# COST OF DEBT AND DIVIDEND POLICY: EVIDENCE FROM MENA REGION

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**Abstract**

Prior literature documents a positive relationship between dividend policy and corporate governance, and negative relationship between the quality of corporate governance and cost of debt. Therefore, we hypothesize that there is a negative relationship between cost of debt and dividend policy. Using a sample of firms from the MENA region (Middle East and North Africa), during the period between 2004 and 2008, we document a negative relationship between cost of debt and dividend policy. Our results remain robust even after controlling for various firm-specific characteristics. The main reason for this negative relationship is that dividend policy act as a substitute for corporate governance mechanisms in emerging markets. Prior literature argues that creditors take into consideration the quality of corporate governance while assessing the riskiness of the firm. High dividend payout ratio reflects proper corporate governance, which would result in a lower required rate of return by creditors, a lower cost of debt for the firm.

**Keywords:** Cost of Debt; Dividend Policy; Corporate Governance

## Introduction

Prior literature documents a negative relationship between corporate governance and cost of debt. Bhojraj and Senpgupta (2003) show the existence of a positive relation between disclosure and bond ratings and a negative relation between disclosure and bond yields. Similarly, Zhu (2009) reports a negative relationship between the firm corporate governance level and the cost of debt. One of the reasons cited for this relationship is that improvement in corporate governance practices of the firm reduces information asymmetry. Hope (2003) documents that proper corporate governance mechanisms contribute in lowering the risks of the firm by reducing information asymmetry between insiders and outsiders. Likewise, Newell and Wilson (2002) provide evidence that proper corporate governance enhances firm's performance and reduces the risks perceived by outside investors. Since debt holders take into consideration the quality of corporate governance mechanisms of the firm while assessing the default risk of the firm, good corporate governance should result in a lower cost of debt.

In this paper, we investigate the relationship between dividend policy and cost of debt. Several papers consider dividend policy as one of the major tools that firms can use to reflect proper governance practices in emerging markets and attract outside investors (La Porta et al., 2000a). These studies regard emerging markets as markets characterized by the pervasiveness of corruption, weak legal institutions, and expropriation of minority shareholders (Saidi, 2004). Such corporate governance weaknesses at firm as well as country level deter the development of capital markets and hinder firms' access to external capital. La

Porta et al. (2000b) argue that dividend payout policy can be used as a substitute for the corporate governance of the firm. In other words, firms, aiming to raise funds externally and repeatedly, have to build a reputation that they are protecting shareholders by paying higher dividends to facilitate their access to capital markets. Sawicki (2008) shows that firms with weak corporate governance mechanisms tend to pay high dividends in emerging stock markets to build or improve their reputation. This strand of literature argues that high dividend payout mirrors the low level of agency problems within the firm. Myers (2000) argues that when the corporate governance mechanisms and investors' protection are low, outside investors would prefer high dividends rather than retained earnings. Similarly, Jensen (1986) documents how high dividend payout ratio contributes in lessening the agency cost by reducing the free cash flow that could be expensed on unprofitable projects. Therefore, firms paying high dividend are perceived to be less risky and experience low agency problems. Thus, management can use dividend as a signaling device to arrange for future access to capital markets at competitive rates.

Using data from eight MENA (Middle East and North Africa) countries, we document a significantly negative relation between cost of debt and dividend policy for the period between 2004 and 2008. This study uses interest coverage ratio as the proxy for debt. Prior literature associates higher interest coverage ratio with lower default spreads and thus lower cost of debt (Damodaran, 2001). Our results show an increase of 0.171 units of interest coverage ratio for each unit increase in payout ratio. Since higher interest coverage ratio is associated with low cost of debt, our result indicate a significant negative relationship between cost of debt and dividend payout ratios. Our results are robust even after controlling for a number of firm-specific characteristics – for example size, leverage, growth, and auditor type. All of the factors controlled for in our analysis can have significant impact on cost of debt. Our results, after controlling for a number of firm-specific characteristics, show an increase of 0.111 units in interest coverage ratio for each unit increase in dividend payout. We also show that our results are robust in different regions and different time periods. For example, our results remain qualitatively the same in North African region and in Middle East region. Similarly, our results retain their significance in different sample periods, i.e. sample period between 2004 and 2006 and between 2007 and 2008. An important finding of this paper is that it documents a strong and negative relationship between current payout and future cost of debt.

Our results have implications in a way that it will enable creditors to better assess the riskiness of firms and help management identify ways to reduce the cost of debt, therefore the cost of capital in MENA region. Lowering firms' cost of capital would enable the firm to undertake many projects that would have been rejected otherwise. This would increase shareholders' value and contribute to the growth, efficiency and enhanced productivity of the whole economy.

