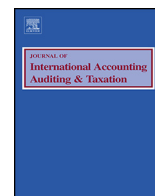


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## The impact of corporate governance and political connections on information asymmetry: International evidence from banks in the Gulf Cooperation Council member countries



Abiot Tessema

Zayed University College of Business, P.O. Box 144354, Abu Dhabi, United Arab Emirates

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### ABSTRACT

This study investigates the impact of corporate governance on the level of information asymmetry. In addition, the study examines whether a firm's political connections have a moderating effect on this relationship. Based on a sample of leading listed local banks in the Gulf Cooperation Council (GCC) member countries, the findings indicate that proxies for corporate governance mechanisms are inversely related to proxies for information asymmetry. Specifically, greater board independence, blockholders, institutional ownership, and board size are associated with greater information asymmetry as reflected in share trading volume, market value of shares traded, and volatility of shares returns, whereas a Chief Executive Officer (CEO)'s also being on the Board of Directors is not significantly related to the level of information asymmetry. Moreover, removing insiders from the board may harm the company because outside directors lack the knowledge and experience to steer the company appropriately. Similarly, blockholders and institutional ownership both have a limited role in information dissemination in the GCC markets. Larger boards are ineffective in information dissemination because communication, coordination, and decision-making problems are greater. However, the interactions between the proxy for the firm's political connections and corporate governance mechanisms are negatively related to the level of information asymmetry. The results indicate that firms with strong corporate governance and political connections may disseminate more information than firms that are politically unconnected. The results also imply that firm-level governance mechanisms and political connections in the GCC are crucial to improve the level of a firm's transparency.

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## 1. Introduction

Following a number of corporate scandals, such as Enron and WorldCom, that occurred between 2000 and 2002 as well as other international developments<sup>1</sup>, various studies have examined the impact of corporate governance on the level of information asymmetry. The studies, however, have offered two competing theories and mixed empirical evidence. For example, classic agency theory suggests that board independence, CEO serving on the Board (CEO Duality), institutional ownership, and equity blockholders (who own a large block of a company's shares) are important devices for monitoring

*E-mail address:* [abiot.tessema@zu.ac.ae](mailto:abiot.tessema@zu.ac.ae)

<sup>1</sup> For example, the recent corruption scandal in Saudi Arabia led to a significant drop in the stock prices of firms connected with the detained Saudi princes and top officials. Another example is the stock price fall of Samsung Electronics after Vice Chairman Lee Jae-yong was arrested over his alleged role in a corruption scandal.

management decisions; this encourages managers to maintain a disclosure policy consistent with firm value maximization (Jensen & Meckling, 1976). Consistent with this view, numerous studies document a positive association between the extent of voluntary disclosure and various factors: board independence (Ajina, Sougne, & Laouiti, 2013; Cheng & Courtenay, 2006; Elbadry, Gounopoulos, & Skinner, 2015; Leung & Horwitz, 2004), CEO duality (Carcello & Nagy, 2004; Forker, 1992; Lakhil, 2005; Lin, Yeh, & Yang, 2014), institutional ownership (Diamond & Verrecchia, 1991; Healy, Hutton, & Palepu, 1999), blockholders (Shleifer & Vishny, 1986; Smith, 1996), board size (Freeman & Reed, 1983; John & Senbet, 1998), and political connections (Boubakri, Guedhami, Mishra, & Saffar, 2012; Guedhami, Pittman, & Saffar, 2014; Watts & Zimmerman, 1983).

A competing theory argues that corporate governance mechanisms, such as higher board independence, institutional ownership, equity blockholders, no CEO serving on the Board, and larger board size, lead to less voluntary disclosure practices. Consistent with this view, several studies document either a negative relationship or no association between the extent of voluntary disclosure and various factors: board independence (Eng & Mak, 2003), CEO serving on the Board (Klein, 1998; Fama & Jensen, 1983), institutional and blockholders (Eng & Mak, 2003; Jung & Kwon, 2002), board size (Alfraih & Almutawa, 2017; Cheng & Courtenay, 2006), and political connections (Chaney, Faccio, & Parsley, 2011).

