

CORPORATE GOVERNANCE AND THE COST OF EQUITY: EVIDENCE FROM THE DEVELOPING COUNTRY

Mahmoud A. Odat^{*}, Khaldoon Ahmad Al Daoud^{**},
Ziad Mohammad Zurigat^{***}

^{*} Department of Accounting, Faculty of Economics and Administrative Sciences, Yarmouk University, Irbid, Jordan

^{**} *Corresponding author*, Department of Accounting, Faculty of Economics and Administrative Sciences, Yarmouk University, Irbid, Jordan
Contact details: Yarmouk University, P. O. Box 566, 21163 Irbid, Jordan

^{***} Department of Banking & Finance, Faculty of Economics and Administrative Sciences, Yarmouk University, Irbid, Jordan



Abstract

How to cite this paper: Odat, M. A., Al Daoud, K. A., & Zurigat, Z. M. (2021). Corporate governance and the cost of equity: Evidence from the developing country. *Journal of Governance & Regulation*, 10(4), 144–155.
<https://doi.org/10.22495/jgrv10i4art13>

Copyright © 2021 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).
<https://creativecommons.org/licenses/by/4.0/>

ISSN Print: 2220-9352
ISSN Online: 2306-6784

Received: 09.06.2021
Accepted: 16.09.2021

JEL Classification: E22, M41, M48
DOI: 10.22495/jgrv10i4art13

This study examines the impact of corporate governance mechanisms on a firm's cost of equity. The corporate governance mechanisms examined consist of board size, board independence, CEO duality, multiple directorships held by board members, and board political influence. To accomplish the study objective, 210 firm-year observations for manufacturing companies listed on Amman Stock Exchange (ASE) in the period 2014–2018 are analyzed using panel data analysis techniques. The results of the fixed effects regression model reveal that CEO duality and board political influence negatively affect the cost of equity, while there is no significant effect of board size, board independence, and multiple directorships on the cost of equity. The results suggest that firms' board of directors is an important factor in mitigating the agency problem suggested by Jensen and Meckling (1976). They also suggest that information risk is priced, which is consistent with previous research such as Easley, Hvidkjaer, and O'Hara (2002), and that the board of directors plays a role in reducing that risk in capital markets.

Keywords: Corporate Governance, Board of Directors, Cost of Equity, Jordan

Authors' individual contribution: Conceptualization — M.A.O. and K.A.A.D.; Methodology — M.A.O., K.A.A.D., and Z.M.Z.; Validation — M.A.O., K.A.A.D., and Z.M.Z.; Formal Analysis — M.A.O., K.A.A.D., and Z.M.Z.; Data Curation — M.A.O., K.A.A.D., and Z.M.Z.; Writing — Original Draft — M.A.O., K.A.A.D., and Z.M.Z.; Writing — Review & Editing — M.A.O., K.A.A.D., and Z.M.Z.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

A firm's cost of equity is the return that investors demand owning the company's shares and bearing the risk associated with ownership. This return may be gained either as dividends or as an appreciation in the value of the shares (Situmeang, Erlina, Maksun, & Supriana, 2018). The cost of equity has been a subject of particular interest in accounting research, both analytical and empirical. Analytical research, for example, shows that information disclosures help to reduce the company's cost of

equity (Clinch & Verrecchia, 2015; Easley & O'Hara, 2004; Lambert, Leuz, & Verrecchia, 2007; Clinch, 2013; Gao, 2010). By providing more information, or high-quality information, companies reduce uncertainties related to the future payoffs of the firm's stock, which, in turn, lower the risk premium that investors demand on their investments in the company's stock resulting in a reduction in the company's cost of equity. Empirical research, such as Botosan (1997), provides evidence that the company's cost of equity decreases with the level of voluntary information disclosure.

This suggests that information asymmetries in the capital market are more critical and relevant and consequently, influence the equity costs. In addition, Francis, Khurana, and Pereira (2005) suggest that earnings quality, among other favorable earnings attributes, is negatively associated with the firm's cost of equity.

It is well-known that the existence of asymmetric information makes the agency problem more severe and induces the company to follow the pecking order of financing by ranking capital sources in accordance with their costs (Myers & Majluf, 1984). This hierarchy financing behavior of listed companies makes equity the last choice of financing. This is because of the adverse selection behavior of potential investors that might arise when the company decides to finance new investment opportunities by issuing equity. To overwhelm this problem and the effects it may have on the cost of equity, the corporate governance mechanisms with other tools are suggested. Corporate governance refers to the collection of rules, procedures, practices, and processes that govern companies. This concept came into action when ownership of the company is separated from management. However, the separation between ownership and management comes with a benefit that enables professional managers to run large firms more efficiently. Yet, it carries the owners the risk of agency costs for the firm (Srivastava, Das, and Pattanayak, 2019). Jensen and Meckling (1976), who provide the theoretical framework of the agency theory, argue that the separation between ownership and firm's management may provide managers with an incentive to work for their own interests while ignoring those of shareholders.

Therefore, effective corporate governance mechanisms are essential to ensure that the interests of all stakeholders of the company (e.g., the board of directors, managers, shareholders, creditors, customers, suppliers, auditors, regulators) are aligned. Moreover, it ensures that the financial statements produced by the company contain complete and accurate information such that the same relative information quality exists between management and other parties (Situmeang et al., 2018). This makes corporate governance an important factor for reducing information asymmetry in the capital market. Because investors' required rate of return, which represents the cost of equity for the firm, is positively related to information asymmetry and information risk, an effective corporate governance mechanism would help to reduce the firm's cost of equity, increasing the firm value and, consequently, help the company avoid the risk of forgoing some of its valuable investment opportunities.

In fact, the small and thin Jordanian capital market with a limited number of buyers and sellers makes the market competition low and thereby increases the cost of raising funds in the primary market. Moreover, market frictions such as bankruptcy risk, agency costs, and information risk are relevant and influence firms' financial decisions (Zurigat, 2016). This, indeed, increases the need for mitigating the impact of market frictions on Jordanian firms' performance. Numerous techniques and mechanisms are suggested as an effective tool for handling the risk of the presence of market

frictions. Recently, corporate governance mechanisms are among the most widely used techniques.

Therefore, the main goal of the current study is to investigate the effect of the corporate governance mechanisms on the firms' cost of equity. More precisely, we examine the effect on the firms' cost of equity of several characteristics of their board of directors. These characteristics include the size of the board, independence of the board's members, CEO duality, which refers to the situation where the CEO of the company also hold the chair of the board position, multiple directorships, which refer to the number of directors who hold three or more other directorships in other companies, and political influence, which refers to the number of directors who have political positions in the country.

These characteristics are selected as they are commonly used in the literature to represent the corporate governance mechanisms. In addition, they are expected to affect the effectiveness of the board in relation to its monitoring and controlling role, and, therefore, would impact companies' cost of equity. The intuitive is that a good corporate governance structure would enhance disclosure practices and transparency which, in turn, would reduce information risk and, ultimately, reduce the cost of equity.

While theories suggest that board characteristics can have significant effects on firms' performance and cost of equity, the empirical evidence on this issue is inconsistent. For example, Hassan, Kayani, and Ayub (2018) find a negative relationship between the independence of the board and the firm's cost of capital, whereas Ali, Yang, Sarwar, and Ali (2019) show that board independence, as well as CEO duality, are insignificant variables for the cost of equity. In addition, Manna, Sahu, and Pandey (2020) find a significant positive association between multiple directorships and firms' performance, while Chiranga and Chiwira (2014) support the busyness hypothesis and conclude that executives with multiple directorships do not add much value to the board of directors to the extent that they perform better than businesses without multiple board directorships. Further, Shin, Hyun, Oh, and Yang (2018) and Sari and Anugerah (2011) indicate that political influence (connections) is positively associated with both transparency and firm performance. In contrast, Proença, Augusto, and Murteira (2020) indicate that political links negatively affect bank performance. This is because the interest of the board members with political links may overlap with their institution's interests, by approving unprofitable activities and relaxing the analysis of risk for loans.

