

# THE ROLE OF CORPORATE GOVERNANCE MECHANISMS ON EQUITY OVERVALUATION

Ayishat Omar<sup>\*</sup>, Johnson Owusu-Amoako<sup>\*\*</sup>

<sup>\*</sup> Corresponding author, Department of Accounting and Finance, Rohrer College of Business, Rowan University, Glassboro, NJ, USA  
Contact details: Department of Accounting and Finance, Rohrer College of Business, Rowan University, 201 Mullica Hill Road,  
Glassboro, NJ 08021, USA

<sup>\*\*</sup> Broadwell College of Business and Economics, Fayetteville State University, Fayetteville, NC, USA



## Abstract

**How to cite this paper:** Omar, A., & Owusu-Amoako, J. (2023). The role of corporate governance mechanisms on equity overvaluation. *Corporate Governance and Sustainability Review*, 7(3), 34–44.  
<https://doi.org/10.22495/cgsrv7i3p3>

Copyright © 2023 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 Online:** 2519-898X  
**ISSN Print:** 2519-8971

**Received:** 16.11.2022  
**Accepted:** 24.10.2023

**JEL Classification:** G30, G32, G34, M40, M41  
**DOI:** 10.22495/cgsrv7i3p3

This study investigates how corporate governance mechanisms, particularly board characteristics, influence equity overvaluation. We use secondary data of 4,185 firm-year observations spanning 2009 to 2015 across 1,351 publicly listed U.S. firms to estimate a logistic regression model. We focus on governance metrics such as gender diversity, Chief Executive Officer (CEO) duality, independent board members, and board size in relation to overvaluation, primarily measured using the price-to-intrinsic-value ratio. We test Jensen's (2005) proposition that the solution to overvaluation lies in the board of directors or the governance system of firms. In line with our hypothesis, our results present evidence to show that the governance system, specifically board gender diversity, has a significant and negative relationship with the overvaluation of equity. We do not find any significant association between other governance metrics and overvaluation. Equity overvaluation misinforms investors (Eisdorfer et al., 2019), prompting further examination of firm value factors. This study underscores the significance of governance mechanisms, particularly gender diversity, for equity value. Future research should expand governance metrics and explore diverse contexts to enhance the results' robustness and applicability across industries and contexts.

**Keywords:** Corporate Governance, Board Characteristics, Equity, Overvaluation, Agency Theory, Managerial Hegemony

**Authors' individual contribution:** Conceptualization — A.O.; Methodology — A.O.; Formal Analysis — A.O.; Investigation — A.O. and J.O.-A.; Data Curation — A.O.; Writing — Original Draft — A.O.; Writing — Review & Editing — A.O. and J.O.-A.; Supervision — A.O. and J.O.-A.; Project Administration — A.O. and J.O.-A.

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

## 1. INTRODUCTION

Equity overvaluation often occurs when favorable news about a company's fundamentals is disclosed (Barberis et al., 2018; Lan et al., 2021). This positive information can lead investors and the market to overestimate the true value of the company's stock, thereby causing the stock price to exceed its intrinsic value. To sustain this situation, companies may employ a combination of strategic disclosure and earnings management (Badertscher, 2011). Equity-overvalued companies, constrained in their

ability to manage earnings through accruals, often resort to aggressive approaches when disclosing their underlying earnings to maintain the overvaluation (Yang & Abeysekera, 2019). This overvaluation conveys false information to investors and could potentially lead to securities violations (Warusawitharana & Whited, 2016). Fuller and Jensen (2002) propose that firms can address overvaluation issues by implementing changes in corporate governance. Therefore, the objective of this study is to investigate the role of governance mechanisms in firms' equity overvaluation.

When a company's stock price significantly exceeds its underlying value, it can quickly trigger factors that lead to value erosion (Dong et al., 2012; Marciukaityte & Varma, 2008). In response, companies may resort to earnings management activities to maintain their overvalued state. This is often done to prevent negative market reactions resulting from downward revisions, and to protect jobs, salaries, and compensation (Bergstresser & Philippon, 2006; Warusawitharana & Whited, 2016). However, these earnings management activities can have detrimental impacts on firm value and exacerbate conflicts of interest within the organization (Badertscher, 2011; Gu & Lev, 2011). In some notable cases, such as Enron and Xerox, companies have faced legal prosecution, while others have had to pay substantial settlement fees to resolve these issues (Ravenscroft & Williams, 2005).

The motivation for this study stems from prior literature that emphasizes the importance of exploring the factors contributing to firms becoming overvalued, particularly emphasizing the roles of regulators, governance mechanisms, and expectation management (Badertscher, 2011; Jensen, 2005). Within the discourse on overvalued equity, the agency theory perspective posits that the remedy for overvaluation can be found in the actions of the board and corporate governance mechanisms. In contrast, the managerial hegemony view contends that board members are often subject to the influence of managers and may be dysfunctional (Kosnik, 1987). This debate has prompted us to address the central research question of this study:

*RQ1: How are the characteristics of the board of directors associated with equity overvaluation?*

While prior research has examined various factors contributing to overvaluation, such as regulatory aspects and management practices, the specific role of the board and the governance mechanisms associated with it have not been comprehensively investigated in relation to overvaluation. Furthermore, the debate between agency theory and managerial hegemony regarding the board's effectiveness in addressing overvaluation calls for empirical examination. Therefore, our study aims to bridge this literature gap by shedding light on the nuanced relationship between board characteristics and equity overvaluation.

To address this research question, we use archival data from publicly listed U.S. firms spanning the years 2009 to 2015. We estimate a logistic regression model to assess the relationship between overvaluation, primarily measured by the price-to-intrinsic-value ratio and various corporate governance metrics. These metrics include gender diversity, Chief Executive Officer (CEO) non-duality, presence of independent board members, and board size (Anas et al., 2022; Usman, Zhang, Farooq, et al., 2018). Given the pivotal role of a company's board of directors as an internal oversight mechanism (Al-Saidi, 2021; Arora & Singh, 2021; Cardillo et al., 2020; Chams & García-Blandón, 2019; Chen et al., 2014; Ferreira, 2010; Lee et al., 2010), we hypothesize a negative association between effective governance practices and overvaluation.

Our analysis provides some empirical support for our hypothesis, as our findings demonstrate a negative association between gender diversity and

overvaluation. This suggests that as gender diversity within corporate governance structures increases, the likelihood of overvaluation decreases. This finding aligns with the view that gender diversity can have a positive impact on corporate governance, ultimately reducing agency conflicts. Thus, we find support for the agency theory framework that emphasizes how corporate governance mechanisms can align the interests of shareholders and agents and mitigate agency conflicts.

Our study adds value to the existing literature by examining the impact of governance mechanisms on the misvaluation of equity. The distinct separation of ownership and control in publicly held U.S. firms creates both opportunities and challenges. Among these challenges is the potential for opportunistic behavior by managers. In light of the recurring instances of corporate governance concerns, it becomes crucial to understand the role played by a firm's governance system. This understanding can enhance the knowledge of investors, regulators, and various stakeholders regarding the functions and significance of corporate governance.