Prior literature on the link between voluntary disclosure and information asymmetry suggests that greater voluntary disclosure reduces adverse selection problems in the capital market and mitigates the information asymmetry problem by “leveling the playing field” for all investors (Diamond & Verrecchia, 1991; Lambert, Leuz, & Verrecchia, 2007; Leuz & Verrecchia, 2000). Consistent with this view, numerous empirical studies document that higher disclosure quality reduces information asymmetry by altering the trading behavior of uninformed investors (Cheng, Courtenay, & Krishnamurti, 2006; Lang & Lundholm, 1996; Welker, 1995).

Given the implications of these two competing views and mixed empirical evidence, this study argues that it is ultimately an empirical issue whether corporate governance mechanisms affect the level of information asymmetry. In addition, the extensive research on the relationship between corporate governance mechanisms and the level of information asymmetry has mainly focused on data collected from developed countries. Given the increasing importance of financial and trade linkages between the Gulf Cooperation Council (GCC) countries and global markets, corporate governance practices that deliver adequate investors’ protection through transparency of the relevant information are now an increasingly important factor when assessing both the domestic and foreign direct investment climate in the region. Hence, the current study seeks to address the above gaps by examining whether corporate governance practices affect the level of information asymmetry between informed and uninformed investors. In addition, it examines whether political connections affect the impact of corporate governance practices on the level of information asymmetry in leading listed local banks in GCC member countries.

Following prior studies, share trading volume, the market value of shares traded, and the volatility of share returns are employed as proxies for information asymmetry (Elbadry et al., 2015; Linsmeier, Thornton, Venkatachalam, & Welker, 2002). Five proxies for corporate governance practices are explored, namely, board independence, CEO serving on the Board, blockholders, institutional ownership, and board size. I use a dummy variable to measure whether a firm is politically connected.<sup>2</sup> Based on variables identified in the literature related to information asymmetry, the regression analysis includes several control variables. To reduce omitted variable bias, I used year fixed effects regressions to test the hypotheses. For sensitivity tests, alternative specifications were employed.

Analyzing a sample of leading listed local banks in the GCC for the fiscal years from 2012 to 2016, I find that greater board independence, blockholders, institutional ownership, and board size are significantly and positively related to the level of information asymmetry as reflected in share trading volume, the market value of shares traded, and the volatility of shares returns, whereas CEO serving on the Board is not significantly related to the level of information asymmetry. However, I also find that the interactions between political connections and most of the proxies of corporate governance mechanisms are positively related to the proxies for the level of information asymmetry. The results indicate that firms with “strong” corporate governance and political connections may disseminate more information than firms that are politically unconnected.

I conducted a robustness check based on composite measures derived from a principal component analysis of three conventional proxies for the level of information asymmetry and five proxies for corporate governance mechanisms. The results are confirmed by the composite measures of the level of information asymmetry and corporate governance mechanisms.

This study contributes to the literature in several ways. First, this study helps to increase our understanding of the impact of various corporate governance mechanisms on the level of information asymmetry in the GCC, which has different kinds of economies, legal and political institutions, regulatory and litigation incentives, and social contexts from research conducted using data from developed or other emerging countries. This helps to widen our knowledge on the role of corporate governance and political connections on information asymmetry across the globe.

Second, this study extends the existing literature by providing new insights into the relationship between corporate governance and the level of information asymmetry, and whether firms’ political connections have a moderating effect on this relationship.

Third, the findings have policy implications. The results suggest that in order to improve managers’ decisions to disseminate the firm’s information, policymakers, standard setters, and regulators need to understand how various corporate

<sup>2</sup> Each variable is defined in section 4 (see also Appendix A).

governance practices in the GCC and a firm's political connections are associated with incentives for firms to disclose information before establishing comprehensive rules and regulations for corporate reporting. Moreover, this study suggests that policymakers, standards setters, regulators, and investors should be aware that strong corporate governance may be a necessary but not a sufficient condition for monitoring the manager's decision to disseminate the firm's information. For example, using a sample of firms drawn from the London Stock Exchange, [Elbadry et al. \(2015\)](#) documented that greater board independence and board activities are inversely related to the level of information asymmetry. The results reported in the present study, however, show that greater board independence, blockholders, institutional ownership, and board size may lead to greater information asymmetry. This suggests that in the absence of a strong institutional infrastructure, strong corporate governance may have a limited role in monitoring managers' decisions to disseminate firms' information.