The paper will be structured as follows: Section 2 briefly discusses motivation and background for this study, while Section 3 illustrates our choice for cost of debt variable. Section 4 discusses the data used in this study. Section 5 presents assessment of the relationship between the cost of debt and dividend policy. Section 6 documents robustness of our results and the paper concludes with Section 7.

## Motivation and background

### Corporate governance in emerging markets

Investors have always been concerned about the relevant information, signals, and measures that would reflect the financial health of the firms they are investing in. Financial health of the firm would determine the risks of investing and thus the required rate of return. The need for relevant information and signals increase many fold in emerging markets where the corporate governance mechanisms are low. Prior literature suggests that insiders and managers do not disclose the information correctly in these markets (Leuz, Nanda and Wysocki, 2003). As a result, emerging market firms are prone to corruption, abuse of minority shareholders right through assets tunnelling, asset stripping, weak legal institutions, and insider trading and self dealing (Saidi, 2004). Prior literature, thus, documents increase in the fear of investors, delay in the development of capital markets, and inability of firm's to access external sources of financing in these markets. Shleifer and Vishny (1997) mention that "in less developed countries, including some of the transition economies, corporate governance mechanisms leads to substantial diversion of assets by managers of many privatized companies, and the virtual non-existence of external capital supply to companies".

Prior literature holds that the difficulty to raise external capital induces firms, especially those that need to raise funds from the market repeatedly, to look for innovative ways to distinguish themselves from their competitors. One such mechanism is the effective corporate governance. Newell and Wilson (2002) document that corporate governance helps firms improve their financial performance, enhance their market valuation, reduce risks, and increase investor confidence. By sending signals regarding the effectiveness of their corporate governance mechanisms, strength of investor protection rights, and lower agency problems, firms can build their reputation and attract outside investors to invest at a favourable rate with them.

### Dividend policy and corporate governance

Prior literature considers dividend policy as an important mechanism via which firms can build their reputation. This strand of literature argues that high dividend payouts are an important tool that can signal lower agency problems within the firm. Grossman and Hart (1980), for example, document that high dividend payouts alleviate agency conflicts through the reduction of free cash flow available to managers. Similarly, Jensen (1986) concludes that high payout ratio can lessen the agency cost by reducing the free cash flow that could be expensed on unprofitable projects. The above strand of literature argues that paying high dividends reflect managements' good faith and signals the low agency problems and the good corporate governance mechanisms. As a result, firms are able to raise capital at efficient rates. Gomes (2000), for example, documents that dividend policy may help firms raise capital by building reputation. He notes that by disgorging high amount of cash, firms can minimize the agency costs and improve their reputation and thus, enable them to raise capital at competitive rates.

The above findings have been discussed and interpreted in various ways in the literature. La Porta et al. (2000b) formalize the above findings in a theory that is called as the substitute model. They argue that insiders interested in issuing equity in the future choose to pay high dividends to establish a reputation for decent treatment of minority shareholders. An important interpretation of this theory is that even the weaker minority shareholder rights should be associated with higher dividend payouts.

**Corporate governance and cost of debt**

There has been an extensive literature on the relationship between corporate governance and the cost of debt. Bhojraj and Senpgupta (2003), for example, show the existence of a positive correlation between disclosure and bond ratings and a negative relation between disclosure and bond yields. Likewise, Blom and Schauten (2006) document a negative relationship between corporate governance and the cost of debt. This strand of literature argues that good corporate governance mechanisms reduce information asymmetry between firms and other agents in the capital markets and therefore reduce the risk of the firm. Debt holders, being outsider to the firm, minimize the information asymmetry by taking into consideration corporate governance mechanisms of the firm. Better governance mechanisms signal lower information asymmetries, therefore allowing debt holders to require lower returns on their investments.

**Dividend policy and cost of debt**

We have argued that dividend policy is an important determinant of the quality of corporate governance in emerging markets (La Porta et al., 2000a). High dividend payouts not only affect the reputation of firms vis-a-vis outside investors but also lower agency problems and information asymmetries (Grossman and Hart, 1980). An important implication of the relationship between dividend policy and corporate governance is that dividend policy should also be significantly related to cost of debt. We argue that high dividend payouts, being an indicator of better governance, should be associated with lower cost of debt. Thus, firms paying high dividends should be able to not only raise equity at lower rates but also be able to access debt at competitive rates.

**Cost of debt**

Unlike many studies that use the yield on outstanding bonds as a proxy for the cost of debt (Zhu, 2009; Blom and Schauten, 2006), our study uses interest coverage ratio as a proxy for the cost of debt. One of the reasons for this choice is the unavailability of the data on the yield on outstanding bonds in the MENA region. This is due to the fact that the bond market in the MENA region remains the weakest bond market in the world (Abed and Soueid, 2005).