Moreover, existing studies predominantly focus on conventional corporate governance mechanisms like board independence or CEO duality, often overlooking the incorporation of gender diversity metrics, such as the representation of women on boards or in executive roles, into their analyses. Therefore, our study seeks to address this gap by incorporating gender diversity as a vital factor in our analysis.

The remainder of the paper is organized as follows. In Section 2, we provide a literature review and outline our hypothesis. Section 3 introduces the methodology and details the data collection process. In Section 4, we present and analyze our empirical findings. Lastly, Section 5 presents the conclusion and limitations of our study.

## 2. LITERATURE REVIEW

Prior literature has presented evidence of the existence of overvalued stocks and their implications (Eisdorfer et al., 2019; Khalilov & Osmá, 2020). However, it remains unclear how a firm's corporate governance system directly contributes to or alleviates overvaluation, if at all. Using a sample of Taiwanese listed companies, Shiue et al. (2009) find that strong corporate governance, measured by board independence, board size, and board competence, has a moderate impact on reducing overvalued equity in firms issuing seasoned equity offerings. Similarly, Lan et al. (2021) document evidence supporting the overvaluation hypothesis in their analysis of seasoned equity offerings.

Managers must identify overvaluation because it triggers organizational forces that are challenging to control and can lead to the destruction of firm value (Chi & Gupta, 2009; Dong et al., 2012; Houmes & Skantz, 2010; Jensen, 2005; Marciukaityte & Varma, 2008; Warusawitharana & Whited, 2016). Managers of overvalued companies face a critical choice: they can either inform the market that they are unable to meet the expected operating performance required to justify their overvalued equity, or they can opt to delay and report a negative performance surprise at the next reporting date

(Chi & Gupta, 2009; Jensen, 2005). These choices can significantly impact the manager's compensation and career. Consequently, managers might resort to inflating reported performance, a form of earnings management (Badertscher, 2011; Chi & Gupta, 2009; Tsai et al., 2012), thereby sending false information to investors who could potentially suffer financial losses if the company subsequently faces financial distress or bankruptcy.

Furthermore, firms that have been overvalued for an extended period tend to engage in more earnings management to sustain their overvalued state (Badertscher, 2011; Burns & Kedia, 2006; Yang & Abeysekera, 2019). Such firms are driven by the desire to access low-cost capital, increase wealth, particularly for board members with equity-based compensation, and offer stock options to attract employees (Badertscher, 2011; Eisdorfer et al., 2019).

Establishing effective governance systems is crucial for managing corporate agency problems. However, creating such well-functioning systems can be challenging (Jensen, 2005), as managers and boards may not fully understand the issue, may be unwilling to address it, or may lack the knowledge to tackle it effectively. Hence, there is a demand for further research into the development of governance systems capable of addressing the challenge posed by overvaluation. This is the research gap our study aims to address.

The composition of a company's board of directors is a critical aspect of corporate governance. It plays a pivotal role in shaping corporate decision-making and oversight, which, in turn, can affect equity valuation. In alignment with prior literature, we have adopted board independence, CEO duality, gender diversity, and board size as corporate governance measures (Brahma et al., 2021; Ferreira, 2010; Omar et al., 2021).

## 2.1. Board independence

The role of board independence in corporate governance has been a central focus of research, aiming to understand its positive influence on firm outcomes and performance. Independent directors, often measured by the proportion of independent directors on a company's board, are considered a crucial element of effective corporate governance (Karkowska & Acedański, 2020). Independent directors are individuals who have no significant ties to the firm, its management, or major shareholders, thus ensuring an objective perspective and oversight role.

Numerous studies have demonstrated the positive impact of board independence on firm outcomes and performance (Karkowska & Acedański, 2020). Yermack (1996) and Fama and Jensen (1983) have provided empirical evidence that a higher proportion of independent directors is associated with better monitoring of managerial decisions. Independent directors are more likely to scrutinize corporate actions, thus reducing agency conflicts and mitigating the risk of unethical or value-destructive behavior (Agrawal & Knoeber, 1996; Karkowska & Acedański, 2020; Yermack, 1996). This alignment with agency theory suggests that independent directors play a pivotal role in better monitoring managerial decisions and reducing agency conflicts.

Moreover, independent directors bring diverse expertise and viewpoints to the boardroom, leading to higher-quality strategic decisions (Anderson et al., 2004). Furthermore, firms with independent boards often enjoy increased shareholder confidence, which can translate into higher stock prices and lower cost of capital, ultimately contributing to improved firm performance (Shahid & Abbas, 2019). Such firms are less likely to engage in fraudulent financial reporting, which can have detrimental effects on performance and reputation (Beasley et al., 2000). Additionally, several studies, including research by Larcker et al. (2011) and Hermalin and Weisbach (1998), have highlighted the link between board independence and long-term value creation. Independent directors' commitment to shareholders' interests aligns with the goal of sustainable firm performance.

In summary, empirical evidence suggests that board independence positively impacts firm outcomes and performance through enhanced monitoring, improved decision-making, increased shareholder confidence, reduced risk of financial misconduct, and the promotion of long-term value creation. These findings underscore the importance of maintaining a proportion of independent directors on corporate boards as a critical component of effective corporate governance.

## 2.2. CEO duality

CEO duality represents a governance structure in which the CEO holds both the role of the chief executive officer and the chair of the board of directors. Proponents argue that this structure can lead to more efficient decision-making and streamlined corporate governance (Brickley et al., 1994). However, critics contend that it can compromise the independence of the board and hinder effective oversight (Abdulsamad et al., 2018). This concentration of power can have implications for corporate governance.

When the CEO holds the position of chairperson, it may reduce the effectiveness of board oversight and increase the likelihood of overvaluation. CEO duality may lead to entrenchment, a lack of accountability, or reduced oversight (Abdulsamad et al., 2018). Having a single individual in control can streamline decision-making and facilitate rapid responses, particularly in critical investment decisions (Abdulsamad et al., 2018).

## 2.3. Gender diversity

Gender diversity on corporate boards has gained considerable attention in recent years (Singh et al., 2021). Gender-diverse boards include a mix of male and female directors, and research has explored how such diversity impacts corporate governance and equity valuation. Gender-diverse boards tend to incorporate a wider range of perspectives and experiences (Carter et al., 2003; Palvia et al., 2020), leading to more comprehensive discussions, innovative problem-solving, and better-informed decision-making (Anas et al., 2022; Usman, Zhang, Wang, et al., 2018).

Adams and Ferreira (2009) and Erhardt et al. (2003) have indicated that gender-diverse boards are associated with improved governance practices.

These boards are more likely to establish committees focused on diversity and to prioritize transparency. Companies with diverse boards may experience better financial results, including increased return on equity and improved stock performance (Anas et al., 2022; Cardillo et al., 2020; Chebri & Bahoussa, 2020; Herring, 2009). Additionally, such boards are often perceived as progressive and socially responsible, which can attract customers, investors, and talent (Lu & Herremans, 2019; Wasiuzzaman & Wan Mohammad, 2020). Gender diversity can also reduce the risk of groupthink and foster a climate of healthy debate and dissent leading to more effective risk management and strategic decision-making (Adams & Ferreira, 2009).