The current study supplements existing research that examine the association between the corporate governance mechanisms and firm value, corporate performance, accounting disclosures, information asymmetry, etc. It is expected to provide evidence related to the influence of corporate governance on the firms' cost of equity. While most prior research on this issue is conducted in developed or emerging economies, this research examines this association in developing countries. It will contribute to an improved understanding of the effectiveness of firm governance structures in such countries in monitoring opportunistic behavior of managements to ensure that the interest of all

stakeholders of the company is protected. Our results may bring regulators' attention to areas that require amendments in corporate governance codes. They also can help companies in determining practices or attributes that have the potential to lower the cost of their equity. Finally, the results will help to determine whether there is an asymmetric impact for corporate governance on the firm's cost of equity in developed and developing countries.

The remainder of the paper is structured as follows. Section 2 reviews the previous study on the relationship between the corporate governance mechanisms and the cost of equity. In this section, we also develop the study hypotheses. Section 3 describes the sample and the study design used to address the objective of the research. Section 4 discusses the main findings. Finally, the conclusion and suggestions for future work are presented in Section 5.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESES

2.1. Corporate governance, disclosure, and cost of equity

The major objective of corporate governance is to ensure that the interest of all stakeholders of a company is protected. In this regard, Setiany, Suhardjanto, Lukviarman, and Hartoko (2017) indicate that corporate governance restricts opportunism and drive directors to opt for accounting practices, thus aligning the interests of the company and its shareholders.

However, previous studies have used different measures for corporate governance including corporate governance scorecards and survey questionnaires. For example, Chen, Chen, and Wei (2009) use the Credit Lyonnais Securities Asia (CLSA) survey that includes 57 criteria, which are divided into seven groups: 1) transparency, 2) independence and discipline, 3) management, 4) responsibility, 5) accountability, 6) fairness, and 7) social awareness.

In addition, previous research has used several attributes for the firm's board of directors as measures for the corporate governance mechanisms. A firm's board of directors has a key role in limiting managerial discretion and, subsequently, managing the conflict of interests among all stakeholders of the company (Bouaziz & Triki, 2012). Thus, a well-structured board of directors can control and motivate a company's management effectively for the benefit of its shareholders (Han, Wang, & Yue, 2004).

Numerous studies provide evidence that corporate governance affects firms' disclosure (Boubaker, Hamrouni, & Liang, 2014; Ho & Taylor, 2013; Beekes, Brown, & Zhang, 2015). Boubaker et al. (2014), for example, indicate that firm governance structures play an important role in reducing information asymmetry among managers and investors through the effective monitoring of the top executives of the company. Beekes et al. (2015) find that after the Australian Securities Exchange (ASX) introduced the corporate governance guidelines in 2003, Australian companies have increased their disclosure levels, became more transparent, and demonstrated an improvement in the timeliness of

bad news disclosure relative to good news disclosure.

In another track of research, several studies provide evidence that information disclosures reduce information risk and, consequently, reduce firms' cost of equity (Botosan & Plumlee, 2002; Botosan, 1997; Francis et al., 2005; Lambert et al., 2007; Dhaliwal, Li, Tsang, & Yang, 2011; Gao, 2010). Lambert et al. (2007), for example, suggest that increasing mandatory disclosure quality should bring the firm cost of capital closer to the risk-free rate of return. Dhaliwal et al. (2011) find that by disclosing corporate social responsibility (CSR) information, firms would be able to obtain capital more easily, acquire equity at a lower cost, attract institutional investors, and attract more analysts.

Theoretical research, which examined the association between firms' disclosure and their cost of equity, provides two explanations of how information disclosure affects the cost of equity (Botosan, 1997). The first explanation is that information disclosure reduces liquidity. By disclosing more information, firms reduce the information asymmetries among traders, and hence decrease the bid-ask spread in capital markets and, consequently, reduces the cost of equity through reduced transaction costs or the increased demand for the company's stocks. Leuz and Verrecchia (2000) show that German firms that adopted the German GAAP in their consolidated financial reports, which have been characterized as having low levels of disclosure, have higher bid-ask spreads than firms adopting the international reporting standards or the U.S. GAAP accounting standards, which commit firms to substantially increased levels of disclosure. Diamond and Verrecchia (1991) show that revealing public data to reduce information asymmetry reduces the cost of equity capital because of the increased demand for the firm's stocks by large investors due to the increased liquidity of the stock.

The second explanation for the effect of disclosure on firms' cost of equity is that information disclosure increases the risk-related discount that investors apply to equity prices. That is, the cost of equity represents a risk-adjusted rate that investors use in discounting the expected future cash flow in order to arrive at the current price of the stock given the information disclosed (Botosan, 2006). By disclosing (high quality) information, firms reduce the adverse selection problem for (risk-averse) investors, which in turn, increases the discount investors apply to future cash flow, thus, lower the cost of equity for the company (Clinch, 2013; Clinch & Verrecchia, 2015; Lambert et al., 2007). Defining the cost of equity as the discount rate used to calculate the present value of future cash flows, Lambert et al. (2007) show that accounting information influences the company's cost of equity either directly, or indirectly. The direct effect is where higher quality accounting information affects investors' assessment of the distribution of the future cash flows. The indirect effect is where more precise accounting affects company's real decisions, and therefore, affects its expected value and covariance with its cash flow.

However, in relation to the link between corporate governance and firms' financing choices and cost of capital, Waworuntu, Tjahjana, and

Rusmanto (2014) assert that corporate governance affects firms' capital structure. Capital structure is an important area in corporate finance, and one of the key reasons for managing capital structure is to minimize the firm's cost of capital (Nazir, Aslam, & Nawaz, 2012). Therefore, effective corporate governance would result in an optimal choice of capital structure, which minimizes risk while maximizing shareholders' wealth. In countries where there is a robust legal structure, strong disclosure requirement, and good quality of government, the correlation between the corporate governance structure and the firm's cost of equity is more pronounced. However, in countries plagued by a weak legal system, poor quality of government, and low transparency, the association between the corporate governance structure and debt costs is stronger. Differential relationships may be related to asymmetric payoffs received by shareholders and creditors (Zhu, 2014).

2.2. Hypotheses development

The objective of the current study is to examine the effect of corporate governance mechanisms on the firm's cost of equity. For this purpose, a separate hypothesis is developed for each mechanism. This section provides the theoretical and empirical framework for these hypotheses.

2.2.1. Board size

The board of directors is considered as the firm's highest body in charge of managing the firm and its operation and plays a critical role in strategic decisions concerning the financial mix (Hasan & Butt, 2009). The total number of board members, which represents board size, is a significant factor for its effectiveness. Large board size has more resources than a smaller board size to track management performance. Monitoring in this way ensures that directors would consider crucial organizational decisions more carefully and would require that the managers report sensitive issues to stakeholders (Upadhyay & Sriram, 2011).

As for the association between the size of the board and the cost of equity, previous studies showed mixed results. Upadhyay and Sriram (2011) indicate that board size is positively related to factors that proxy for transparency of information. Their results indicate that companies with large board sizes are paying a lower weighted average cost of capital. Hasan and Butt (2009) suggest that variables representing firm governance, such as the size of the board, play an important role in determining the firms' financial mix. Their results indicate that the size of the board is significantly and negatively associated with the debt-to-equity ratio. They also found a negative correlation between board size and the cost of capital. This implies that companies with a larger board can have less cost of capital than the firms with smaller board (Arslan & Abidin, 2019). Furthermore, Sani, Alifiah, and Dikko (2020) examine the effect of board composition on the capital structure of listed companies in Nigeria for seven years (2012–2018). The results indicate that listed companies in Nigeria employ lower levels of debt as their board size increases in number. Uddin, Khan, and Hosen (2019)

suggest that the corporate governance structures, such as the size of the board and CEO duality are significant elements in leverage structure decisions. However, Ranti (2013) finds that board size and the capital structure have a significant negative relationship. The results indicate that companies with smaller board sizes tend to rely more on debt in order to decrease agency costs due to weaker corporate governance. Nguyen and Faff (2007) showed that small boards appear to represent shareholders more effectively and that small boards are related with a greater firm value. Based on the above discussion, we state the following hypothesis:

H1: There is a negative relationship between board size and the cost of equity.