The remainder of this paper is organized as follows. Section 2 presents the institutional setting. Section 3 reviews previous studies. Section 4 describes the theory and develops the hypotheses. Section 5 presents the research design, the sample selection procedure, and variable measurements. Section 6 discusses the descriptive statistics and the main results. Section 7 concludes the paper.

## 2. Institutional background

The GCC was founded in May 1981 by Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The alliance was formed to strengthen relations among the member countries and to formulate similar regulations in various fields, such as the economy, finance, tourism, trade, legislation, and customs. The region has a common political system based on Islamic beliefs, strong religious and economic ties, and a shared Muslim culture.

The GCC comprises some of the fastest-growing economies in the world due to large oil and natural gas reserves. The oil and gas sector contributes more than half of the gross domestic product (GDP). According to the International Monetary Fund (IMF), the region had a GDP of \$826 billion (half of all the Middle East and North Africa region) in 2007. In 2013, the aggregate GDP was above \$1.6 trillion ([World Bank, 2015](#)). Between 2014 and 2016, the growth rate was 2.9%.

Developing financial stock markets to be globally integrated is an important strategic policy objective in most GCC countries. As a result, stock markets developed dramatically over the past decade, reaching an average capitalization of 44% of GDP in 2013. The market capitalization for all GCC countries increased from US\$132 billion at the end of 2002 to US\$1000 billion at the end of 2006 ([Al-Shammari, Brown, & Tarca, 2008](#)). The region's financial sector is dominated by banking. Across the GCC, bank assets exceed stock capitalization. The GCC also has one of the largest Islamic banking markets, and with approximately \$300 billion in financial assets is more than one-third of the global Islamic banking sector ([Olson & Zoubi, 2008](#)).

## 3. Literature review

Previous studies have indicated that agency problems exist when there are conflicting goals between the principal and the agent ([Jensen & Meckling, 1976](#); [Liu, Valenti, & Chen, 2016](#)). These problems are more pronounced when it is difficult and costly for the principal to monitor the agent's activities. [Healy and Palepu \(1993\)](#); [Holmstrom \(1979\)](#); [Leuz and Verrecchia \(2000\)](#), and [Diamond and Verrecchia \(1991\)](#) argue that a firm's additional information disclosure to investors decreases agency problems (costs) by allowing owners to monitor managerial behavior more easily. These studies also show that corporate governance mechanisms provide an indirect tool for shareholders to control agency problems by monitoring the behavior of managers.

Although numerous empirical studies have examined the impact of corporate governance mechanisms on the extent of voluntary information disclosure, the evidence is mixed. [Akhtaruddin, Hossain, Hossain, and Yao \(2009\)](#); [Chen and Jaggi \(2000\)](#); [Cheng and Courtenay \(2006\)](#); [Gul and Leung \(2004\)](#); [Lim, Matolcsy, and Chow \(2007\)](#); [Patelli and Prencipe \(2007\)](#), and [Leung and Horwitz \(2004\)](#) examined the relationship between board independence and voluntary information disclosure. They predicted that independent directors have greater incentives than inside directors to encourage firms to disclose more information to investors. Consistent with this prediction, they found a positive association between the proportion of independent directors and the extent of voluntary disclosure. In contrast, [Eng and Mak \(2003\)](#) investigated firms listed on the Stock Exchange of Singapore and found that increasing the number of outside directors (blockholders) reduces (is not related to) the level of corporate voluntary disclosure. Also, [Foraker \(1992\)](#) and [Ho and Shun \(2001\)](#) found no association between board independence and voluntary disclosure.

Using companies from emerging markets, [Khoshbakht and Mohammadzadeh \(2011\)](#) and [Soheilyfar, Tamimi, Ahmadi, and Takhtaei \(2014\)](#) found that the proportion of independent directors on the board and institutional ownership are positively related to the level of voluntary disclosure. However, [Al-Shammari and Al-Sultan \(2010\)](#) found no association between board independence and the extent of voluntary disclosure for companies listed on the Kuwait Stock Exchange.