Nonetheless, it is crucial to acknowledge that simply appointing female directors without addressing underlying organizational biases and practices may result in tokenism, where diversity remains superficial and does not lead to meaningful change. Furthermore, while research suggests a correlation between gender diversity and positive firm outcomes, establishing causality is challenging due to the presence of various confounding factors (Huang & Kisgen, 2013).

In summary, prior research indicates that gender diversity on boards can have a positive impact on firm outcomes and performance through diverse perspectives, improved governance, enhanced financial performance, reputation benefits, and reduced groupthink. However, the realization of these benefits requires more than token diversity; it necessitates a commitment to inclusive practices and organizational culture.

#### 2.4. Board size

Board size, referring to the total number of directors serving on a company's board, plays an important role in shaping corporate governance and decision-making processes. Many studies have explored the positive impact of board size on firm outcomes and performance.

A larger board can bring a more diverse range of expertise and perspectives. This diversity may result in more comprehensive discussions and better-informed decision-making, especially in complex industries or firms with diverse operations. Such boards tend to exhibit improved performance, establishing specialized committees like audit and compensation committees, and maintaining effective oversight (Daily et al., 2003; Dalton et al., 1998).

Additionally, the presence of more directors can lead to increased vigilance over executive decisions, potentially mitigating the risk of value-destructive behavior (Fama & Jensen, 1983). Large boards can provide access to a broader network of connections and resources, which can be advantageous for firms seeking strategic partnerships, alliances, or external opportunities (Zattoni & Cuomo, 2008). They can accommodate a more significant number of stakeholders or shareholder groups, facilitating a more inclusive decision-making process and potentially enhancing stakeholder satisfaction (Zattoni & Cuomo, 2008).

However, it is essential to recognize that the relationship between board size and firm outcomes is not universally positive. Prior studies

also suggest that excessively large boards may experience challenges in decision-making efficiency (Eisenberg et al., 1998). Larger boards can lead to slower processes, decreased participation, and difficulty in reaching a consensus. They may face challenges related to coordination, communication, and interpersonal dynamics which can hinder effective governance and oversight (Eisenberg et al., 1998). Optimal board size may differ depending on contextual factors (Goodstein & Boeker, 1991).

In summary, board size can have a positive impact on firm outcomes and performance by bringing diverse expertise, improving governance, enhancing monitoring, providing access to networks, and accommodating stakeholder representation. However, the relationship is complex and contingent on various contextual factors, including industry dynamics and organizational characteristics.

Based on the discussion thus far, it is evident that corporate governance encompasses a range of mechanisms and practices that aim to align the interests of managers (agents) with those of shareholders (principals). This alignment is crucial to prevent agency conflicts and, by extension, mitigate equity overvaluation. Agency theory provides valuable insights by highlighting the potential for conflicts of interest between managers and shareholders and suggests that effective corporate governance mechanisms can play a pivotal role in aligning these interests and reducing overvaluation.

However, empirical studies exploring the relationship between corporate governance mechanisms and equity overvaluation have yielded mixed results. While some research supports the notion that stronger governance practices are associated with lower levels of overvaluation, other studies have found less conclusive evidence. Despite the theoretical support for the role of governance in mitigating overvaluation, it is essential to acknowledge that empirical evidence is context-dependent and can vary based on specific circumstances and environments.

In contrast to the agency theory perspective, the managerial hegemony perspective posits that boards primarily exist to meet regulatory requirements and may be under the significant influence of management, potentially compromising their effectiveness in monitoring (Kosnik, 1987; Pugliese et al., 2009). This perspective challenges the assumption that boards always act in the best interests of shareholders.

Nevertheless, the prior literature underscores the critical role of boards of directors in aligning the interests of various stakeholders and their direct impact on a company's financial performance. Jensen (2005) emphasizes that there is no one-size-fits-all solution to address the issue of overvaluation. However, managers must avoid perpetuating overvaluation, and boards of directors must take accountability for preventing overvaluation and the subsequent destruction of firm value.

Drawing from prior research, our study identifies several key measures that capture essential board characteristics, including gender diversity (female representation), independence of board members, CEO non-duality, and board size. These measures have been associated with various

positive outcomes in prior studies, such as enhancing decision-making processes, improving the quality of financial reporting, positively influencing firm performance, and fostering diverse perspectives in the boardroom.

Many corporate governance studies, particularly in accounting, have been conducted through the lens of agency theory, emphasizing the crucial role of boards of directors as monitoring mechanisms within firms (Chen et al., 2014; Cohen et al., 2004, 2008; Ferreira, 2010; Lee et al., 2010; Rezaee, 2010; Tonello, 2010). Therefore, from an agency theory perspective, we posit that effective corporate governance mechanisms can potentially mitigate issues related to overvaluation. As a result, we formulate our hypothesis as follows:

*H1: There is a negative association between strong board characteristics and overvaluation of equity.*

### 3. RESEARCH METHODOLOGY

#### 3.1. Data sources and sample selection

The study uses secondary data from publicly listed U.S. firms, covering the sample period from 2009 to 2015. The selection of this period is based on data availability and relevance to our research objectives. We source fundamental data from Compustat, market data from the Center for Research in Security Prices (CRSP), earnings data from the Institutional Brokers' Estimate System (I/B/E/S), and corporate governance data from Institutional Shareholder Services (ISS, formerly RiskMetrics) and Securities and Exchange Commission (SEC) Form DEF 14A.

Our dataset comprises 80,232 firm-year observations across 16,090 unique firms, from

Compustat. To maintain data consistency and quality, we adhere to criteria outlined by previous studies, specifically following the methodologies of Frankel and Lee (1998) and Badertscher (2011). These criteria stipulate that all included companies must have Compustat book value data for both years  $t - 1$  and  $t - 2$ , alongside CRSP stock price and shares outstanding data. Additionally, we require firms to have one-year-ahead and two-year-ahead earnings per share forecasts sourced from I/B/E/S.

To ensure proper alignments between Compustat and I/B/E/S data, we restrict our sample to firms with fiscal year-ends falling between the period of June to December, as documented in Compustat. Furthermore, we use I/B/E/S forecasts that were issued in May of time  $t$ . In our data cleansing process, we exclude firms with stock prices below \$1 and those with a return of equity exceeding 100%.

Subsequently, we categorize the remaining firms into quantiles, distinguishing the top quantile as our "overvalued" group and the bottom quantile as our "undervalued" group. This filtering process results in a final dataset comprising 4,185 firm-year observations sourced from 1,351 distinct firms.

Table 1a provides an overview of our data collection process, offering transparency and insight into our data selection process. Meanwhile, Table 1b presents the industry classifications of the firms included in our sample. Our findings reveal that the finance industry has the highest representation, accounting for 17.62% of the sample, closely followed by the business equipment industry at 17.02%. In contrast, the telecommunications industry has the lowest representation, constituting only 1.7% of our dataset.