2.2.2. Board independence

The composition of the board of directors plays a critical role in corporate governance (Sani et al., 2020). A lot of research has examined the importance of independent directors. Zaidi and Nadeem (2017) support the agency theory and suggest that the better monitors are the outside directors and advocate that a greater number of external board members is advantageous to the business. Bulathsinhalage and Pathirawasam (2017) find that the involvement of non-executive board members is significantly and positively linked to the capital structure. As the number of outside directors increases, protection against uncertainty increases, and the ability of companies to raise external debt increases. Sani et al. (2020) find that when the number of independent board members increases, Nigerian listed firms tend to adopt a financial strategy with less leverage.

Studies on the effectiveness of independent directors showed that boards with a higher number of independent members have a considerable impact on the cost of equity. Anwar, Asghar, Khan, and Danish (2019) examine the degree to which corporate governance influences the cost of equity capital of firms in Asian countries for the period 2006–2015.

The results are consistent with the agency theory and indicate that board independence has a substantial correlation with the cost of equity. In addition, Hassan et al. (2018) find that board independence has a statistically significant influence on the cost of equity. The results assert that good independent directors reduce the overall cost of the firm's equity. Salehi, Arianpoor, and Dalwai (2020) suggest that firms can decrease equity costs by creating an effective corporate governance system. They show that corporate governance quality has a significant and negative effect on the cost of capital. However, Ali et al. (2019) find an insignificant positive association between independent directors and the cost of equity. They refer this to poor monitoring and inappropriate appointment of such directors based on the requirements laid down in the governance codes. To examine the relationship between board independence and the cost of equity in our study, the following hypothesis has been formulated:

H2: There is a negative relationship between board independence and the cost of equity.

2.2.3. CEO duality

One of the most debated issues in corporate finance is whether dual CEO leadership is better for companies (Chen, Lin, & Yi, 2008). CEO duality refers to a situation in which the CEO and the chairman of the board positions are held by one person (Nazir et al., 2012). The empirical literature on governance indicates that CEO duality has a significant effect on firm performance. Specifically, Naciti (2019) asserts that companies with higher board diversity and separation between CEO and board chair positions show higher sustainability performance. Similarly, Kamarudin, Ismail, and Samsuddin (2012) show that the independent audit committees' monitoring function to ensure a high earnings quality becomes ineffective when a CEO, holding the role of a chairman, has excessive control over the board of directors' decisions. Wijethilake and Ekanayake (2019) support the agency theory and assert that when the CEO is equipped with "unofficial power", CEO duality negatively affects firm performance. Conversely, when board participation is high, CEO duality positively affects firm performance. In contrast, Donaldson and Davis's (1991) results support the stewardship theory, which suggests that managers act as responsible stewards of the assets they control for the interests of shareholders. They found that dual CEO structures are associated with higher shareholders wealth more than independent chair structures.

Ranti (2013) finds that the CEO duality has a significant positive association with capital structure. A firm's capital structure is an essential financial system that includes the debt and equity used to fund the company. The results indicate that the duality between CEOs increases the use of debt by firms. However, Ali et al. (2019) show that CEO duality is an insignificant variable for the firm's cost of equity. Our study follows several related studies and develops the following hypothesis:

H3: There is a positive relationship between CEO duality and the cost of equity.

2.2.4. Multiple directorships

Multiple directorships refer to members of the board who hold other board memberships in other companies. The Jordanian corporate governance instructions indicated that the firm's board members cannot be board members of a similar or competing company in its business, and a natural person cannot be a board member of more than five public companies. Previous studies report mixed results on the association between multiple directorship and financial distress. Lok and Hooy (2018) assert that companies that have board members holding multiple directorships operate financially better than businesses without multiple directorships. The study, however, concludes that if most of the board members hold more than two memberships, it can be harmful. Manna et al. (2020) explore the effect of a multiplicity of directorship on performance of Indian companies using a sample of 168 companies for the period from 2010–2011 to 2016–2017. The study suggests a significant positive association between a multiplicity of directorship and the sample firm corporate performance. In other words, the board members with multiple

directorships holdings are highly capable of developing their reputational capital through their excellence, expertise, valuable experience, and efficient capabilities for decision-making.

Chiranga and Chiwira (2014) support the busyness hypothesis, which indicates that board members with multiple directorships are more likely to miss board meetings. The study concludes that executives with multiple directorships do not add much value to the board of directors to the extent that they perform better than businesses without multiple board directorships. In a similar study, Roudaki and Bhuiyan (2015) examine the determinants and implications of New Zealand's interlocking board membership and whether performance of the companies is affected by this interlocking. The study shows that New Zealand companies are significantly interlocked and that interlocking has a negative effect on the performance of New Zealand's companies. Hence, the following hypothesis is formulated:

H4: There is a negative relationship between board multiple directorships and the cost of equity.

2.2.5. Political influence

The effectiveness of the board of directors in corporate decision-making and value creation for shareholders is largely determined by the way, in which directors perform their duties (Chou & Feng, 2019). Therefore, companies may employ the political connections of their boards for their own benefit (Choi, Chung, Hong, & Young, 2020). Al-dhamari and Ismail (2015) suggest that firms should report information on their dealings with governments, political groups, or politicians such that investors and all stakeholders can use that information to effectively evaluate the quality of their earnings.

Boubakri, Guedhami, Mishra, and Saffar (2012) indicate that politically related companies have a relatively lower cost of equity capital than their non-related peers. They conclude that the relationship between political connection and the cost of corporate equity financing is significantly affected by both the prevailing institutional and political environment at the state level as well as by company features. Han et al. (2004) indicate that the association between board characteristics and firm performance is politically influenced. The study revealed that state ownership has a positive association with company performance in state-dominant groups, while it is negatively related in non-state-owning groups. Similarly, Shin et al. (2018) suggest that outside directors who have political connections have a positive effect on firm performance. They show that companies with a high number of "politically connected" outside directors have better performance and lower risk. Sari and Anugerah (2011) indicate that government ownership (political influence) has a positive association with both firm transparency and performance of a company measured by ROA. In contrast, Proença et al. (2020) indicate that political links have a negative effect on bank performance and tend to decrease profitability of banks and increase their risk. The special interest of members with political links overlaps with their institution's interests, by approving unprofitable activities and

relaxing the analysis of the risk of loans. In a related study, Al-dhamari and Ismail (2015) find that the investors consider the earnings of politically affiliated companies to be of low quality.

H5: There is a negative relationship between board political influence and the cost of equity.

These hypotheses will be tested using the appropriate econometrics techniques. Therefore, in what follows, the study presents the research methodology, including the study sample and data collection, the study empirical model, definition and measurement of variables, and finally, the study presents the diagnostic tests and data analysis techniques used to test the empirical model.

3. RESEARCH METHODOLOGY

3.1. Sample and data collection

The sample for this study contains all manufacturing firms listed on Amman Stock Exchange (ASE) for the period 2014–2018, which represents about 35% of the total of listed firms that are directed by the Listing Requirements of ASE and the Jordanian Corporate Governance rules. Data related to the variables of interest were collected from the annual reports of these companies for the financial years from 2014 to 2018, and the website of ASE. The study excludes companies that do not have all the required data about the independent and dependent variables. The final sample for the study consists of 45 companies with 225 firm-year observations. However, 15 firm-year observations were removed as they have extreme values, which leave us with 210 observations. Industrial listed businesses are appropriate for assessing the cost of equity in Jordan and providing a better indication of the association between the firm governance and the cost of equity in Jordan.