Studies document a negative association between CEO duality leadership and voluntary disclosure ([Carcello & Nagy, 2004](#); [Foraker, 1992](#); [Gul & Leung, 2004](#); [Lakhal, 2005](#); [Lin et al., 2014](#)). This result indicates that separating the CEO and the chairperson of the board improves the effectiveness of board monitoring and improves information disclosure quality. However, [Soheilyfar et al. \(2014\)](#) reported a significant positive association between CEO duality and voluntary disclosure. Whereas [Al-Shammari and Al-Sultan \(2010\)](#); [Patelli and Prencipe \(2007\)](#), and [Akhtaruddin et al. \(2009\)](#) found that CEO duality is not associated with the level of voluntary disclosure.

Studies on the impact of board size on voluntary disclosure argue that large board size may be beneficial to the firm since it increases the pool of expertise and available resources. Consistent with this view, [Abeysekera \(2010\)](#); [Allegrini and Greco \(2013\)](#); [Arcay and Vazquez \(2005\)](#), and [Prado-Lorenzo and Garcia-Sanchez \(2010\)](#) found a positive association between board size and voluntary disclosure. However, [Yermack \(1996\)](#) and [Alfraih and Almutawa \(2017\)](#) found a negative association with the level of voluntary disclosure, and [Cheng and Courtenay \(2006\)](#) found no association.

Consistent with the voluntary disclosure literature that predicts that greater voluntary disclosure reduces information asymmetries among informed and uninformed investors by leveling the playing field for all investors ([Diamond & Verrecchia, 1991](#); [Lambert et al., 2007](#); [Leuz & Verrecchia, 2000](#)), [Elbadry et al. \(2015\)](#) predicted and found that corporate governance mechanisms that enhance managerial monitoring lead to lower levels of information asymmetry.

The present study extends the recent work of [Elbadry et al. \(2015\)](#) and [Shen, Lin, and Wang \(2015\)](#) and other corporate governance literature by exploring the impact of corporate governance on the level of information asymmetry and whether firms' political connections have a moderating effect on this relationship.

## 4. Hypotheses development

### 4.1. Board independence and information asymmetry

As discussed above, previous studies show that board of directors with larger proportions of independent directors are more effective at monitoring a firm's managerial opportunism, so managers are expected to voluntarily disclose more information. The literature on voluntary disclosure suggests that a higher quality of financial reporting and better disclosure reduce adverse selection problems in the capital market and reduce the information asymmetry problem by leveling the playing field for all investors ([Diamond & Verrecchia, 1991](#); [Lambert et al., 2007](#); [Leuz & Verrecchia, 2000](#)). Consequently, the proportion of independent directors on the board is expected to be negatively associated with the level of information asymmetry. Consistent with this theory, [Ajina et al. \(2013\)](#) and [Elbadry et al. \(2015\)](#) documented an inverse relationship between board independence and the level of information asymmetry.

Although the extant literature indicates that boards with independent directors are better at making better decisions, removing insiders from the board may harm the company because outside directors lack the knowledge and experience to steer the company appropriately. Consistent with this view, [Eng and Mak \(2003\)](#) documented that an increase in outside directors reduces corporate disclosure. Following these competing views in the voluntary disclosure literature, the following null hypothesis is tested:

**H1.** There is no relationship between the proportion of independent directors on the board and the level of information asymmetry.

### 4.2. CEO role and information asymmetry

Agency theory suggests that CEO duality creates CEO dominance of the board of directors and promotes CEO entrenchment by reducing the effectiveness of the board's monitoring. CEO duality can also determine what information the company discloses, and as previously discussed, several studies provide evidence that CEO duality is negatively related to the extent of voluntary disclosure.