**Table 1a.** Sample construction

Description	Firm year observations	Firms
Initial sample from Compustat for 2009–2015	80,232	16,090
Less: Observations dropped due to data restriction and missing Compustat, CRSP, I/B/E/S, and ISS data	69,026	14,375
Less: Observations in quintiles 2, 3, and 4	7,021	364
Final sample	4,185	1351

**Table 1b.** Industry classification

Industry	Number of firms	% of sample
1. Consumer non-durables	67	4.96
2. Consumer durables	34	2.52
3. Manufacturing	160	11.84
4. Energy — oil, gas, and coal extraction and products	71	5.26
5. Chemicals and allied products	47	3.48
6. Business equipment	230	17.02
7. Telecommunication — telephone and television transmission	24	1.78
8. Utilities	58	4.29
9. Shops	106	7.85
10. Health care, medical equipment and drugs	147	10.88
11 Money and finance	238	17.62
12. Other	169	12.51
Total	1,351	100%

#### 3.2. Methodology

Following the approach used by Frankel and Lee (1998) and Badertscher (2011), we use the Edwards-

Bell-Ohlson (EBO) residual income approach to assess a firm's underlying intrinsic value (Edwards & Bell, 1965; Ohlson, 1995), as formulated below:

$$V_t = B_t + \frac{(FROE_t - r_e)}{(1 + r_e)} B_t + \frac{(FROE_{t+1} - r_e)}{(1 + r_e)^2} B_{t+1} + \frac{(FROE_{t+2} - r_e)}{(1 + r_e)^2 r_e} B_{t+2} \quad (1)$$

where,  $B$  represents the book value, and  $FROE$  denotes the future return on capital. The cost of capital ( $r$ ) is estimated using industry-specific equity costs, obtainable from [http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/wacc.html.htm](http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/wacc.html.htm).

The estimation of  $FROE$  necessitates three future ROE forecasts [ $FROE_t$ ,  $FROE_{t+1}$ ,  $FROE_{t+2}$ ], extracted from consensus earnings per share (EPS) estimates provided by I/B/E/S. Adhering to the methodology outlined by Frankel and Lee (1998), we execute the following steps.

**Step 1:** Calculation of  $FROE_t$  and  $B_t$ . We require that all firms have a one-year ahead I/B/E/S consensus EPS estimate ( $FY1$ ). The forecasted ROE for each year is determined by dividing the consensus forecast by the average book value per share in  $t + 1$ . To mitigate the risk of an extremely low denominator, we employ the average book value. Subsequently, we derive the ending book value for each year using  $FROE_t$  and the dividend payout ratio ( $k$ ). The notations are as follows:

$$FROE_t = FY1 / \left[ \frac{B_{t-1} + B_{t-2}}{2} \right] \quad (2)$$

$$B_t = B_{t-1} [1 + FROE_t (1 - k)] \quad (3)$$

**Step 2:** We also require firms to have a two-year-ahead consensus forecast ( $FY2$ ). The computation for  $FROE_{t+1}$  proceeds as follows:

$$FROE_{t+1} = FY2 / \left[ \frac{B_t + B_{t-1}}{2} \right] \quad (4)$$

$$B_{t+1} = B_t [1 + FROE_{t+1} (1 - k)] \quad (5)$$

**Step 3:** In cases, where a long-term earnings growth estimate ( $Ltg$ ) is available, we proceed with the following calculations:

$$FROE_{t+2} = FY2 / [1 + Ltg] / [B_{t+1} + B_t / 2] \quad (6)$$

$$B_{t+1} = B_t [1 + FROE_{t+1} (1 - k)] \quad (7)$$

In instances where  $Ltg$  is not available, we use  $FROE_{t+1}$  as a proxy for  $FROE_{t+2}$ .

To categorize firms as overvalued or undervalued relative to their peers, we construct portfolios based on the price-to-intrinsic-value

ratio ( $PV$ ). Firms in the highest quantile are ranked as overvalued, while those in the lowest quantile are classified as undervalued. Additionally, we use price-to-book value ratio ( $PB$ ), a more firm-specific measure, as an alternative to rank firms and compare the results with the former measure.

### 3.2.1. Model specification

To evaluate our hypothesis, we use a logistic regression model, as presented below:

$$\begin{aligned} Over = & \beta_0 + \beta_1 GENDER + \beta_2 LNBRDSIZE + \\ & \beta_3 PERCENT_{BIND} + \beta_4 CEOD + \beta_5 B + \beta_6 ROE + \\ & \beta_7 LEV + \beta_8 LNAT + \varepsilon \end{aligned} \quad (8)$$

### 3.2.2. Dependent variable

The dependent variable, equity overvaluation ( $Over$ ), is a binary variable taking a value of 1 if the firm falls into the overvalued category and 0 otherwise.  $Over$  is calculated using two measures, namely the price-to-intrinsic-value ratio ( $PV$ ) and price-to-book ratio ( $PB$ ) (Li & Mohanram, 2019). A firm is deemed overvalued when its stock price exceeds its intrinsic value (Jensen, 2005).

### 3.2.3. Independent variables

The independent variables of interest capture the governance characteristics of sample firms, namely  $GENDER$ ,  $LNBRDSIZE$ ,  $PERCENT_{BIND}$ , and  $CEOD$ .  $GENDER$  represents gender diversity on the board, set as a dummy variable equal to 1 if there is at least one female member on the board and 0 otherwise.  $LNBRDSIZE$  signifies the logarithm of board size,  $PERCENT_{BIND}$  denotes the percentage of independent board members, and  $CEOD$  represents CEO non-duality, a dummy variable set as 1 if the CEO is not the chairman and 0 otherwise.

### 3.2.4. Control variables

Following Badertscher (2011), we include firm-specific control variables such as firm size ( $LNAT$ ), firm's book value ( $B$ ), return on equity ( $ROE$ ), and leverage ( $LEV$ ). A summary of the variables is presented in Table 2.

**Table 2.** Variables of the study

Variable	Definition
$B$	Book value per share: common equity-total/common shares outstanding
$CEOD$	A dummy variable which is set to 1 if the CEO is not the chairman of the board (non-duality), otherwise 0 (duality)
$FROE$	Future return on equity
$GENDER$	A dummy variable which is set to 1 if there is at least one female member on the board, otherwise 0
$LEV$	Leverage ratio: (short-term debt + long-term debt)/total asset
$LNAT$	Natural logarithm of total asset
$LNBRDSIZE$	Natural logarithm of board size
$Over$	A dummy variable set equal to 1 if the firm is in the top quantile of $PV(PB)$ and 0 if it is in the lowest quantile
$P$	Stock price
$PERCENT_{BIND}$	Percentage of independent board members; (number of independent members/board size) * 100
$PB$	Price-to-book ratio
$PV$	Price-to-value ratio
$Re$	Industry cost of equity
$ROE$	Return on equity, calculated as income before extraordinary items/common equity-total for year $t - 1$
$V$	Fundamental value measured using the current I/B/E/S consensus analyst predictions of future earnings available before June

## 4. RESEARCH RESULTS AND DISCUSSION

### 4.1. Descriptive statistics and univariate analysis

In Table 3a and Table 3b, we provide the descriptive statistics for the variables under investigation in our study. These statistics offer essential insights into the central tendencies and distributional characteristics of our dataset, facilitating a clearer understanding of the key parameters involved.