3.2. Variable definition and measurement

3.2.1. Independent variable

In this study, corporate governance is an independent variable. This variable is represented by the following characteristics/mechanisms:

Board size (B.SIZE) is measured as the total number of board members (Al Daoud, Ismail, & Lode, 2015). *Board independence (B.IND)* is determined by the number of independent directors divided by the total number of directors on the board (Al Daoud, 2020; Al-Sraheen & Al Daoud, 2018; Bouaziz & Triki, 2012). *CEO duality (CEO.DUAL)*, which refers to the situation where the CEO also serves as the chairman of the board. It is assigned 1 if the CEO duality is present and 0 otherwise (Al Daoud, Al-Sraheen, & Aleqab, 2018). *Multiple directorships (MUL.DIR)* are determined by the number of board members who hold three or more other directorships divided by the total number of directors on the board. *Political connection (P.INFL)* is defined as the number of the firm's board members that have any political

position in the nation (Al-dhamari, Nor, Boudiab, & Mas'ud, 2020; Sari & Anugerah, 2011).

3.2.2. Dependent variable

The firm's cost of equity (CoE) is a dependent variable in this study. There are several methods to estimate the firm's cost of equity. The two most common methods used are the residual income model (RIM) and the capital asset pricing model (CAPM). The RIM estimates the cost of equity as the internal rate of return (IRR) that equates the current stock price to the present value of all future cash flows to common shareholders (Botosan & Plumlee, 2002). The CAPM, on the other hand, measures the cost of equity as the risk-free rate of return plus a market's expected risk premium. The risk premium consists of the market rate of return minus the risk-free rate and multiplied by the firm's amount of risk measured by the market beta (β) (Sharpe, 1964; Lintner, 1965).

However, to estimate the firm's cost of equity using the RIM, analysts' earnings forecasts for at least two future years are needed which are unavailable in Jordan. Therefore, in this study, we employ the CAPM to estimate the firm's cost of equity. That is, we use the following equation:

$$CoE_{j,t} = R_{f,t} + \beta_{j,t} * (R_{m,t} - R_{f,t}) \quad (1)$$

where, $CoE_{j,t}$ is the required rate of return and represents the cost of equity for company j in year t . $R_{f,t}$ is the risk-free rate of return in year t measured as the rate of return on bonds issued by the central bank of Jordan. $R_{m,t}$ is the market rate of return in year t measured as the percentage change in the ASE General Free Float Price-Weighted Index (ASE 100). $\beta_{j,t}$ is the risk factor for company j in year t measured as the regression coefficient of 60 monthly returns for company j on the market return.

3.2.3. Control variables

Previous investigation documents that a firm's cost of equity is positively related to its firm beta, leverage ratio, and book-to-market ratio, i.e., firms with high beta, leverage ratio, and book-to-market ratio have a high cost of equity; and negatively associated with its size and return on assets ratio, i.e., large companies and companies with high ROA ratio have a low cost of equity (Richardson & Welker, 2001; Francis, LaFond, Olsson, & Schipper, 2004; Gray, Koh, & Tong, 2009). Hence, in our analysis, we control for the effect of these variables. *Firm beta (BETA)* is an indicator of share price volatility and is calculated for each firm as the coefficient of regressing 60 monthly returns on the market return. *Firm size (F.SIZE)* is measured as the natural logarithm of total assets at the end of the year. *Leverage (LEV)* is calculated by the ratio of total debt to total equity. *Book-to-market value (BMV)* is calculated by the ratio of the book value of equity to the market value of equity. *Return on asset (ROA)* is calculated by the ratio of net income to total assets. Table 1 provides a summary of the research variables.

Table 1. Definition and measurement of variables

Variables	Definition and measurement	Expected relationship with the dependent variable	Relevant hypothesis
Dependent variable			
CoE	Cost of equity measured using the CAPM, as the risk-free rate of return plus a market expected risk premium, which consists of the market rate of return minus the risk-free rate, multiplied by the firm beta.		
Independent variables			
B.SIZE	Board size, measured by the total membership of the board of directors.	-	H1
B.IND	Board independence, measured by the number of independent directors divided by the total number of directors on the board.	-	H2
CEO.DUAL	CEO duality, measured by dummy variable a value of 1 is assigned if the CEO duality is present and 0 is otherwise assigned.	+	H3
MUL.DIR	Multiple directorships, measured by the number of board members holding three or more other directorships divided by the total number of directors on the board.	-	H4
P.INFL	Political influence, measured by the number of the company's board that has any political position in the nation.	-	H5
Control variables			
BETA	Firm beta is calculated as the coefficient of regressing 60 monthly returns on the market return.		
F.SIZE	Company size, measured as the natural logarithm of total assets.	-	
LEV	Company leverage, calculated by the ratio of total debt to total equity.	+	
BMV	Book-to-market value, calculated by the ratio of the book value of equity to the market value of equity.	-	
ROA	Return on assets, calculated by the ratio of net income to total assets.	-	

3.3. Regression model

To examine the association between the selected corporate governance mechanisms and the firm's cost of equity, a multiple regression model has been

$$CoE_{j,t} = \alpha + \beta_1 B.SIZE_{j,t} + \beta_2 B.IND_{j,t} + \beta_3 CEO.DUAL_{j,t} + \beta_4 MUL.DIR_{j,t} + \beta_5 P.INFL_{j,t} + \beta_6 BETA_{j,t} + \beta_7 F.SIZE_{j,t} + \beta_8 LEV_{j,t} + \beta_9 BMV_{j,t} + \beta_{10} ROA_{j,t} + \varepsilon \quad (2)$$

where,

- α is intercept;
- $CoE_{j,t}$ is cost of equity for firm j in year t ;
- $B.SIZE_{j,t}$ is board of director size for company j in year t ;
- $B.IND_{j,t}$ is board independence ratio for company j in year t ;
- $CEO.DUAL_{j,t}$ is CEO duality for firm j in year t ;
- $MUL.DIR_{j,t}$ is multiple directorships for company j in year t ;
- $P.INFL_{j,t}$ is political influence for company j in year t ;
- $BETA_{j,t}$ is firm beta for firm j in year t ;
- $F.SIZE_{j,t}$ is firm j size in year t ;
- $LEV_{j,t}$ is leverage ratio for firm j in year t ;
- $BMV_{j,t}$ is book-to-market ratio for company j in year t ;
- $ROA_{j,t}$ is return on assets ratio for company j in year t ;
- ε is error term;
- $\beta_1 \dots \beta_{10}$ is variable coefficients.

The above empirical model that has been developed to test the study hypotheses and accomplish its objectives will be tested using the pooled and panel data analysis methods. The advantage of panel data analysis over the pooled one, it allows controlling for unobserved heterogeneity which defines individual specific

developed based on the previous research such as Chen et al. (2009), Haniffa and Cooke (2002), and Christensen, Kent, and Sewart (2010). This model can be presented as follow:

effects not capturing by the observed study variables (Gujarati, 2003). More precisely, a panel data technique aids researchers in significantly reducing the issues that arise when variables such as time and individual-specific variables are omitted. The existence of time and individual effects makes the regression of testing pooled data not efficient. Moreover, panel data overwhelm the problem of having a limited sample size which may solve the problem of multicollinearity. Panel data are typically tested using either fixed effects techniques or random effects techniques. For the purpose of selecting the best description for testing the data set, the Hausman test is usually used to choose among the two-panel data analysis techniques. However, obtaining accurate and efficient results requires making numerous diagnostic tests such as multicollinearity, heteroskedasticity, and normality tests.