Although CEO duality is considered an ineffective governance mechanism because it reduces the possibility that the board will objectively monitor management, the board of directors often does not have enough information to perform their function properly. Consistent with this view, [Fama and Jensen \(1983\)](#) and [Klein \(1998\)](#) found that firms benefit greatly by including insiders on the board of directors because top managers bring in expertise and experience about the firm to the board of directors' decision-making process. These findings suggest that CEO serving on the Board helps the board to acquire enough information to provide effective advice and monitor management decisions. As a result, CEO serving on the Board may lead to better information disclosure. The second hypothesis regarding CEO serving on the Board and information asymmetry is stated in the following null hypothesis:

**H2.** There is no relationship between a CEO serving on the board and the level of information asymmetry.

### 4.3. Institutional ownership, blockholders and information asymmetry

Prior studies provide evidence on the relationship between institutional investor ownership and corporate information disclosure practices. These studies show that institutional investors are sensitive to corporate information disclosure practices for various reasons. For example, [Diamond and Verrecchia \(1991\)](#) and [Healy et al. \(1999\)](#) suggest that institutional investors and large shareholders may be attracted to firms with more open information disclosure practices because this reduces the price impact of trade and influences the potential for finding profitable trading opportunities. Thus, both institutional investors and large shareholders (blockholders) have strong incentives to monitor managers' behavior. [Shleifer and Vishny \(1986\)](#) and [Smith \(1996\)](#) show that large shareholders and institutional investors have the resources, opportunity, and ability to monitor, discipline, and influence managers. This suggests that firms with large shareholders and institutional investor ownership disclose more information. [Elbadry et al. \(2015\)](#) found that a high proportion of institutional investor

ownership may induce greater voluntary disclosure. Similarly, [Bushee and Noe \(2000\)](#) found a positive association between the proportion of institutional ownership and the extent of voluntary disclosure.

With respect to blockholders, prior studies indicate that more monitoring is required when share ownership is diffused ([Eng & Mak, 2003](#)). Blockholders may help in reducing agency costs through monitoring managers' actions, and this could increase information transparency ([Choi, Lam, Sami, & Zhou, 2013](#)). Consistent with this view, [Mitchell, Chia, and Loh \(1995\)](#) and [Schadewitz and Blevins \(1998\)](#) reported a negative association between blockholders and the level of voluntary disclosure.

The other competing theory argues that institutional investors are more focused on current earnings than on monitoring managements' adoption of value-increasing policies. For example, [Porter \(1992\)](#) notes that "... institutional agents are drawn to current earnings, unwilling to invest in understanding the fundamental prospects of companies, and unable and unwilling to work with companies to build long-term earnings power." Moreover, because institutional infrastructure is not well developed in emerging markets, the role of institutional investors in the dissemination of information in emerging markets is limited ([Choi et al., 2013](#)). Consistent with this view, [Kim, Krinsky, and Lee \(1997\)](#) documented greater stock return volatility around earnings announcements for firms with higher institutional ownership. Similarly, [Schadewitz and Blevins \(1998\)](#) reported a negative relationship between institutional ownership concentration and voluntary disclosure, while [Eng and Mak \(2003\)](#) showed that blockholders are not related to corporate voluntary disclosure. [Jung and Kwon \(2002\)](#) found that blockholders' role in Korea is limited compared with that in the US. These findings suggest that the short-term focus of institutional investors' trading and blockholders and their limited role in information dissemination in emerging markets create a less transparent information environment.

Taken together, the relationship between the information environment and ownership structure can be explained through two competing views. Classic agency theory suggests that institutional ownership and equity blockholders are important devices for monitoring management decisions and encourage managers to maintain a disclosure policy that is consistent with firm value maximization. Thus, this view predicts a negative relationship between information asymmetry and the proportion of institutional ownership or blockholders. The opposing view, however, predicts a positive association between information asymmetry and the proportion of institutional ownership or blockholders because institutional investors and blockholders have a limited role in information dissemination in emerging markets. These competing views are addressed in the following two null hypotheses:

- H3.** There is no relationship between the level of blockholder and the level of information asymmetry.
- H4.** There is no relationship between the level of institutional investor ownership and the level of information asymmetry.

#### 4.4. Board size and information asymmetry

The results are mixed on whether board size has a significant effect on voluntary disclosure. On the one hand, theoretical and empirical studies indicate that a larger board size helps to promote corporate democracy ([Freeman & Reed, 1983](#)) and increases the board's monitoring capacities ([John & Senbet, 1998](#)). Consistent with this view, [Allegrini and Greco \(2013\)](#) reported a positive association between board size and the extent of voluntary disclosure. In contrast, [Yermack \(1996\)](#) showed that larger boards are ineffective because communication, coordination, and decision-making problems are greater. Thus, firms with smaller boards of directors are better performers. Similarly, [Cheng and Courtenay \(2006\)](#) found no association between board size and the level of voluntary disclosure. Whereas [Alfraih and Almutawa \(2017\)](#) found a negative association between board size and the extent of voluntary disclosure. These competing views are addressed with the following null hypothesis:

- H5.** There is no relationship between board size and the level of information asymmetry.