In Table 3a, we present an overview of the sample's central tendencies. The calculated mean for *ROE* is 0.05, indicative of the average profitability observed across the firms within our sample. Additionally, the mean leverage stands at 0.23, shedding light on the typical debt-to-equity ratio prevalent among the sampled companies. Furthermore, the dataset reveals that the mean price-to-intrinsic-value ratio (*PV*) is 28.01, signifying the valuation multiples assigned to these firms by the market. Lastly, the mean price-to-book value ratio (*PB*) is recorded at 3.16, offering insights into the market's assessment of a firm's tangible assets relative to its market value.

In Table 3b, we delve deeper into the dataset by examining the mean values and differences between the extreme quantiles, specifically Quantile 1 (Q1)

and Quantile 5 (Q5). Q1 represents firms that are deemed undervalued in comparison to their peers within the sample, while Q5 comprises firms characterized as overvalued relative to others in the dataset. Our analysis reveals compelling distinctions between these two quantiles.

Relative to the highest quantile, Q5, firms in the lowest quantile, Q1, exhibit significantly lower *ROE*. This observation highlights the contrast in profitability levels between firms considered undervalued (Q1) and those deemed overvalued (Q5). Furthermore, *PB* is notably higher for Q1 firms, reflecting a discernible divergence in market perceptions regarding the tangible asset value relative to market value between these quantiles. Additionally, the analysis indicates that Q1 firms tend to be larger and have higher leverage, illuminating the multifaceted differences between the two quantiles.

These findings underscore the substantial disparities in key financial and market metrics between undervalued and overvalued firms within our sample. Such distinctions lay the groundwork for our subsequent analysis, as we explore how these variations relate to corporate governance mechanisms and their impact on equity overvaluation.

**Table 3a.** Descriptive statistics

Variable	N	Min	Mean	Max	STD
<i>Over</i>	4,185	0	0.50	1.00	0.50
<i>PV</i>	4,185	-14,542.34	28.01	93,608.67	1,473.71
<i>PB</i>	4,185	0.14	3.61	354.58	8.50
<i>B</i>	4,185	0.05	18.85	541.52	23.11
<i>ROE</i>	4,185	-18.18	0.05	0.98	0.46
<i>LEV</i>	4,185	0	0.23	2.85	0.22
<i>LNAT</i>	4,185	4.00	7.83	14.63	1.59
<i>GENDER</i>	4,185	0	0.75	1.00	0.43
<i>LNBRDSIZE</i>	4,185	1.10	2.17	3.52	0.24
<i>PERCENT_BIND</i>	4,185	0	78.72	100	10.91
<i>CEOD</i>	4,185	0	0.40	1.00	0.49

**Table 3b.** Univariate analysis: Characteristics of extreme quantiles

Firm characteristics	Q1 (Low PV)	Q5 (High PV)	Q1-Q5 (Diff.)
<i>B</i>	18.70	18.99	-0.30
<i>ROE</i>	0.03	0.08	-0.05***
<i>LNAT</i>	7.90	7.76	0.15***
<i>PB</i>	2.69	4.53	-1.84***
<i>LEV</i>	0.24	0.22	0.01**
Number of firms	2092	2093	

Note: In columns 1 and 2 of Table 3b, we present the mean values for the variables. Results in Q1-Q5 (Diff.) represent the differences in means between the two extreme quantiles. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

### 4.2. Pearson correlation result

In Table 4, we present the correlation coefficients among the variables utilized in our model. These correlation coefficients offer valuable insights into the initial associations between our study's key constructs. While these associations provide a preliminary understanding, it is important to note that a more comprehensive examination will be conducted through regression analysis to ascertain the strength and significance of these relationships.

Contrary to our initial expectations, the correlation results do not reveal any significant associations between *Over* (our proxy for equity overvaluation) and our selected governance measures. However, it is essential to underscore that the absence of strong correlations at this stage does

not preclude the possibility of meaningful relationships emerging through the regression analysis. Therefore, a deeper investigation will be conducted to provide a more nuanced understanding of the connections between governance mechanisms and equity overvaluation.

Furthermore, our correlation analysis identifies noteworthy relationships between *Over* and other financial variables. Specifically, we observe significant negative correlations between *Over* and other variables such as *LEV* and *LNAT*. These findings suggest that firms characterized by higher leverage ratios and larger total assets values tend to exhibit lower values of overvaluation. Additionally, we also find a significant positive association between *Over* and *ROE*, indicating that higher *ROE* values are associated with increased levels of overvaluation.

Importantly, our analysis does not reveal any apparent problems with multicollinearity among the variables, which bolsters the robustness of our dataset and affirms the validity of our subsequent regression analysis. While these initial correlations provide a valuable starting point, our comprehensive

regression analysis will enable us to disentangle the intricate interplay between these variables and provide a more nuanced understanding of the factors influencing equity overvaluation within our sample.

**Table 4.** Pearson correlation result

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) <i>Over</i>	1.000	0.017	-0.025	-0.016	-0.002	0.006	0.059***	-0.031**	-0.046***
(2) <i>GENDER</i>		1.000	0.397***	0.256***	-0.012	0.074***	0.024	0.119***	0.319***
(3) <i>LNBRDSIZE</i>			1.000	0.170***	-0.021	0.214***	0.012	0.107***	0.572***
(4) <i>PERCENT_BIND</i>				1.000	0.072***	0.072***	0.011	0.052***	0.203***
(5) <i>CEOD</i>					1.000	0.019	0.026*	-0.015	0.051***
(6) <i>B</i>						1.000	0.060***	-0.001	0.295***
(7) <i>ROE</i>							1.000	-0.048***	0.014
(8) <i>LEV</i>								1.000	0.282***
(9) <i>LNAT</i>									1.000

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

#### 4.3. Regression result

In Table 5, we present the results of our logistic regression analysis. The overall regression model is statistically significant with an adjusted  $R^2$  of 0.12. Notably, we observe a significant and negative relationship between the presence of at least one female member on the board of directors (*GENDER*) and the occurrence of overvaluation (*Over*). That is, the presence of at least a female member on the board of directors is associated with lower levels of overvaluation. This finding aligns with existing research suggesting that gender diversity on boards fosters a positive environment (Abbott et al., 2012; Herring, 2009; Usman, Zhang, Wang, et al., 2018).

However, our analysis does not reveal significant relationships between overvaluation (*Over*) and other measures of effective governance, such as percentage of independent board members (*PERCENT\_BIND*), CEO non-duality (*CEOD*), and board size (*LNBRDSIZE*). Consequently, our results offer partial support for our hypothesis, which posits a negative relationship between effective governance mechanisms and overvaluation.