4. RESULTS AND DISCUSSIONS

4.1. Descriptive statistics

The descriptive statistics cover the period 2014–2018 for a pooled sample of companies listed on Amman Stock Exchange (ASE). The study is limited to 42 manufacturing firms that have been listed on ASE during the period 2014–2018. Table 2 shows

descriptive data for the entire sample of companies covered in this research. It comprises the mean and standard deviations, as well as the minimum and maximum values, of the important variables of the study. The results offered in this table show that the mean value of the cost of equity capital has amounted to 0.028 with a 0.009 standard deviation. This indicates that, on average, investors require a 2.8% return on their investments in the sample firms. This rate is close to the rate found in Bouqalieh and Zalloum (2019), who reported that the average firm's cost of equity for the Jordanian listed companies during the period 2010–2015 was 0.0336. This result, however, is lower than the findings of Haddad, Abughazaleh, and Al-Hares (2014), who found that the average cost of equity in the Jordanian companies listed in ASE for 2004 was 0.0959.

Table 2. Descriptive statistics

<i>Variables</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>Std. Dev.</i>
<i>CoE</i>	0.005	0.051	0.028	0.009
<i>B.SIZE</i>	4	13	7.900	2.166
<i>B.IND</i>	0	1	0.455	0.252
<i>CEO.DUAL</i>	0	1	0.580	0.495
<i>MUL.DIR</i>	0	0.778	0.304	0.189
<i>P.INFL</i>	0	0.571	0.184	0.133
<i>BETA</i>	-0.14559	0.651	0.092	0.110
<i>F.SIZE</i>	5.505	9.083	7.370	0.500
<i>LEV</i>	0.004	0.863	0.368	0.248
<i>MBV</i>	0.032	7.524	1.285	1.302
<i>ROA</i>	-1.952	0.36	0.020	0.458

Notes: *CoE*: cost of equity capital, *B.SIZE*: board of directors' size, *B.IND*: board independence ratio, *CEO.DUAL*: CEO duality, *MUL.DIR*: multiple directorships, *P.INFL*: political influence, *BETA*: firm beta, *F.SIZE*: firm size, *LEV*: leverage, *BMV*: book-to-market ratio, *ROA*: return on assets ratio.

In terms of the board size, the minimum number of board members is 4 and the maximum number is 13 with a mean of 7.9 members, which is consistent with the Jordanian firm governance requirement regarding the size of the board. In addition, this average is approximately close to Al Daoud, Ismail, and Lode (2014) recent results, which reported that the Jordanian companies had an average board size value of about 8.01. The mean value for the board independence variable (*B.IND*), measured by the percentage of the board independent directors is about 45.5%, with a standard deviation value of 25.2%. This shows that the independence level of the board of directors tends to be moderate on average. The descriptive statistics for CEO duality (*CEO.DUAL*), show that 0.58% of the firms in the sample have the dual role of a CEO and a chairman. This outcome shows that 58% of the sample complied with the requirements of the firm governance codes and separated between the roles of a chairman and a CEO. This is lower than the results of Al Daoud et al. (2018), who reported that the average CEO duality ratio in the Jordanian industrial companies was 64%.

Regarding multiple directorships (*MUL.DIR*), the average number of directors who have multiple directorships was 30.4%, with an 18.9% standard deviation. According to the findings, the Jordanian companies tend to appoint directors with multiple directorships to their boards, which are considered

as an indicator of strong governance. In terms of the board political connection (*P.INFL*), on average, 18.4% of boards have directors with affiliations of political connections, with a 13.3% standard deviation. This shows that the number of board members who have any political position tends to be low on average. As for the control variables, the average value documented for firm beta (*BETA*), firm size (*F.SIZE*), leverage (*LEV*), the book-to-market ratio (*MBV*) and return on assets (*ROA*) are: 0.092, 7.370, 0.368 and 1.285, and 0.020, respectively.

4.2. Estimation results

The current study investigates the impact of the corporate governance mechanisms on the firm's cost of equity, using five internal corporate governance techniques, which include board size, independence, CEO duality, multiple directorships held by board members, and board political influence. To accomplish this objective, the pooled and panel data analyses were used with several diagnostic tests to make sure that the obtained results are accurate and efficient. The diagnostic tests show that the estimated model has no multicollinearity problem where the mean of variance inflation factor (VIF) for all variables was 1.17. According to Gujarati (2003), a VIF less than 10 indicates that no multicollinearity problem exists. However, the result of the Breusch-Pagan test for heteroskedasticity reveals that the variance of residuals obtained by OLS regressions is not homogeneous or constant. This result is confirmed by the statistically significant value of χ^2 , hence, the null hypothesis that the variance of residuals is constant is rejected.

It is well-known that the existence of heteroskedasticity problems makes the obtained results not efficient. Therefore, the fixed effects technique with a robust test is used to test the study empirical model in order to overwhelm the heteroskedasticity problem. Moreover, the testing hypothesis will be made using the estimation results obtained by the fixed effects technique. Table 3 provides a summary of the findings. As can be seen from Table 3, F-statistic is found to be statistically significant at 1% level, hence, the null hypothesis that all estimated coefficients are equal to zero will be rejected which leads to the acceptance of the alternative one: at least one of the estimated coefficients is not zero.

The results regarding the association between firm governance measure and cost of equity indicate that both CEO duality and board political influence are related to the cost of equity. With respect to CEO duality, the result shows that it negatively effects the cost of equity capital where the estimated coefficient of the CEO duality variable is found to be statistically significant at 1%. This result suggests that duality between the roles of a chairman and a CEO will decrease the cost of equity capital. Similarly, the political influences variable is found to be statistically significant at 5% with a negative sign which indicates that political factor has a negative effect on the cost of equity capital (i.e., political connections of the board of directors reduces the cost of equity).

Table 3. The results of fixed effects regression between the cost of equity and the independent and control variables

<i>Variables</i>	<i>t-value</i>	<i>Fixed effects model results</i>	<i>VIF</i>
Constant	-5.182	0.260	—
<i>B.SIZE</i>	-0.059	0.359	1.16
<i>B.IND</i>	-0.099	0.798	1.32
<i>CEO.DUAL</i>	-0.633	0.000	1.08
<i>MUL.DIR</i>	-0.518	0.480	1.14
<i>P.INFL</i>	-0.218	0.029	1.22
<i>BETA</i>	0.067	0.000	1.09
<i>F.SIZE</i>	-0.167	0.781	1.39
<i>LEV</i>	0.039	0.510	1.05
<i>MBV</i>	-0.042	0.290	1.08
<i>ROA</i>	-0.033	0.061	1.13
N		210	
R ²		0.4402	
F-statistic		25.12 (0.000)	
Mean VIF		1.17	
Heteroskedasticity Ch ²		198.8 (0.000)	

Notes: *CoE*: cost of equity capital, *B.SIZE*: board of directors' size, *B.IND*: board independence ratio, *CEO.DUAL*: CEO duality, *MUL.DIR*: multiple directorships, *P.INFL*: political influence, *BETA*: firm beta, *F.SIZE*: firm size, *LEV*: leverage, *BMV*: book-to-market ratio, *ROA*: return on assets ratio.

4.3. Discussion

The results suggest that there is a negative relationship between CEO duality and the firms' cost of equity. This can be attributed to the fact that when the company's CEO also serves as the chairman of the board of directors, the cost of equity is reduced. This is because investors take this situation as beneficial to the firm, implying that they are willing to accept a lower rate of return in exchange for reducing the risk of owning the company's stock. The findings, however, are consistent with the stewardship hypothesis, which argues that CEO duality allows for better and more accurate decision-making, as well as a better response to changing market circumstances and easier action by the CEO (Boyd, 1995). However, it does not support the finding of Naciti (2019).

