td>
<td>0.639</td>
</tr>
<tr>
<td>Services</td>
<td>0.151</td>
<td>0.506</td>
<td>0.298</td>
</tr>
<tr>
<td>Overall</td>
<td>0.186</td>
<td>0.531</td>
<td>0.369</td>
</tr>
</tbody>
</table>

In addition, the results indicate that during the time period 1995- 2005 listed Jordanian companies distribute about 36.9 percent of their profits in the form of cash dividends. This proportion is lower than its corresponding ratio in more advanced economies like the USA and or European companies.

Finally, the reported results indicate that the banking sector reflects the highest mean earnings per share (1.813 Dinar per share). In other words, on a per share basis, the banking sector has been the most profitable. The insurance sector, on the other hand, has been the least profitable sector. Having said that, it must be noted that the industrial sector reflects the highest mean payout ratio and this is equal to 64 percent.

The estimates of Lintner’s model are presented in Tables (6 and 7). While Table 6 reports the results for the overall sample, Table (7) reports the results for each industrial sector. Based on the reported results, we can make a number of observations.
First, the values of the constant term ($\alpha_1$) are consistently positive and statistically significant at the 1 percent confidence level. This observation implies that companies are reluctant to decrease their cash dividends and prefer to gradually increase them. In other words, unless they believe that the increase in net profits is “permanent”, firms do not increase their cash dividend per share. For example, the overall result (Table 6) indicates that the value of constant term is equal to +0.068. The constant terms for the banking, industrial, insurance and services companies are equal to +0.015, +0.038, +0.032 and +0.111, respectively. In other words, it seems that the services sector companies are the most reluctant to reduce their dividends.

Second, the coefficient values of the lagged dividend per share (DPS$_{i,t-1}$) are consistently positive and significant. This indicates that the overall sample of firms, the sample of banking, industrial, insurance and services companies follow stable dividend policies. However, these coefficient values (0.313; 0.430; 0.235; 0.263; 0.348) are relatively low. For example, the value of this coefficient for U.S. companies is equal to 0.834 (Aivazian et al. 2001). Based on the value of these coefficients, we can state that the speed of adjustment in the overall sample of firms, and the banking, industrial, insurance and services sectors are equal to 0.687, 0.570, 0.765, 0.737 and 0.652 respectively. When the speed of adjustment (c) is equal to +1, this value means that companies do not smooth their dividends at all.

Third, the coefficient of the lagged dividend per share in the banking sector (0.430) and the services sector (0.348) are higher than their corresponding values in the industrial sector (0.235) and the insurance sector (0.263). In other words, based on these results, one can argue that the dividend policies of the banking and services companies are more stable than the industrial and insurance companies. This result is indeed expected given the fact that the profitability (earnings per share) of the banking and services sectors are higher. In other words, these companies can afford to follow more stable dividend policies.

Finally, as expected, the earnings per share coefficients are consistently positive and significant. However, there are some differences in the results. For example, the industrial and insurance samples of companies reflect the higher coefficient values of earnings per share. Again, this result is not surprising given the fact that these sectors’ profitability (earnings per share) is lower than those in the banking and services sectors. In other words, it seems that in the least
profitable sectors, earnings per share play a more important role in impacting the dividend per share.

5. SUMMARY AND CONCLUSIONS

The subject matter of corporate finance is interesting and challenging because it deals with three long-term and interrelated issues and these are the capital investment decision, financing decisions and dividend policy.

The issue of corporate dividend policy has attracted a large number of theoretical and empirical research papers. Indeed, explaining dividend policy has been one of the most difficult challenges facing corporate finance researchers. For example, more than two decades ago, it was stated that “the harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just don’t fit together” (Black, 1976).

The pioneering work which analyzed corporate dividend policy is the study done by Lintner (1956). Based on some survey and empirical analysis, the results of this paper indicate that American corporations follow stable dividend policies.

This paper has extended the dividend policy research to the Jordanian scene. In more specific terms, and as mentioned in the introductory chapter, this paper involved two questions (problems) and these are:

1. Do listed Jordanian companies follow stable dividend policies?
2. Do banking, industrial, insurance, and services companies behave in a similar fashion regarding the issue of dividend policy stability?

Based on the time period 1995-2005, the results of this paper indicated that listed Jordanian companies follow stable policies. However, the extent of this stability is much lower than companies which are listed on more advanced stock markets such as the USA. In addition, the results reflect the fact that the banking and services companies follow more stable dividend policies than the industrial and insurance companies.

Based on the analyses and results of this paper, a number of research recommendations can be made. These include the followings. First, it would be interesting to survey the Chief Financial officers (CFOs) of all listed Jordanian firms. The results of such a survey can shed more light on what really determines their companies’ dividend policy. Moreover, the results of such a survey can complement the results of papers which rely on econometric analysis. Second, the results of this paper can be advanced further by examining the factors that determine the dividend policy of listed Jordanian firms. For example, one can analyze the impact of, for example, leverage, firm size and profitability, and the ownership structure of firms on their dividend policy.

REFERENCES


Corporations. Corporate Governance 14: 266-276.
Mintz, J. and A. Weichenrieder 2004. Taxation and the
Financial Structure of German Outward FDI”, Goethe-University Frankfurt and CESifo.