The arguments behind the choice of interest coverage ratio as the proxy for cost of debt are based on (1) the relationship between cost of debt and credit ratings and (2) the relationship between interest coverage ratio and credit ratings.

**Credit ratings and cost of debt**

One of the most important ways to estimate the cost of debt is to add firm-specific debt premium to the risk-free rate. Prior literature considers credit ratings as the main drivers of firm's debt premium (Baker, Hern, and Bennett, 1999). Credit ratings are usually assigned by agencies, such as Standards and Poor's (S&P's) and Moody's. They define credit rating as the ability of an obligor to honor financial obligations and contracts.[46]

Plentiful of prior literature has used S&P's long-term credit ratings to proxy for the cost of debt.[47] For example, Minardi, Sanvicente, and Artes (n.d.) argue that the yield to maturity of fixed income securities is strongly correlated to credit ratings. They also document significantly lower yields for well-rated securities in comparison to poorly-rated

[46] S&P's (2008) defines credit rating as a current opinion of the creditworthiness of an obligor with respect to a specific financial obligation, while Moody's Investor Service (2007) defines credit rating as an opinion about the ability of entities to honor unsecured financial obligations and contracts. Consult S&P's and Moody's websites for the definition.

[47] See Mansi et al. (2004), Ghosh and Moon (2005), and Ashbaugh-Skaife, Collins and Lafond, (2006) for greater details.

securities. While, Baker et al. (1999) document that a decrease of credit rating of one notch from A- to BBB+ is associated with an increase in debt spreads by 30 basis points.

**Credit ratings and interest coverage ratio**

Prior literature documents that rating agencies take into consideration business risk, financial risk, and industry risk, amongst others, to arrive at an appropriate credit rating (Altman, Caouette, and Narayanan, 1998). This strand of literature notes that the rating agencies pay a special attention to Funds from Operations (FFO)[48] to interest ratio and to interest coverage ratio while determining the credit ratings (Baker et al., 1999). These ratios reflect firms' ability to honor their debt obligations. Baker et al. (1999) also note that credit rating agencies, such as S&P's and Moody's, require a specific interest coverage ratio for a given rating and that the highest interest coverage ratio corresponds to the highest rating. Furthermore, Altman and Katz (1976) use a multiple discriminate analysis to show that interest coverage ratio is one of the most important determinants of the credit rating. In another important study, Damodaran (2001) suggests the use of interest coverage ratio to come up with estimation for the cost of debt. He proposes the creation of synthetic ratings based on interest coverage ratio. He documents that higher interest coverage ratio corresponds to higher synthetic ratings.[49] These arguments confirm a positive correlation between credit rating and interest coverage ratio.

The above discussion implies a strong relationship between cost of debt and credit ratings, and a strong relationship between credit rating and interest coverage ratio. By extension, this would imply a strong relationship between cost of debt and interest coverage ratio.

**Data**

This paper documents the relationship between cost of debt and dividend policy in the MENA region. Our sample consists of 242 firms listed at the stock exchanges of eight MENA countries. The countries include Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Saudi Arabia, and United Arab Emirates. Our sample covers the period between 2004 and 2008. The choice of time period is driven by the fact that this period attracted significant interest from investors and regulators resulting in the increased market activity.

Datastream, Worlscope, and Thomson Financials were used to assemble data of the following items: cost of debt, payout ratio, debt to equity ratio, market capitalization, type of auditors, auditor's opinion, retained earnings to total assets ratio, revenues growth rate, total debt to common equity ratio, and total debt to common assets ratio.[50] We will, briefly, describe data in the following section.

**Cost of debt**

We measure the cost of debt by interest coverage ratio. Interest coverage ratio is defined as the ratio between Earnings before interest and taxes(EBIT)and total interest expenses. Table 1 documents the descriptive statistics for the cost of debt. Panel A presents cost of debt within each country, Panel B illustrates similar statistics for each industry, and Panel C exhibits descriptive statistics for the cost of debt for each year.

The results in Table 1, Panel A, shows that interest coverage ratio is of almost the same range in most of the countries. The only exceptions are Egypt, where it is too high, and Bahrain, where it is too low. It points to higher cost of debt in Bahrain and lower cost of debt

[48] FFO is the sum of funds from operations and cash interest paid.
[49] The method was developed by listing all rated firms in the US, based on their market capitalization lower than or greater than $2 billion, with their interest coverage ratio, and then sorting firms based on their bond ratings.
[50] See Appendix – A for the definition of variables.

in Egypt relative to other countries in the sample. Table 1, Panel B, documents interest coverage ratio for each sector represented in our dataset. The results show homogeneity of cost of debt across all industries. The only exception is healthcare, where cost of debt is too high. Table 1, Panel C, documents interest coverage ratio for each year. The results show no noticeable difference through our sample period.