#### 4.5. Corporate governance, political connections and information asymmetry

Several studies show that political connections are associated with both benefits and costs. For example, politically connected firms tend to receive benefits such as favorable loan contracts, lower interest rates, a lower tax burden, and preferential access to debt financing ([Baek, Johnson, & Kim, 2009](#); [Chaney et al., 2011](#); [Chen, Ding, & Kim, 2010](#); [Johnson & Mitton, 2003](#); [Shen et al., 2015](#); [Yeh, Shu, & Chiu, 2013](#)). Using a sample of listed firms on the Taiwan Stock Exchange from 1998 to 2006, [Yeh et al. \(2013\)](#) found a positive association between political connections and preferential bank loans. Using Malaysian firms, [Johnson and Mitton \(2003\)](#) also found that firms with political connections gained subsidies when capital controls were imposed. Similarly, [Boubakri et al. \(2012\)](#) showed that investors require a lower cost of capital for politically connected firms. [Faccio and Lang \(2002\)](#) examined 35 countries from 1997 to 2002 and found that politically connected firms are significantly more likely to be bailed out than similar but politically unconnected firms. This indicates that political connections influence the allocation of capital through the mechanism of financial assistance when connected companies experience economic distress.

However, political connections are also associated with costs. For instance, using firms listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange from 1993 to 2001, [Fan, Wong, and Zhang \(2007\)](#) showed that politically con-

nected firms are exposed to rent extraction by politicians and that excessive government intervention can cause ineffective investment, weaken managerial practices and harm firm performance.

Numerous studies of the link between voluntary disclosure and the cost of capital show that investors demand additional information to reduce their uncertainty about the quality of the firm and the expected returns from their securities. As a result, firms with high levels of disclosure, and hence low information risk, are likely to have a lower cost of capital (Botosan, 1997; Gray, Meek, & Roberts, 1995; Healy & Palepu, 1993). For instance, Gray et al. (1995) found that firms that raise capital internationally face more capital market pressure to disclose more information than firms that raise capital at home. These findings suggest that politically connected firms disclose less information, as their preferential access to credit (capital) makes them subject to less capital market pressure. However, because politically unconnected firms need access to external capital, they disclose more information, which helps them to lower the cost of capital. Thus, empirical studies have shown that politically connected firms disclose poorer quality information than politically unconnected firms (Chaney et al., 2011). Similarly, Al-Janadi, Abdul Rahman, and Alazzani (2016) focused on firms listed on the Saudi Arabia Stock Market and found that government ownership reduces the effectiveness of corporate governance. Shen et al. (2015) used 71,069 individual bank loan contracts from Taiwan and reported that firms with strong corporate governance and political connections obtain worse loan terms than firms that have strong corporate governance but are politically unconnected. These findings suggest that corporate governance and political connections do not complement each other. In contrast, Watts and Zimmerman (1983) argued that politically connected firms may voluntarily disclose more information because they are subject to public scrutiny and their managers have a greater need to convince external investors that they refrain from exploiting their connections to divert corporate resources. Similarly, Guedhami et al. (2014) provide strong evidence that politically connected firms are more likely to appoint a Big 4 auditor, indicating that these firms are eager to improve accounting transparency. They also find that the relationship between political connections and auditor choice is stronger for firms operating in countries with relatively poor institutional infrastructure. These competing views are tested with the following null hypotheses:

**H6.** Political connections do not affect the relationship between corporate governance mechanisms and the level of information asymmetry.

## 5. Sample selection, variable measurement and research design

### 5.1. Sample selection and data sources

The sample used in the study consists of leading listed local banks across the GCC for the fiscal years 2012–2016<sup>3</sup>. The data used were obtained from various sources, including the audited financial statements published by listed banks, databases, and web searches. Annual trading volume, trade value, and other financial data were collected from Compustat Global. Corporate governance mechanism measures were hand-collected from audited annual reports downloaded from the websites of each GCC bank and stock exchange. For the measure of political connections, the profile of each board member, and CEO in annual reports, Bloomberg and other related sites was examined.