The negative association identified between gender diversity and overvaluation suggests that

gender-diverse boards and leadership teams may be more effective in aligning their interests with those of shareholders. This alignment can be attributed to the diverse perspectives and experiences brought by women leaders, which may result in more balanced decision-making and a greater focus on shareholder value. This finding also supports the agency theory framework that emphasizes the importance of corporate governance mechanisms in aligning the interests of shareholders (the principals) and management and the board (the agents). It posits that effective governance can reduce agency conflicts, including those that may lead to equity overvaluation.

Moreover, our analysis of control variables yields a significant insight. We find that *Over* has a significant negative association with *ROE*. Specifically, firms with lower ROE tend to exhibit higher levels of overvaluation. This suggests that a company's financial performance, as reflected in its ROE, plays a vital role in influencing its valuation in the equity market. The relationship between *ROE* and *Over* underscores the importance of financial fundamentals in determining a firm's perceived value by investors and the market.

**Table 5.** Regression result

Variable	Expected sign	Estimated coefficient	Pr > Chi <sup>2</sup>
Intercept	?	-0.7994**	0.0237
<i>GENDER</i>	-	-0.1889**	0.0187
<i>LNBRDSIZE</i>	-	0.1120	0.4977
<i>PERCENT_BIND</i>	-	0.0028	0.3481
<i>CEOD</i>	-	0.0048	0.9398
<i>B</i>		-0.0015	0.2976
<i>ROE</i>		-0.4696***	0.0001
<i>LEV</i>		0.1458	0.3256
<i>LNAT</i>		0.0638**	0.0136
Industry dummies		Yes	
Year dummies		Yes	
N		4185	
Adjusted R <sup>2</sup>		0.12	

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . The model estimated is:  $Over = \beta_0 + \beta_1 GENDER + \beta_2 LNBRDSIZE + \beta_3 PERCENT\_BIND + \beta_4 CEOD + \beta_5 B + \beta_6 ROE + \beta_7 LEV + \beta_8 LNAT + \varepsilon$ .

## 5. CONCLUSION

Overvaluation is an ongoing issue with potentially severe consequences for firms. Using secondary data of 4,185 firm-year observations spanning 2009 to 2015 across 1,351 publicly listed U.S. firms, we

examine the relationship between overvaluation, measured primarily by the price-to-intrinsic-value ratio, and various corporate governance metrics. These metrics include gender diversity, CEO non-duality, presence of independent board members, and board size. Drawing from agency



theory, our hypothesis posits that the presence of strong corporate governance mechanisms will be negatively associated with overvaluation. Our logistic regression results provide partial supporting evidence, specifically revealing a significant negative relationship between only the presence of at least one female board member, gender diversity, and overvaluation.

The challenge of overvaluation calls for a comprehensive understanding of its underlying factors. Thus, our study contributes to the corporate governance literature by shedding light on the commonly used measures to capture effective governance mechanisms within firms and how they impact levels of equity overvaluation. Furthermore, our research highlights the importance of gender diversity within corporate boards, underscoring its relevance to stakeholders.

The practical implications of our study extend to corporate governance practices. Companies aiming to address agency conflicts and enhance equity valuation accuracy should consider bolstering gender diversity within their boards and leadership teams as part of a broader governance strategy. A gender-diverse governance structure promotes transparency, accountability, and responsible decision-making, potentially reducing the likelihood of overvaluation.

However, it is essential to acknowledge a limitation of this study, specifically regarding the number of governance variables examined. A more extensive investigation could encompass a broader array of governance variables. This expanded approach could offer a more nuanced understanding of how various facets of corporate governance collectively influence equity overvaluation. Such depth could benefit academia and practitioners across diverse industries and regions. Furthermore, a broader examination of

governance variables would enhance the robustness and generalizability of our findings, yielding insights applicable across different industries, regions, and organizational contexts.

Moreover, while our findings support the negative association between gender diversity and overvaluation, there may be additional factors or mechanisms at play. Future research should delve deeper into understanding these specific channels, considering potential variations across industries or cultural contexts.

Exploring this subject in future research holds great potential for enhancing our comprehension of how corporate governance mechanisms, including gender diversity, influence equity valuation. This knowledge can drive improvements in governance practices, foster more precise equity valuations, and promote greater sustainability and ethical conduct within financial markets.

Given the dynamic nature of corporate governance practices, continual research is imperative to grasp their implications for equity valuation, especially with the emergence of novel mechanisms and approaches. Additionally, the intersection of gender diversity and equity overvaluation carries substantial social and ethical ramifications. Conducting further research in this domain can contribute to more ethically guided corporate decision-making, aligning businesses with societal expectations and ethical standards.

As organizations increasingly prioritize diversity and inclusion, gaining a deeper understanding of how gender diversity shapes governance and equity valuation becomes essential for achieving these organizational objectives. Additionally, delving into the enduring impacts of governance mechanisms on equity valuation can provide insights into the durability and adaptability of companies in the long term.

## REFERENCES

1. Abbott, L. J., Parker, S., & Presley, T. J. (2012). Female board presence and the likelihood of financial restatement. *Accounting Horizons*, 26(4), 607-629. <https://doi.org/10.2308/acch-50249>
2. Abdulsamad, A. O., Yusoff, W. F. W., & Lasyoud, A. A. (2018). The influence of the board of directors' characteristics on firm performance: Evidence from Malaysian public listed companies. *Corporate Governance and Sustainability Review*, 2(1), 6-13. <https://doi.org/10.22495/cgsrv2i1p1>
3. Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291-309. <https://doi.org/10.1016/j.jfineco.2008.10.007>
4. Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *The Journal of Financial and Quantitative Analysis*, 31(3), 377-397. <https://doi.org/10.2307/2331397>
5. Al-Saidi, M. (2021). Boards of directors and firm performance: A study of non-financial listed firms on the Kuwait Stock Exchange. *Corporate Ownership & Control*, 18(2), 40-47. <https://doi.org/10.22495/cocv18i2art3>
6. Anas, M., Jamal, M. T., Ahmad, M. M., Azmi, S. N., & Alam, M. F. (2022). The moderating role of board gender diversity in association of board characteristics and firm value. *Corporate Governance and Sustainability Review*, 6(2), 29-41. <https://doi.org/10.22495/cgsrv6i2p3>
7. Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2004). Board characteristics, accounting report integrity, and the cost of debt. *Journal of Accounting and Economics*, 37(3), 315-342. <https://doi.org/10.1016/j.jacceco.2004.01.004>
8. Arora, A., & Singh, A. (2021). Board characteristics and financial performance: A comprehensive literature review. *Corporate Ownership & Control*, 19(1), 188-198. <https://doi.org/10.22495/cocv19i1art14>
9. Badertscher, B. A. (2011). Overvaluation and the choice of alternative earnings management mechanisms. *The Accounting Review*, 86(5), 1491-1518. <https://doi.org/10.2308/acch-10092>
10. Barberis, N., Greenwood, R., Jin, L., & Shleifer, A. (2018). Extrapolation and bubbles. *Journal of Financial Economics*, 129(2), 203-227. <https://doi.org/10.1016/j.jfineco.2018.04.007>
11. Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Lapides, P. D. (2000). Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. *Accounting Horizons*, 14(4), 441-454. <https://doi.org/10.2308/acch.2000.14.4.441>
12. Bergstresser, D., & Philippon, T. (2006). CEO incentives and earnings management. *Journal of Financial Economics*, 80(3), 511-529. <https://doi.org/10.1016/j.jfineco.2004.10.011>
13. Brahma, S., Nwafor, C., & Boateng, A. (2021). Board gender diversity and firm performance: The UK evidence. *International Journal of Finance & Economics*, 26(4), 5704-5719. <https://doi.org/10.1002/ijfe.2089>