**Definition of variables**

| Variable | Definition | Source |
|---|---|---|
| Cost of Debt (CoD) | Earnings before interest and taxes divided by total interest expenses | Worldscope |
| Payout ratio (PoR) | Payout is the ratio of total dividends to total earnings. | Worldscope |
| Size of the firm (Size) | The natural logarithm of the total market value of equity. | Datastream |
| Total debt to common equity (LEV1) | The total book value of debt divided by the market value of equity. Value of equity equals the total number of outstanding shares multiplied by the stock price. | Thomson Financials |
| Sales growth (Growth) | The ratio of change in the firm's revenues between two consecutive years | Worldscope |
| Retained earnings (RE) to total assets (RE) | Retained earnings (RE) divided by book value of total assets. Retained earnings equals Beginning retained earnings + Net Income - Dividends | Worldscope |
| Choice of auditors (Auditors) | This variable is assigned the value of 1 if the firm was audited by one of the big 4 auditors (Deloitte Touche Tohmatsu, Ernst & Young, KPMG, and PricewaterhouseCoopers); 0 otherwise. | Worldscope |
| Auditors' opinion (Opinion) | This variable is assigned a value of 1 if the firm has received an unqualified opinion; 0 otherwise. | Worldscope |
| Total debt to total assets (LEV2) | Total book value of debt divided by the book value of total assets. | Thomson Financials |

Table 1: Descriptive statistics for cost of debt

**Dividend policy**

In this study, we consider dividend payout ratio as a proxy for dividend policy. The descriptive statistics for dividend policy are presented in Table 2. Panel A documents dividend payout within each country, Panel B exhibits similar statistics for each industry, and Panel C presents descriptive statistics for dividend payout for each year.

Table 2, Panel A, reports relatively low level of payout ratios in the sample countries. None of the countries have payout ratio exceeding 40%. This observation is in line with the findings of previous studies that document relatively lower level of payout ratios in emerging markets. An interesting observation from Table 2, Panel A, is extremely low payout ratios by the firms located in the UAE. The average payout ratio for the UAE firms is 16.98%. This can be due the high growth rate of the country's firms that require firms to increase their reinvestment rate to take advantage from the available investment opportunities. However, weakness of corporate governance mechanisms may also be cited as a reason for such low average payout ratios.

The results in Table 2, Panel B and Panel C, show that payout ratios are similar across industries and across years in our sample, suggesting homogeneity in dividend policies across industries and years. The only exception is telecommunications sector that reports more than 40% of dividend payout ratios.

The following table documents the descriptive statistics for cost of debt. We measure cost of debt by interest coverage ration (EBIT / Total Interest Expense). Panel A documents

cost of debt for each country, Panel B documents similar statistics for each industry, while Panel C reports cost of debt for each year.

**Panel A: Cost of debt within each country**

| Country | Average Interest Coverage Ratio |
|---|---|
| Bahrain | 27.618 |
| Egypt | 13.560 |
| Jordan | 18.316 |
| Kuwait | 15.820 |
| Morocco | 18.444 |
| Qatar | 22.438 |
| Saudi Arabia | 17.795 |
| United Arab Emirates | 19.185 |

**Panel B: Cost of debt within each industry**

| Industry | Average Interest Coverage Ratio |
|---|---|
| Oil and Gas | 13.105 |
| Basic Materials | 13.473 |
| Industrials | 17.794 |
| Consumer Goods | 17.256 |
| Healthcare | 32.600 |
| Consumer Services | 20.550 |
| Telecommunications | 16.439 |
| Utilities | 11.438 |
| Technology | 9.521 |

**Panel C: Cost of debt within each year**

| Year | Average Interest Coverage Ratio |
|---|---|
| 2004 | 14.972 |
| 2005 | 20.234 |
| 2006 | 16.119 |
| 2007 | 16.848 |
| 2008 | 17.481 |

Table 2: Descriptive statistics for dividend policy

**Control variables**

Size (Size), revenues growth (Growth), choice of auditors (Auditor), auditors' opinion (Opinion), total debt to common equity (Lev 1), retained earnings to total assets (RE/TA), and total debt to total assets (Lev 2) are used as control variables for this study. Table 3 reports the descriptive statistics of our control variables.