The results also suggest that there is a negative relationship between political influence and the cost of equity. This can be attributed to a belief that companies with political connections on the board are more likely to induce a lower cost of equity than their non-politically connected counterparts. The finding is consistent with Shin et al. (2018), who revealed that outside directors with political connections have a positive impact on firm performance, and firms with a large number of politically connected outside directors perform better and are less risky. The results are also consistent with Boubakri et al. (2012), who claim that politically connected companies have lower equity capital costs than their non-connected counterparts. It is also consistent with Sari and Anugerah (2011) who indicates that government ownership (political influence) has a positive association with both firm transparency and performance. Hence, the proposed hypothesis will be accepted.

The estimated coefficients on *B.SIZE*, *B.IND*, and *MUL.DIR* are statistically insignificant at the 5% confidence level suggesting. The results indicating that there is no association between board size, board independence and multiple directorships with

the cost of equity capital are consistent with the previous study such as Ali et al. (2019), who find an insignificant association between the board size and independent directors and the cost of equity. They are also consistent with Chiranga and Chiwira's (2014), who concludes that executives with multiple directorships do not add much value to the board of directors to the extent that they perform better than businesses without multiple board directorships.

Regarding the firm characteristics, as Table 3 shows, the estimated coefficient on beta is found to be statistically significant at 5% with a negative sign. This suggests that investors' required rate of return is increasing in the firm beta. Beta represents the systematic or undiversified risk of a stock compared to the systematic risk of the market as a whole. A stock that deviates very much from the market tends to bear greater risk, and therefore, increases the return that investors demand from investment, which in turn, increases the firm's cost of equity. This finding is consistent with the result of Gray et al. (2009) and Francis, Nanda, and Olsson (2008), who found that the cost of equity is increasing with the firm beta. The obtained results also reveal a negative relationship between ROA and the cost of equity capital, implying that companies with a high ROA have a low cost of equity. This result is in line with Ali Shah and Butt (2009), who indicate that firms use internally generated funds as a first choice to finance projects before turning to debt, according to the pecking order theory. However, no statistically significant results are found for firm size, leverage, and book-to-market ratio, which suggest that these variables do not influence the cost of equity.

Overall, the estimated results reveal that the agency problem and asymmetric information are relevant and influence the cost of external financing, which is the cost of equity capital. This finding, in fact, indicates that the corporate governance mechanisms will be effective in handling the risk of agency and asymmetric information problems and their effect on the cost of equity. Furthermore, they indicate that the cost of equity is largely affected by the systematic risks, making the market factors more relevant in the Jordanian capital market. This is largely confirmed by the statistically significant positive coefficient of the beta variable.

5. CONCLUSION

This study examines the impact of the corporate governance mechanisms on the cost of equity capital using five attributes of the board of directors such as board size, board independence, CEO duality, and multiple directorships held by the board members, and political influence of the board members. To accomplish this objective, a panel sample data of 210 firm-year observations of manufacturing companies are used and regressed by using the fixed effects model with the robust test. The robust test is used to overwhelm the heteroskedasticity problem. The results indicate that CEO duality and board political influence are negatively associated with the cost of equity capital, while no significant association between board size, independence, and multiple directorships, with the firm's cost of equity, are found. This indicates that investors regard these two situations as being advantages for the company, which may reduce the risk of holding that firm's

share and thus accept a lower rate of return. The estimated coefficients on the other variables (i.e., board size, independence, multiple directorships, firm size, leverage, and book-to-market value) are statistically insignificant suggesting no relationship between these variables and the cost of equity.

Our results have implications for both regulators and corporations. The results can help policymakers in determining areas in the corporate governance code where amendment is needed in order to mitigate the impact of the agency problem and to ensure that the interests of all stakeholders are protected. The results also can help corporations in reducing their cost of equity. Corporations should effectively apply the corporate governance mechanisms to ensure transparency and investors' protection. Results from the current study could help the firm's management in creating more awareness about the importance of the board of directors in reducing the firm's cost of equity. Furthermore, this study also acts as a guide for policymakers and regulators, and firm's management when developing rules and strategies related to the board of directors and the cost of equity.

This research is limited in two specific aspects. This study ignores financial companies due to their different regulations and capital structures and the sample includes only manufacturing companies in Jordan during the period 2014-2018. This study also employed five important characteristics of board namely; board size, independence, CEO duality, political influence, and multiple directorships. The board of directors' characteristics examined may not provide a comprehensive measure of corporate governance. Therefore, for future research, this study recommends the following. Future research should examine the impact of firm governance on the cost of equity within all firm sectors in an economy. This will help to determine whether corporate governance exhibits a different impact on the cost of equity for the different sectors. In addition, future research should expand the corporate governance measure to include more aspects in the corporate governance code. We believe that increasing the number of observations and adding more corporate governance attributes would enhance the analysis and obtain more reliable results.

REFERENCES

1. Al Daoud, K. A. (2020). An investigation into the effect of audit firm size, auditor tenure, institutional ownership, board characteristics on auditor independence. *International Journal of Management Practice*, 13(4), 462-477. <https://doi.org/10.1504/IJMP.2020.10029573>
2. Al Daoud, K. A., Al-Sraheen, D. A. A. D., & Aleqab, M. M. (2018). Does CEO duality and family ownership concentration hinder the effectiveness of the corporate board of directors in Jordanian service firms? *Journal of Environmental Accounting and Management*, 6(2), 95-104. <https://doi.org/10.5890/JEAM.2018.06.001>
3. Al Daoud, K. A., Ismail, K. N. I. K., & Lode, N. A. (2014). The timeliness of financial reporting among Jordanian companies: Do company and board characteristics, and audit opinion matter? *Asian Social Science*, 10(13), 191-201. <https://doi.org/10.5539/ass.v10n13p191>
4. Al Daoud, K. A., Ismail, K. N. I. K., & Lode, N. A. (2015). The impact of internal corporate governance on the timeliness of financial reports of Jordanian firms: Evidence using audit and management report lags. *Mediterranean Journal of Social Sciences*, 6(1), 430. <https://doi.org/10.5901/mjss.2015.v6n1p430>
5. Al-dhamari, R., & Ismail, K. N. I. K. (2015). Cash holdings, political connections, and earnings quality: Some evidence from Malaysia. *International Journal of Managerial Finance*, 11(2), 215-231. <https://doi.org/10.1108/IJMF-02-2014-0016>
6. Al-dhamari, R., Nor, M. N. M., Boudiab, M., & Mas'ud, A. (2020). The impact of political connection and risk committee on corporate financial performance: Evidence from financial firms in Malaysia. *Corporate Governance*, 20(7), 1281-1305. <https://doi.org/10.1108/CG-04-2020-0122>
7. Ali Shah, S. Z., & Butt, S. A. (2009). The impact of corporate governance on the cost of equity: Empirical evidence from Pakistani listed companies. *The Lahore Journal of Economics*, 14(1), 139-171. <https://doi.org/10.35536/lje.2009.v14.i1.a6>
8. Ali, S. T., Yang, Z., Sarwar, Z., & Ali, F. (2019). The impact of corporate governance on the cost of equity: Evidence from cement sector of Pakistan. *Asian Journal of Accounting Research*, 4(2), 293-314. <https://doi.org/10.1108/AJAR-08-2019-0062>
9. Al-Sraheen, D. A. D., & Al Daoud, K. A. (2018). Does the presence of independent directors reduce the practices of earnings management? The moderating role of family ownership concentration. *Ekonomskipregled*, 69(6), 638-654. <https://doi.org/10.32910/ep.69.6.2>
10. Anwar, Z., Asghar, M. J. K. A., Khan, M. K., & Danish, R. Q. (2019). Corporate governance and cost of equity: Evidence from Asian Countries. *Journal of Political Studies*, 26(1), 207-230. Retrieved from <https://www.prdb.pk/article/corporate-governance-and-cost-of-equity-evidence-from-asian-5024>
11. Arslan, M., & Abidin, S. (2019). Nexus between corporate governance practices and cost of capital in PSX listed firms. *Cogent Economics & Finance*, 7(1), 1600222. <https://doi.org/10.1080/23322039.2019.1600222>
12. Beekes, W., Brown, P., & Zhang, Q. (2015). Corporate governance and the informativeness of disclosures in Australia: A re-examination. *Accounting and Finance*, 55(4), 931-963. <https://doi.org/10.1111/acfi.12088>
13. Bona-Sánchez, C., Pérez-Alemán, J., & Santana-Martín, D. J. (2014). Politically connected firms and earnings informativeness in the controlling versus minority shareholders context: European evidence. *Corporate Governance: An International Review*, 22(4), 330-346. <https://doi.org/10.1111/corg.12064>
14. Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *The Accounting Review* 72(3), 323-349. Retrieved from <https://www.jstor.org/stable/248475>
15. Botosan, C. A. (2006). Disclosure and the cost of capital: What do we know? *Accounting and Business Research*, 36(1), 31-40. <https://doi.org/10.1080/00014788.2006.9730042>
16. Botosan, C. A., & Plumlee, M. A. (2002). A re-examination of disclosure level and the expected cost of equity capital. *Journal of Accounting Research*, 40(1), 21-40. <https://doi.org/10.1111/1475-679X.00037>
17. Bouaziz, Z., & Triki, M. W. (2012). The impact of the board of directors on the financial performance of Tunisian companies. *Corporate Board: Role, Duties and Composition*, 8(3), 6-21. <https://doi.org/10.22495/cbv8i3art1>