The banking sector is an interesting setting for investigating the impact of corporate governance practices on the level of information asymmetry for the following reasons. First, the banking sector plays an important role in the development of national and regional economies. For example, Sedik and Williams (2011) estimated that banks dominate the financial sector and represent over 30 percent of the total public equity market capitalization in the GCC. Second, banks in the region are heavily regulated compared with other firms. This renders banks to be a relatively homogeneous sample compared with industrial firms, both in terms of their operating activities and accounting practices. Prior studies suggest that focusing on relatively homogeneous industries with relatively homogeneous accounting practices facilitates control over other determinants of cross-sectional differences (Lobo, 2017). Third, the banking industry operates with a higher level of information uncertainty than other industries. As a result, it is difficult to fully understand all the relevant information when communicating about a bank's future prospects (Autore, Billingsley, & Schneller, 2009; Lobo, 2017). Fourth, the development of the financial sector has been a policy priority in many GCC member countries over the past two decades.

To mitigate the influence of outliers, all variables were winsorized at the 0.5 and 99.5 percentiles. Observations with missing values were deleted. As shown in Table 1, the final sample is comprised of 49 leading local banks for a total of 236 bank-years in the GCC.

### 5.2. Variable measurement

#### 5.2.1. Measuring information asymmetry

Consistent with prior studies, several proxies (trading volume, trade value, volatility, and composite) for information asymmetry were used (Elbadry et al., 2015; Linsmeier et al., 2002). I measured trading volume (*TR.VOLUME*) as the square root of the number of annual shares traded divided by the number of shares outstanding for each firm. Trade value (*TR.VALUE*)

<sup>3</sup> This study focuses on local banks because the banking sector in the GCC is largely domestically owned. Due to entry barriers and licensing restrictions for foreign banks, the presence of foreign banks is limited. Also, data availability issues restricted the study to the period from 2012 to 2016.

**Table 1**  
Sample composition by country.

| Country              | No. of observations | Percentage |
|----------------------|---------------------|------------|
| Bahrain              | 35                  | 14.83      |
| Kuwait               | 39                  | 16.53      |
| Oman                 | 34                  | 14.41      |
| Qatar                | 40                  | 16.95      |
| Saudi Arabia         | 53                  | 22.46      |
| United Arab Emirates | 35                  | 14.83      |
| Total                | 236                 | 100.00     |

is measured as the market value of a stock traded in a given year. Volatility (*VOLATILITY*) is measured as the annual average of daily stock return volatility. Composite (*COMP*) is constructed using a principal component analysis of *TR.VOLUME*, *TR.VALUE*, and *VOLATILITY*, and I find that the first principal component of these three variables has an eigenvalue greater than one and explains approximately 50 percent of the total variation of these data. I expect that *COMP* is decreasing in asymmetric information because *COMP* is positively associated with *TR.VOLUME* and *TR.VALUE* and inversely related to *VOLATILITY*.

### 5.2.2. Measuring corporate governance and political connections

Based on prior studies, I used five proxies for corporate governance mechanisms (Al-Shammari & Al-Sultan, 2010; Elbadry et al., 2015; Eng & Mak, 2003). These are (1) board independence (*BRD.ID*), measured as the percentage of independent members serving on the board of directors; (2) CEO role (*CEO.R*), which is the proportion of CEOs serving on the board; (3) blockholders (*BLK*), measured as the number of shareholders owning substantial equity shares (with equity of 5% or more); (4) institutional ownership (*INS.O*), measured as the percentage of shares owned by institutions; and (5) board size (*BRD.S*), measured as the number of board of directors. Similar to prior studies, I measured political connections (*POL.C*) using a dummy variable that takes a value of one if at least one of the firm's largest shareholders or one of its board of directors or the CEO is a member of the country's royal family, a former or current ministers, a member of the country's cabinet, an ambassador, or member of the parliament of the country, and zero otherwise (Boubakri et al., 2012; Faccio & Lang, 2002).