The following table documents the descriptive statistics for dividend payout ratio. We measure dividend payout ratio by percentage of earnings paid as dividends to shareholders. Panel A documents dividend payout ratio for each country, Panel B documents similar statistics for each industry, while Panel C reports dividend payout ratio for each year.

**Panel A: Dividend policy within each country**

| Country | Average Dividend Payout Ratio (PoR) |
|---|---|
| Bahrain | 37.848 |
| Egypt | 34.520 |
| Jordan | 36.911 |
| Kuwait | 30.316 |
| Morocco | 38.298 |
| Qatar | 31.464 |
| Saudi Arabia | 26.759 |
| United Arab Emirates | 16.983 |

**Panel B: dividend policy within each industry**

| Industry | Average Dividend Payout Ratio (PoR) |
|---|---|
| Oil and Gas | 35.903 |
| Basic Materials | 34.032 |
| Industrials | 29.422 |
| Consumer Goods | 30.517 |
| Healthcare | 38.031 |
| Consumer Services | 27.660 |
| Telecommunications | 41.874 |
| Utilities | 32.624 |
| Technology | 24.651 |

**Panel C: dividend policy within each year**

| Year | Average Dividend Payout Ratio (PoR) |
|---|---|
| 2004 | 32.873 |
| 2005 | 27.063 |
| 2006 | 26.622 |
| 2007 | 31.420 |
| 2008 | 33.2181 |

Table 3: Descriptive statistics for control variables

Table 5 represents the correlation matrix for the variables used in our analysis. It shows low levels of correlations between variables. This fact enables us to include all of the variables together in our regression equation.

The following table documents the descriptive statistics for the control variables used in our study. Panel A documents descriptive statistics for each country, Panel B documents similar statistics for each industry, while Panel C reports descriptive statistics for each year.

**Panel A: control variables within each country**

| Country | LEV1 | Size | LEV2 | RE/TA | Growth |
|---|---|---|---|---|---|
| Bahrain | 20.380 | 4.456 | 12.175 | 0.173 | 76.269 |
| Egypt | 70.940 | 7.887 | 25.384 | 0.137 | 79.289 |
| Jordan | 32.84 | 5.107 | 14.209 | 0.060 | 18.028 |
| Kuwait | 58.022 | 4.582 | 26.024 | 0.148 | 71.308 |
| Morocco | 79.809 | 8.818 | 22.563 | 0.075 | 33.545 |
| Qatar | 44.775 | 7.843 | 22.923 | 0.070 | 361.270 |
| Saudi Arabia | 61.137 | 8.410 | 25.443 | 0.092 | 117.318 |
| United Arab Emirates | 54.188 | 8.038 | 23.682 | 0.100 | 79.033 |

**Panel B: control variables within each industry**

| Industry | LEV1 | Size | LEV2 | RE/TA | Growth |
|---|---|---|---|---|---|
| Oil and Gas | 75.514 | 5.741 | 28.810 | 0.126 | 64.342 |
| Basic Materials | 82.815 | 7.682 | 31.509 | 0.098 | 189.720 |
| Industrials | 55.348 | 6.929 | 23.263 | 0.128 | 44.996 |
| Consumer Goods | 42.911 | 6.059 | 20.781 | 0.121 | 27.297 |
| Healthcare | 11.621 | 6.684 | 8.894 | 0.091 | 10.045 |
| Consumer Services | 38.687 | 6.470 | 17.421 | 0.113 | 38.219 |
| Telecommunications | 73.720 | 9.200 | 23.750 | 0.123 | 36.539 |
| Utilities | 55.905 | 7.216 | 23.339 | 0.052 | 14.766 |
| Technology | 59.018 | 5.645 | 27.070 | 0.085 | 64.080 |

**Panel C: control variables within each year**

| Year | LEV1 | Size | LEV2 | RE/TA | Growth |
|---|---|---|---|---|---|
| 2004 | 66.695 | 6.572 | 25.773 | 0.092 | 39.630 |
| 2005 | 50.651 | 6.880 | 22.553 | 0.114 | 265.229 |
| 2006 | 52.542 | 6.692 | 22.890 | 0.127 | 58.481 |
| 2007 | 61.016 | 6.663 | 25.011 | 0.125 | 53.517 |
| 2008 | 62.039 | 6.767 | 24.116 | 0.113 | 89.825 |