14. Brickley, J. A., Coles, J. L., & Terry, R. L. (1994). Outside directors and the adoption of poison pills. *Journal of Financial Economics*, 35(3), 371-390. [https://doi.org/10.1016/0304-405X\(94\)90038-8](https://doi.org/10.1016/0304-405X(94)90038-8)
15. Burns, N., & Kedia, S. (2006). The impact of performance-based compensation on misreporting. *Journal of Financial Economics*, 79(1), 35-67. <https://doi.org/10.1016/j.jfineco.2004.12.003>
16. Cardillo, G., Onali, E., & Torluccio, G. (2020). Does gender diversity on banks' boards matter? Evidence from public bailouts. *Journal of Corporate Finance*, 71, Article 101560. <https://doi.org/10.1016/j.jcorpfin.2020.101560>
17. Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review*, 38(1), 33-53. <https://doi.org/10.1111/1540-6288.00034>
18. Chams, N., & García-Blandón, J. (2019). Sustainable or not sustainable? The role of the board of directors. *Journal of Cleaner Production*, 226, 1067-1081. <https://doi.org/10.1016/j.jclepro.2019.04.118>
19. Chebri, M., & Bahoussa, A. (2020). Impact of gender and nationality diversity on financial performance: A study of listed banks in Morocco. *Corporate Ownership and Control*, 18(1), 56-68. <https://doi.org/10.22495/cocv18i1art5>
20. Chen, A., Kao, L., & Lu, C.-S. (2014). Controlling ownership and firm performance in Taiwan: The role of external competition and internal governance. *Pacific-Basin Finance Journal*, 29, 219-238. <https://doi.org/10.1016/j.pacfin.2014.04.007>
21. Chi, J. D., & Gupta, M. (2009). Overvaluation and earnings management. *Journal of Banking and Finance*, 33(9), 1652-1663. <https://doi.org/10.1016/j.jbankfin.2009.03.014>
22. Cohen, J. R., Krishnamoorthy, G., & Wright, A. M. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, 23, 87-152. <https://ssrn.com/abstract=1086743>
23. Cohen, J. R., Krishnamoorthy, G., & Wright, A. M. (2008). Form versus substance: The implications for auditing practice and research of alternative perspectives on corporate governance. *Auditing: A Journal of Practice and Theory*, 27(2), 181-198. <https://doi.org/10.2308/aud.2008.27.2.181>
24. Daily, C. M., & Dalton, D. R. (2003). Women in the boardroom: A business imperative. *Journal of Business Strategy*, 24(5). <https://doi.org/10.1108/jbs.2003.28824eaf.002>
25. Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal*, 19(3), 269-290. [https://doi.org/10.1002/\(SICI\)1097-0266\(199803\)19:3%3C269::AID-SMJ950%3E3.0.CO;2-K](https://doi.org/10.1002/(SICI)1097-0266(199803)19:3%3C269::AID-SMJ950%3E3.0.CO;2-K)
26. Dong, M., Hirshleifer, D., & Teoh, S. H. (2012). Overvalued equity and financing decisions. *The Review of Financial Studies*, 25(12), 3645-3683. <https://doi.org/10.1093/rfs/hhs112>
27. Edwards, E. O., & Bell, P. W. (1965). *The theory and measurement of business income*. University of California Press.
28. Eisdorfer, A., Goyal, A., & Zhdanov, A. (2019). Equity misvaluation and default options. *The Journal of Finance*, 74(2), 845-898. <https://doi.org/10.1111/jofi.12748>
29. Eisenberg, T., Sundgren, S., & Wells, M. T. (1998). Larger board size and decreasing firm value in small firms. *Journal of Financial Economics*, 48(1), 35-54. [https://doi.org/10.1016/S0304-405X\(98\)00003-8](https://doi.org/10.1016/S0304-405X(98)00003-8)
30. Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance: An International Review*, 11(2), 102-111. <https://doi.org/10.1111/1467-8683.00011>
31. Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, 26(2), 301-325. <https://doi.org/10.1086/467037>
32. Ferreira, D. (2010). Board diversity. In H. K. Baker, & R. Anderson (Eds.), *Corporate governance: A synthesis of theory, research, and practice* (pp. 225-242). John Wiley & Sons. <https://doi.org/10.1002/9781118258439.ch12>
33. Frankel, R., & Lee, C. M. C. (1998). Accounting valuation, market expectation, and cross-sectional stock returns. *Journal of Accounting and Economics*, 25(3), 283-319. [https://doi.org/10.1016/S0165-4101\(98\)00026-3](https://doi.org/10.1016/S0165-4101(98)00026-3)
34. Fuller, J., & Jensen, M. C. (2002). Just say no to Wall Street: Putting a stop to the earnings game. *Journal of Applied Corporate Finance*, 14(4), 41-46. <https://doi.org/10.1111/j.1745-6622.2002.tb00447.x>
35. Goodstein, J., & Boeker, W. (1991). Turbulence at the top: A new perspective on governance structure changes and strategic change. *The Academy of Management Journal*, 34(2), 306-330. <https://doi.org/10.2307/256444>
36. Gu, F., & Lev, B. (2011). Overpriced shares, ill-advised acquisitions, and goodwill impairment. *The Accounting Review*, 86(6), 1995-2022. <https://doi.org/10.2308/accr-10131>
37. Hermalin, B. E., & Weisbach, M. S. (1998). Endogenously chosen boards of directors and their monitoring of the CEO. *The American Economic Review*, 88(1), 96-118. <https://www.jstor.org/stable/116820>
38. Herring, C. (2009). Does diversity pay?: Race, gender, and the business case for diversity. *American Sociological Review*, 74(2), 208-224. <https://doi.org/10.1177/000312240907400203>
39. Houmes, R. E., & Skantz, T. R. (2010). Highly valued equity and discretionary accruals. *Journal of Business Finance & Accounting*, 37(1-2), 60-92. <https://doi.org/10.1111/j.1468-5957.2009.02179.x>
40. Huang, J., & Kisgen, D. J. (2013). Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics*, 108(3), 822-839. <https://doi.org/10.1016/j.jfineco.2012.12.005>
41. Jensen, M. C. (2005). Agency costs of overvalued equity. *Financial Management*, 34(1), 5-19. <https://doi.org/10.1111/j.1755-053X.2005.tb00090.x>
42. Karkowska, R., & Acedański, J. (2020). The effect of corporate board attributes on bank stability. *Portuguese Economic Journal*, 19(2), 99-137. <https://doi.org/10.1007/s10258-019-00162-3>
43. Khalilov, A., & Osmá, B. G. (2020). Accounting conservatism and the profitability of corporate insiders. *Journal of Business Finance and Accounting*, 47(3-4), 333-364. <https://doi.org/10.1111/jbfa.12438>
44. Kosnik, R. D. (1987). Greenmail: A study of board performance in corporate governance. *Administrative Science Quarterly*, 32(2), 163-185. <https://doi.org/10.2307/2393124>
45. Lan, Y., Huang, Y., & Yan, C. (2021). Investor sentiment and stock price: Empirical evidence from Chinese CEOs. *Economic Modelling*, 94, 703-714. <https://doi.org/10.1016/j.econmod.2020.02.012>
46. Larcker, D. F., Ormazabal, G., & Taylor, D. J. (2011). The market reaction to corporate governance regulation. *Journal of Financial Economics*, 101(2), 431-448. <https://doi.org/10.1016/j.jfineco.2011.03.002>
47. Lee, H.-Y., Mande, V., & Son, M. (2010). Corporate governance characteristics of firms backdating stock options. *Quarterly Journal of Finance and Accounting*, 49(1), 39-60. <https://www.jstor.org/stable/25747075>
48. Li, K., & Mohanram, P. (2019). Fundamental analysis: Combining the search for quality with the search for value. *Contemporary Accounting Research*, 36(3), 1263-1298. <https://doi.org/10.1111/1911-3846.12466>
49. Lu, J., & Herremans, I. M. (2019). Board gender diversity and environmental performance: An industries perspective. *Business Strategy and the Environment*, 28(7), 1449-1464. <https://doi.org/10.1002/bse.2326>