18. Boubaker, S., Hamrouni, A., & Liang, Q.-B. (2014). Corporate governance, voluntary disclosure, and firm information environment. *Journal of Applied Business Research (JABR)*, 31(1), 89–102. <https://doi.org/10.19030/jabr.v31i1.8993>
19. Boubakri, N., Guedhami, O., Mishra, D., & Saffar, W. (2012). Political connections and the cost of equity capital. *Journal of Corporate Finance*, 18(3), 541–559. <https://doi.org/10.1016/j.jcorpfin.2012.02.005>
20. Bouqalieh, B., & Zalloum, N. O. (2019). Impact of audit quality on the cost of equity capital: An empirical study on industrial and service companies listed in Amman Stock Exchange. *Jordan Journal of Business Administration*, 15(1), 121–146. Retrieved from <https://journals.ju.edu.jo/JJBA/article/view/15524>
21. Boyd, B. K. (1995). CEO duality and firm performance: A contingency model. *Strategic Management Journal*, 16(4), 301–312. <https://doi.org/10.1002/smj.4250160404>
22. Bulathsinhale, S., & Pathirawasam, C. (2017). The effect of corporate governance on firms' capital structure of listed companies in Sri Lanka. *Journal of Competitiveness*, 9(2), 19–33. <https://doi.org/10.7441/joc.2017.02.02>
23. Chen, K. C., Chen, Z., & Wei, K. J. (2009). Legal protection of investors, corporate governance, and the cost of equity capital. *Journal of Corporate Finance*, 15(3), 273–289. <https://doi.org/10.1016/j.jcorpfin.2009.01.001>
24. Chen, C.-W., Lin, J. S. B., & Yi, B. (2008). CEO duality and firm performance — An endogenous issue. *Corporate Ownership and Control*, 6(1), 58–65. <https://doi.org/10.22495/cocv6i1p6>
25. Chiranga, N., & Chiwira, O. (2014). Impact of multiple directorships on performance for companies listed on the Johannesburg Stock Exchange (JSE). *Economics World*, 2(6), 378–387. Retrieved from <http://www.davidpublisher.com/index.php/Home/Article/index?id=1066.html>
26. Choi, D., Chung, C. Y., Hong, S.-I. S., & Young, J. (2020). The role of political collusion in corporate performance in the Korean market. *Sustainability*, 12(5), 2031. <https://doi.org/10.3390/su12052031>
27. Chou, T.-K., & Feng, H.-L. (2019). Multiple directorships and the value of cash holdings. *Review of Quantitative Finance and Accounting*, 53(3), 663–699. <https://doi.org/10.1007/s11156-018-0762-1>
28. Christensen, J., Kent, P., & Stewart, J. (2010). Corporate governance and company performance in Australia. *Australian Accounting Review*, 20(4), 372–386. <https://doi.org/10.1111/j.1835-2561.2010.00108.x>
29. Clinch, G. (2013). Disclosure quality, diversification and the cost of capital. *Australian Journal of Management*, 38(3), 475–489. <https://doi.org/10.1177/0312896213510700>
30. Clinch, G., & Verrecchia, R. E. (2015). Voluntary disclosure and the cost of capital. *Australian Journal of Management*, 40(2), 201–223. <https://doi.org/10.1177/0312896214529441>
31. Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*, 86(1), 59–100. <https://doi.org/10.2308/accr.00000005>
32. Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *The Journal of Finance*, 46(4), 1325–1359. <https://doi.org/10.1111/j.1540-6261.1991.tb04620.x>
33. Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16(1), 49–64. <https://doi.org/10.1177/031289629101600103>
34. Easley, D., & O'Hara, M. (2004). Information and the cost of capital. *The Journal of Finance*, 59(4), 1553–1583. <https://doi.org/10.1111/j.1540-6261.2004.00672.x>
35. Easley, D., Hvidkjaer, S., & O'Hara, M. (2002). Is information risk a determinant of asset returns? *The Journal of Finance*, 57(5), 2185–2221. <https://doi.org/10.1111/1540-6261.00493>
36. Francis, J. R., Khurana, I. K., & Pereira, R. (2005). Disclosure incentives and effects on cost of capital around the world. *The Accounting Review*, 80(4), 1125–1162. <https://doi.org/10.2308/accr.2005.80.4.1125>
37. Francis, J., LaFond, R., Olsson, P. M., & Schipper, K. (2004). Costs of equity and earnings attributes. *The Accounting Review*, 79(4), 967–1010. <https://doi.org/10.2308/accr.2004.79.4.967>
38. Francis, J., Nanda, D., & Olsson, P. (2008). Voluntary disclosure, earnings quality, and cost of capital. *Journal of Accounting Research*, 46(1), 53–99. <https://doi.org/10.1111/j.1475-679X.2008.00267.x>
39. Gao, P. (2010). Disclosure quality, cost of capital and investor welfare. *The Accounting Review*, 85(1), 1–29. <https://doi.org/10.2308/accr.2010.85.1.1>
40. Gray, P., Koh, P.-S., & Tong, Y. H. (2009). Accruals quality, information risk and cost of capital: Evidence from Australia. *Journal of Business Finance & Accounting*, 36(1–2), 51–72. <https://doi.org/10.1111/j.1468-5957.2008.02118.x>
41. Gujarati, D. (2003). *Basic econometrics* (4th ed.). New York, NY: McGraw-Hill.
42. Haddad, A. E., Abughazaleh, N. M., & Al-Hares, O. M. (2014). The implied cost of equity capital in the Jordanian industrial and service companies. *International Journal of Accounting and Finance*, 4(3), 240–260. <https://doi.org/10.1504/IJAF.2014.058108>
43. Han, D., Wang, F., & Yue, H. (2004). Board structure, political influence, and firm performance — An empirical study on publicly listed firms in China. *Asia-Pacific Journal of Accounting & Economics*, 11(1), 77–94. <https://doi.org/10.1080/16081625.2004.10510633>
44. Haniffa, R. M., & Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38(3), 317–349. <https://doi.org/10.1111/1467-6281.00112>
45. Hasan, A., & Butt, S. A. (2009). Impact of ownership structure and corporate governance on capital structure of Pakistani listed companies. *International Journal of Business & Management*, 4(2), 50–57. <https://doi.org/10.5539/ijbm.v4n2p50>
46. Hassan, S., Kayani, G. M., & Ayub, U. (2018). Corporate governance and cost of equity capital using DCAPM. *Abasyn Journal of Social Sciences*, 11(2), 335–351. Retrieved from <http://ajss.abasyn.edu.pk/admineditor/papers/V11I2-5.pdf>
47. Ho, P.-L., & Taylor, G. (2013). Corporate governance and different types of voluntary disclosure: Evidence from Malaysian listed firms. *Pacific Accounting Review*, 25(1), 4–29. <https://doi.org/10.1108/01140581311318940>
48. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
49. Kamarudin, K. A., Ismail, W. A. W., & Samsuddin, M. E. (2012). The influence of CEO duality on the relationship between audit committee independence and earnings quality. *Procedia — Social and Behavioral Sciences*, 65, 919–924. <https://doi.org/10.1016/j.sbspro.2012.11.220>
50. Lambert, R., Leuz, C., & Verrecchia, R. E. (2007). Accounting information, disclosure, and the cost of capital. *Journal of Accounting Research*, 45(2), 385–420. <https://doi.org/10.1111/j.1475-679X.2007.00238.x>