Table 4: Correlation matrix

## Methodology

The most obvious question while analyzing the relationship between cost of debt and dividend policy is to see whether or not there exist a significant relationship between the two. We test this relationship by estimating a regression with cost of debt as a dependent variable and dividend policy as an independent variable. If our arguments regarding the relationship between cost of debt (CoD) and dividend policy (PoR) are true, we should expect the coefficient estimate for the variable representing dividend policy to be statistically significant and positive. Our basic regression equation takes the following form. For the purpose of completeness, we will estimate all of the equations used in this study with and without year (YDum), industry (IDum), and country dummies (CDum).[51]

$$CoD_t = \alpha + \beta_1 (PoR_t) + \sum_{yr} \beta^{yr} (YDum) + \sum_{ind} \beta^{ind} (IDum) + \sum_{Ctry} \beta^{Ctry} (CDum) + \varepsilon \quad (1)$$

The result of the above equation is reported in Table 5. As hypothesized, our results show a significantly positive relationship between payout ratio and cost of debt. We document that an increase of 0.171 units of interest coverage ratio for each unit increase in payout ratio (without including dummy variables) and an increase of 0.202 units of interest coverage ratio for each unit increase in payout ratio (while including dummy variables). Since increase in interest coverage ratio represents lower costs of debt, our results indicate significantly negative relationship between cost of debt and payout ratios. The reason behind the negative relationship is that firms may use high payout ratios as a signaling mechanism to tell investors that they are properly governed. Good governance should result in lowering information asymmetry and thus reducing the cost of debt. Furthermore, high payout ratios may also indicate lower level of agency problems within the firm by signaling to the market that no excess cash is available with the firm to expropriate (Easterbrook, 1984). This will also result in lowering the cost of debt.

This table documents correlations for the variables used in our study. The sample period is from 2004 to 2008 and the countries represented in our analysis are Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Saudi Arabia, and United Arab Emirates.

| | PoR | Auditor | Opinion | LEV1 | Size | LEV2 | RE/TA |
|---|---|---|---|---|---|---|---|
| PoR | 1 | | | | | | |
| Auditor | -0.014 | 1 | | | | | |
| Opinion | -0.005 | -0.005 | 1 | | | | |
| LEV1 | -0.087 | -0.005 | 0.0567 | 1 | | | |
| Size | 0.008 | 0.447 | 0.0329 | 0.100 | 1 | | |

[51] We used robust regression in STATA for all of the regression estimations done in this paper. Robust regression can be used in any situation in which you would use OLS regression. When doing the regression diagnostics, you might discover that one or more data points are outliers. These are the points that you have determined are not data entry errors, from a different population than the rest of your data, and for which you have no compelling reason to exclude them from the analysis. Robust regression is a compromise between deleting these points, and allowing them to violate the assumptions of OLS regression.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LEV2 | -0.141 | -0.069 | 0.0384 | 0.886 | 0.037 | 1 | |
| RE/TA | 0.101 | -0.020 | -0.0074 | -0.200 | 0.051 | -0.160 | 1 |
| Growth | -0.087 | 0.03 | 0.0098 | 0.023 | -0.022 | 0.054 | -0.115 |

Table 5: Relationship between cost of debt and dividend policy (without control variables)

We may argue that firm-specific characteristics may have a role in driving the results of the above equations. For instance, larger firms may pay higher dividends and enjoy access to preferential debt financing due to their relatively lower perceived risk. In such situation, a negative relationship between dividend policy and cost of debt is caused by firm size instead of dividend. Mindful of the effects that firm-specific factors may have on cost of debt, we re-estimate the above equation after controlling for several firm-specific characteristics. For example, size of the firm (Size) is used to capture for any effect that the size may have on cost of debt. Prior literature has shown that smaller firms are riskier than larger firms (Banz, 1981). As a result, we should expect higher cost of debt for smaller firms. Furthermore, Total debt to common equity ratio (LEV1) and total debt to total assets ratio (LEV2) were added to control for the effect of leverage on the cost of debt.[52] Prior literature associates higher leverage with higher risk (Ahmed et al., 2008; Zhu, 2009). We also controlled for the governance environment of the firm by introducing two dummy variables representing whether a firm is audited by big-four auditor (Auditor) and whether the auditors have issued unqualified opinion (Opinion) regarding firm's disclosure. Mansi, Maxwell and Miller, (2004) and Pittman and Fortin (2004) document that the use of big-four auditor is associated with a lower cost of debt, while Li, Stokes Taylor and Leon, (2009) document that firms receiving a qualified audit opinion suffer an increase in the cost of equity capital.[53] Retained earning to total assets (RE/TA) is also used as a controlling variable to capture the impact of higher or lower retained earnings on the risk perception of creditors. Firms with high retained earnings are more able to meet their obligation even when the operations of the firm are not generating enough cash flows. This would reduce the default risk of firms with high retained earnings, and therefore their cost of debt. While,sales growth (Growth) is used as a proxy for the growth of the firm. High growth necessitates more external financing, but it has a lower cost (Zhu, 2009).