50. Marciukaityte, D., & Varma, R. (2008). Consequences of overvalued equity: Evidence from earnings manipulation. *Journal of Corporate Finance*, 14(4), 418–430. <https://doi.org/10.1016/j.jcorpfin.2008.05.002>
51. Ohlson, J. A. (1995). Earnings, book values, and dividends in equity valuation. *Contemporary Accounting Research*, 11(2), 661–687. <https://doi.org/10.1111/j.1911-3846.1995.tb00461.x>
52. Omar, A., Tang, A. P., & Cong, Y. (2021). Corporate governance, CEO turnover and say on pay votes. *Accounting Research Journal*, 34(6), 580–596. <https://doi.org/10.1108/ARJ-11-2019-0207>
53. Palvia, A. A., Vähämaa, E., & Vähämaa, S. (2020). Female leadership and bank risk-taking: Evidence from the effects of real estate shocks on bank lending performance and default risk. *Journal of Business Research*, 117, 897–909. <https://doi.org/10.2139/ssrn.3264126>
54. Pugliese, A., Bezemer, P. J., Zattoni, A., Huse, M., Van den Bosch, F. A., & Volberda, H. W. (2009). Boards of directors' contribution to strategy: A literature review and research agenda. *Corporate Governance: An International Review*, 17(3), 292–306. <https://doi.org/10.1111/j.1467-8683.2009.00740.x>
55. Ravenscroft, S., & Williams, P. F. (2005). Rules, rogues, and risk assessors: Academic responses to Enron and other accounting scandals. *European Accounting Review*, 14(2), 363–372. <https://doi.org/10.1080/09638180500124889>
56. Rezaee, Z. (2010). Board subcommittees for corporate governance. In H. K. Baker, & R. Anderson (Eds.), *Corporate governance: A synthesis of theory, research, and practice* (pp. 243–262). John Wiley & Sons. <https://doi.org/10.1002/9781118258439.ch13>
57. Shahid, M. S., & Abbas, M. (2019). Does corporate governance play any role in investor confidence, corporate investment decisions relationship? Evidence from Pakistan and India. *Journal of Economics and Business*, 105, Article 105839. <https://doi.org/10.1016/j.jeconbus.2019.03.003>
58. Shiue, M.-J., Lin, C.-J., & Liu, Y.-P. (2009). Board characteristics and overvalued equity: Evidence from Taiwan. *International Research Journal of Finance and Economics*, 32(2009), 104–114. <http://ntur.lib.ntu.edu.tw/bitstream/246246/213934/1/s20.pdf>
59. Singh, J., Singhania, S., & Aggrawal, D. (2021). Gender diversity on corporate boards: Review and future research agenda through bibliometric mapping. *Corporate Governance and Sustainability Review*, 5(3), 57–72. <https://doi.org/10.22495/cgsrv5i3p5>
60. Tsai, C.-C., Wu, C.-C., & Chang, R.-D. (2012). Effects of overvalued equity and managerial incentives on corporate policy. *Emerging Markets Finance and Trade*, 48(1), 74–87. <https://doi.org/10.2753/REE1540-496X4801S106>
61. Tonello, M. (2010). Board composition and organization issues. In H. K. Baker, & R. Anderson (Eds.), *Corporate governance: A synthesis of theory, research, and practice* (pp. 195–223). John Wiley & Sons. <https://doi.org/10.1002/9781118258439.ch11>
62. Usman, M., Zhang, J., Farooq, M. U., Makki, M. A. M., & Dong, N. (2018). Female directors and CEO power. *Economics Letters*, 165, 44–47. <https://doi.org/10.1016/j.econlet.2018.01.030>
63. Usman, M., Zhang, J., Wang, F., Sun, J., & Makki, M. A. M. (2018). Gender diversity in compensation committees and CEO pay: Evidence from China. *Management Decision*, 56(5), 1065–1087. <https://doi.org/10.1108/MD-09-2017-0815>
64. Yang, Y., & Abeysekera, I. (2019). The duration of equity overvaluation and managers' choice to use aggressive underlying earnings reporting and accruals earnings management: Australian evidence. *Journal of Contemporary Accounting and Economics*, 15(2), 167–185. <https://doi.org/10.1016/j.jcae.2019.04.004>
65. Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40(2), 185–211. [https://doi.org/10.1016/0304-405X\(95\)00844-5](https://doi.org/10.1016/0304-405X(95)00844-5)
66. Wasiuzzaman, S., & Wan Mohammad, W. M. (2020). Board gender diversity and transparency of environmental, social and governance disclosure: Evidence from Malaysia. *Managerial and Decision Economics*, 41(1), 145–156. <https://doi.org/10.1002/mde.3099>
67. Warusawitharana, M., & Whited, T. M. (2016). Equity market misvaluation, financing, and investment. *The Review of Financial Studies*, 29(3), 603–654. <https://doi.org/10.1093/rfs/hhv066>
68. Zattoni, A., & Cuomo, F. (2008). Why adopt codes of good governance? A comparison of institutional and efficiency perspectives. *Corporate Governance: An International Review*, 16(1), 1–15. <https://doi.org/10.1111/j.1467-8683.2008.00661.x>