51. Leuz, C., & Verrecchia, R. E. (2000). The economic consequences of increased disclosure. *Journal of Accounting Research*, 38(3), 91-124. <https://doi.org/10.2307/2672910>
52. Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *The Review of Economics and Statistics*, 47(1), 13-37. <https://doi.org/10.2307/1924119>
53. Lok, C.-L., & Hooy, C.-W. (2018). Does busyness of directors matter in reputable firms? *International Journal of Economics & Management*, 12(1), 339-356. Retrieved from http://myjournal.my/filebank/published_article/72580/18.pdf
54. Manna, A., Sahu, T. N., & Pandey, K. D. (2020). Board size, multiple directorship, and performance of Indian listed firms. *International Journal of Economics and Business Research*, 19(2), 111-129. <https://doi.org/10.1504/IJEER.2020.104754>
55. Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
56. Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production*, 237, 117727. <https://doi.org/10.1016/j.jclepro.2019.117727>
57. Nazir, M. S., Aslam, A., & Nawaz, M. M. (2012). The impact of CEO duality on capital structure: A case from non-financial sector of Pakistan. *American Journal of Scientific Research*, 56(56), 5-12. Retrieved from <https://lahore.comsats.edu.pk/Papers/Abstracts/146-8588087139709383308.pdf>
58. Nguyen, H., & Faff, R. (2007). Impact of board size and board diversity on firm value: Australian evidence. *Corporate Ownership and Control*, 4(2), 24-32. <https://doi.org/10.22495/cocv4i2p2>
59. Proenca, C., Augusto, M., & Murteira, J. (2020). Political connections and banking performance: The moderating effect of gender diversity. *Corporate Governance*, 20(6), 1001-1028. <https://doi.org/10.1108/CG-01-2020-0018>
60. Ranti, U. O. (2013). The effects of board size and CEO duality on firms' capital structure: A study of selected listed firms in Nigeria. *Asian Economic and Financial Review*, 3(8), 1033-1043. Retrieved from [http://www.aessweb.com/pdf-files/aefr%203\(8\)%201033-1043.pdf](http://www.aessweb.com/pdf-files/aefr%203(8)%201033-1043.pdf)
61. Richardson, A. J., & Welker, M. (2001). Social disclosure, financial disclosure and the cost of equity capital. *Accounting, Organizations and Society*, 26(7-8), 597-616. [https://doi.org/10.1016/S0361-3682\(01\)00025-3](https://doi.org/10.1016/S0361-3682(01)00025-3)
62. Roudaki, J., & Bhuiyan, M. B. U. (2015). Interlocking directorship in New Zealand. *Australasian Accounting, Business and Finance Journal*, 9(3), 45-58. <https://doi.org/10.14453/aabfj.v9i3.4>
63. Salehi, M., Arianpoor, A., & Dalwai, T. (2020). Corporate governance and cost of equity: Evidence from Tehran Stock Exchange. *The Journal of Asian Finance, Economics and Business*, 7(7), 149-158. <https://doi.org/10.13106/jafeb.2020.vol7.no7.149>
64. Sani, A., Alifiah, M. N., & Dikko, U. M. (2020). The dynamic relationship between board composition and capital structure of the Nigerian listed firms. *Journal of Critical Reviews*, 7(11), 621-626. Retrieved from <http://www.jcreview.com/?mno=117892>
65. Sari, R. N., & Anugerah, R. (2011). The effect of political influence and corporate transparency. *Journal of Modern Accounting and Auditing*, 7(8), 773-783.
66. Setiandy, E., Suhardjanto, D., Lukviarman, N., & Hartoko, S. (2017). Board independence, voluntary disclosure, and the cost of equity capital. *Review of Integrative Business and Economics Research*, 6(4), 389-399. Retrieved from http://buscompress.com/uploads/3/4/9/8/34980536/riber_6-4_30b17-152_389-399.pdf
67. Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425-442. <https://doi.org/10.2307/2977928>
68. Shin, J. Y., Hyun, J.-H., Oh, S., & Yang, H. (2018). The effects of politically connected outside directors on firm performance: Evidence from Korean chaebol firms. *Corporate Governance: An International Review*, 26(1), 23-44. <https://doi.org/10.1111/corg.12203>
69. Situmeang, C., Erlina, Maksam, A., & Supriana, T. (2018). Effect of corporate governance on cost of equity before and after International Financial Reporting Standard implementation. *Junior Scientific Researcher*, 4(1), 1-13. Retrieved from https://www.jsrpublishing.com/userfiles/files/archive_pages/29/Situmeang_C._Situmeang_E._Maksam_A._Supriana._JSR_Journal_Vol_IV_No._2_.2018.pdf
70. Srivastava, V., Das, N., & Pattanayak, J. K. (2019). Impact of corporate governance attributes on cost of equity. *Managerial Auditing Journal*, 34(2), 142-161. <https://doi.org/10.1108/MAJ-01-2018-1770>
71. Uddin, M. N., Khan, M. S. U., & Hosen, M. (2019). Does corporate governance influence leverage structure in Bangladesh? *International Journal of Financial Studies*, 7(3), 50. <https://doi.org/10.3390/ijfs7030050>
72. Upadhyay, A., & Sriram, R. (2011). Board size, corporate information environment and cost of capital. *Journal of Business Finance & Accounting*, 38(9-10), 1238-1261. <https://doi.org/10.1111/j.1468-5957.2011.02260.x>
73. Waworuntu, S. R., Tjahjana, K. A. N. F., & Rusmanto, T. (2014). The effect of corporate governance on capital structure in public listed companies in Indonesia. *Proceedings book of ICETSR "handbook on the Emerging trends in scientific research"* (pp. 243-258). Retrieved from [http://www.conscientiabeam.com/ebooks/ICETSR-72-%20\(243-%20258\).pdf](http://www.conscientiabeam.com/ebooks/ICETSR-72-%20(243-%20258).pdf)
74. Wijethilake, C., & Ekanayake, A. (2019). CEO duality and firm performance: The moderating roles of CEO informal power and board involvements. *Social Responsibility Journal*, 16(8), 1453-1474. <https://doi.org/10.1108/SRJ-12-2018-0321>
75. Zaidi, S. M. T., & Nadeem, F. (2017). Impact of overboarded directors on the firm performance: Evidence from Pakistan. *International Journal of Advances in Science Engineering and Technology*, 5(3-2), 23-31. Retrieved from http://www.iraaj.in/journal/journal_file/journal_pdf/6-406-155496178723-31.pdf
76. Zhu, F. (2014). Corporate governance and the cost of capital: An international study. *International Review of Finance*, 14(3), 393-429. <https://doi.org/10.1111/irfi.12034>
77. Zurigat, Z. M. (2016). Financial flexibility and speed of target adjustment of capital structure: Panel data analysis. *Risk Governance and Control: Financial Market and Institution*, 6(4), 410-419. <https://doi.org/10.22495/rcgv6i4c3art6>