$$\begin{aligned} CoD_t &= \alpha + \beta_1(PoR_t) + \beta_2(Auditor_t) + \beta_3(Opinion_t) + \beta_4(LEV1_t) \\ &+ \beta_5(LEV2_t) + \beta_6(Size_t) + \beta_7(Growth_t) + \beta_8(RE/TA_t) \\ &+ \sum_{yr} \beta^{yr}(YDum) + \sum_{ind} \beta^{ind}(IDum) + \sum_{Ctry} \beta^{Ctry}(CDum) + \varepsilon \end{aligned} \quad (2)$$

The result of the above equation is reported in Table 6. The results document that our hypothesized relationship between cost of debt and dividend payout remains intact even after controlling for a number of different firm-specific characteristics. The results show a significantly positive relationship between dividend policy and interest coverage ratio, suggesting lower cost of debt. We document an increase of 0.111 units in interest coverage ratio for each one unit increase in dividend payout (without including the dummy variables), and an increase of 0.128 units in interest coverage ratio for each one unit increase in dividend payout (while including the dummy variables). An important observation that should be emphasized is that the adjusted $R^2$ has increased from 5.40% in equation (1) to 34.3% in

[52] The importance of the leverage ratios pushes us to use more than one proxy to capture most of its aspects. The total debt to common equity is more forward looking since debt is scaled on the market value of equity. While, total debt to total assets is backward looking since total debt is scaled by the book value of assets. Even if there is relatively high correlation between the two variables, the VIF value is below 10 for all the regressions estimated by us, indicating no severe multicollinearity.

[53] Another strand of literature argues that a high leverage ratio reflects their good reputation in the market and firm's their ability to raise debt more easily (Denis and Mihov, 2003).

equation (2). This fact means that firms-specific characteristics have a big impact on explaining cost of debt.

The following table documents the relationship between cost of debt and dividend policy using equation (1). The sample period is from 2004 to 2008 and the countries represented in our analysis are Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Saudi Arabia, and United Arab Emirates. Variables significant at 10% are followed by *, variable significant at 5% by **, and variable significant at 1% by ***.

| | **Equation (1)** | |
|---|---|---|
| PoR | 0.171*** | 0.202*** |
| Year Dummies | No | Yes |
| Industry Dummies | No | Yes |
| Country Dummies | No | Yes |
| No. of Observations | 691 | 548 |
| Adjusted-$R^2$ | 0.054 | 0.085 |
| F-Values | 33.860 | 3.220 |

Table 6: Relationship between cost of debt and dividend policy (with control variables)

**Robustness of results**

In this section, we investigate whether our results are robust to different specifications.

**Relationship between cost of debt and dividend policy in different regions**

As a first robustness check, we re-estimate equation (2) for North Africa and Middle East separately. If our arguments are robust, the relationship between cost of debt and dividend policy should hold in both regions. The results of this estimation are provided in Table 7. The results show a significantly positive relationship between interest coverage ratio and dividend policy for both regions, suggesting that high dividend payouts are associated with lower cost of debt. The relationship is, however, weaker in Middle East.

The following table documents the relationship between cost of debt and dividend policy using equation (2). The sample period is from 2004 to 2008 and the countries represented in our analysis are Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Saudi Arabia, and United Arab Emirates. Variables significant at 10% are followed by *, variable significant at 5% by **, and variable significant at 1% by ***.

| | **Equation (2)** | |
|---|---|---|
| PoR | 0.112*** | 0.128*** |
| Auditor | 1.954 | 0.751 |
| Opinion | 5.569** | 6.146* |
| LEV1 | 0.054** | 0.109*** |
| Size | 0.441 | -1.022 |
| LEV2 | -0.834*** | -0.979*** |
| RE/TA | 36.581*** | 54.473*** |
| Growth | 0.000 | 0.007* |
| Year Dummies | No | Yes |
| Industry Dummies | No | Yes |
| Country Dummies | No | Yes |
| No. of Observations | 486 | 386 |
| Adjusted-$R^2$ | 0.343 | 0.358 |
| F-Values | 27.72 | 8.09 |

Table 7: Relationship between cost of debt and dividend policy in different regions

**Relationship between cost of debt and dividend policy in different years**

As a second robustness check, we re-estimate equation (2) for different time periods. Our first estimation period is spans from 2004 to 2006, while the second estimation period ranges from 2007 to 2008. The results of this estimation are provided in Table 8. The results show a significantly positive relationship between interest coverage ratio and dividend policy for both time periods, suggesting that high dividend payouts are associated with lower cost of debt.

The following table documents the relationship between cost of debt and dividend policy in different regions using equation (2). The sample period is from 2004 to 2008. North Africa comprise of Egypt and Morocco, while Middle East include Bahrain, Jordan, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates. Variables significant at 10% are followed by *, variable significant at 5% by **, and variable significant at 1% by ***.

| | **North Africa** | **Middle East** |
|---|---|---|
| PoR | 0.1455** | 0.0997** |
| Auditor | -8.582 | 1.391 |
| Opinion | 12.082 | 7.126* |
| LEV1 | 0.108*** | 0.099** |
| Size | 0.044 | -0.922 |
| LEV2 | -0.958*** | -0.944*** |
| RE/TA | -1.279 | 77.190*** |
| Growth | -0.004 | 0.007** |
| Year Dummies | Yes | Yes |
| Industry Dummies | Yes | Yes |
| Country Dummies | Yes | Yes |
| No. of Observations | 110 | 276 |
| Adjusted-$R^2$ | 0.356 | 0.380 |
| F-Values | 5.79 | 7.17 |

Table 8: Relationship between cost of debt and dividend policy in different time periods

**Relationship between next period's cost of debt and current dividend policy**

As a last robustness check, we adjust equation (2) as follows to test the relationship between next period's cost of debt and current dividend policy. The motivation behind estimating this relationship is driven by the fact that creditors take into consideration historical data, the historic dividend payouts, to assess the current riskiness of the firm.

$$CoD_{t+1} = \alpha + \beta_1(PoR_t) + \beta_2(Auditor_t) + \beta_3(Opinion_t) + \beta_4(LEV1_t) + \beta_5(LEV2_t) + \beta_6(Size_t) + \beta_7(Growth_t) + \beta_8(RE/TA_t) + \sum_{yr}\beta^{yr}(YDum) + \sum_{ind}\beta^{ind}(IDum) + \sum_{Ctry}\beta^{Ctry}(CDum) + \varepsilon \quad (3)$$

The results of the above regression equation are provided in Table 9. The results show that current dividend payouts are significantly associated with next period's cost of debt. We document an increase of 0.096 units in next period's interest coverage ratio for each one unit increase in payout, suggesting a negative relationship between next period's cost of debt and current dividend payout ratio.

The following table documents the relationship between cost of debt and dividend policy in different time periods using equation (2). The first period consist of years between 2004 and 2006, while the second period consists of years between 2007 and 2008. The countries represented in our analysis are Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar,

Saudi Arabia, and United Arab Emirates. Variables significant at 10% are followed by *, variable significant at 5% by **, and variable significant at 1% by ***.

| | 2004-2006 | 2007-2008 |
|---|---|---|
| PoR | 0.122** | 0.143*** |
| Auditor | 0.566 | 0.996 |
| Opinion | 0.615 | 9.416* |
| LEV1 | 0.106*** | 0.110** |
| Size | -2.049** | 0.471 |
| LEV2 | -0.887*** | -1.089*** |
| RE/TA | 59.351*** | 46.201** |
| Growth | 0.004 | 0.026 |
| Year Dummies | Yes | Yes |
| Industry Dummies | Yes | Yes |
| Country Dummies | Yes | Yes |
| No. of Observations | 209 | 177 |
| Adjusted-$R^2$ | 0.2970 | 0.390 |
| F-Values | 6.92 | 6.50 |

Table 9: Relationship between next period's cost of debt and current dividend policy

The following table documents the relationship between next period's cost of debt and dividend policy using equation (2). The sample period is from 2004 to 2008 and the countries represented in our analysis are Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Saudi Arabia, and United Arab Emirates. Variables significant at 10% are followed by *, variable significant at 5% by **, and variable significant at 1% by ***.

| | Equation (3) |
|---|---|
| PoR | 0.096*** |
| Auditor | 2.294 |
| Opinion | 2.850 |
| LEV1 | 0.078** |
| Size | -0.224 |
| LEV2 | -0.069*** |
| RE/TA | 44.560*** |
| Growth | 0.005 |
| Year Dummies | Yes |
| Industry Dummies | Yes |
| Country Dummies | Yes |
| No. of Observations | 243 |
| Adjusted-$R^2$ | 0.275 |
| F-Values | 6.67 |

## Conclusion

This paper documents the relationship between cost of debt and dividend policy in the MENA region during the period between 2004 and 2008. Our results show a significantly negative relationship between cost of debt and dividend policy. Our results are robust after controlling for different firm-specific characteristics and in different regions and periods. We argue that one of the reasons for this negative relationship is that dividend policy acts as a substitute for corporate governance mechanisms in emerging markets. Sine higher payout

ratios signal lower agency problems and better governance, creditors can infer valuable information about the riskiness of the firm and thus can ask for lower return for better governed firms.

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