### 5.2.3. Control variables

I included several control variables expected to influence information asymmetry. I controlled for leverage (*LEV*) because finance theory suggests that firms with a larger proportion of debt in their capital structure provide higher quality disclosure in order to reduce the cost of debt (Jensen & Meckling, 1976). I controlled for firm profitability performance using return on assets (*ROA*) because prior studies indicate that firms do not provide more disclosure when they are not performing well, whereas firms performing well disclose more information to market participants. Moreover, capital market incentives induce more profitable firms to disclose more information (Healy et al., 1999). I controlled for growth opportunities using a market to book ratio (*MTB*) because firms with higher growth opportunities disclose more information than firms with lower growth opportunities (Smith & Watts, 1992). Finally, I controlled for firm size (*SIZE*) because prior studies indicate that firm size and disclosure level are positively associated because larger firms incur lower costs to prepare and disclose information (Eng & Mak, 2003). Moreover, larger firms disclose more information to benefit from greater marketability and ease of financing (Welker, 1995). Following Elbadry et al. (2015) and Linsmeier et al. (2002), I control for market trading volume (*SQMKTVOL*) and market value (*MKTVALUE*). I control for firm age (*AGE*) because prior studies indicate that it is easier to predict future earnings, cash flows, and the asset value process of firms with longer trading histories (Lu, Chen, & Liao, 2010). All variables are operationally defined in the Appendix A.

## 5.3. Research design

### 5.3.1. Corporate governance and information asymmetry

Like Elbadry et al. (2015), I used the following regression equation to test the impact of corporate governance practices on the level of information asymmetry (*H1 to H5*):

$$Y_{j,i,t} = \beta_0 + \beta_1 BRD.ID_{j,i,t} + \beta_2 CEO.R_{j,i,t} + \beta_3 BLK_{j,i,t} + \beta_4 INS.O_{j,i,t} + \beta_5 BRD.S_{j,i,t} + \beta_6 LEV_{j,i,t} + \beta_7 ROA_{j,i,t} + \beta_8 MTB_{j,i,t} + \beta_9 SIZE_{j,i,t} + \beta_{10} SQMKTVOL_{j,i,t} + \beta_{11} MKTVALUE_{j,i,t} + \beta_{12} AGE_{j,i,t} + \varepsilon_{j,i,t} \quad (1)$$

where:

$j = 1 = TR.VOLUME$

$j = 2 = TR.VALUE$

$j = 3 = VOLATILITY$

$j = 4 = COMP$

$i, t =$  firm and time subscripts, respectively;

**Table 2**  
Descriptive statistics of variables.

| Variable   | Min    | Mean    | Median  | Std. Dev. | Max      |
|------------|--------|---------|---------|-----------|----------|
| TR_VOLUME  | 0.069  | 5.245   | 4.043   | 5.737     | 42.330   |
| TR_VALUE   | 10.931 | 19.446  | 19.645  | 3.005     | 25.928   |
| VOLATILITY | 0.318  | 11.312  | 4.086   | 19.593    | 98.402   |
| BRD_ID     | 0.000  | 0.350   | 0.400   | 0.274     | 1.286    |
| CEO_R      | 0.000  | 0.042   | 0.000   | 0.055     | 0.167    |
| BLK        | 0.000  | 3.169   | 3.000   | 1.562     | 7.000    |
| INS_O      | 0.022  | 0.475   | 0.503   | 0.207     | 0.897    |
| BRD_S      | 6.000  | 9.131   | 9.000   | 1.495     | 13.000   |
| POL_C      | 0.000  | 0.665   | 1.000   | 0.473     | 1.000    |
| LEV        | 0.011  | 0.828   | 0.861   | 0.136     | 0.928    |
| ROA        | -0.063 | 0.014   | 0.015   | 0.012     | 0.051    |
| MTB        | 0.091  | 0.464   | 0.406   | 0.280     | 1.280    |
| SIZE       | 3.052  | 6.962   | 7.425   | 1.911     | 10.309   |
| SQMKTVOL   | 0.211  | 0.737   | 0.626   | 0.340     | 2.138    |
| MKTVALUE   | 12.328 | 701.793 | 364.264 | 904.407   | 5731.194 |
| AGE        | 4.000  | 32.953  | 37.000  | 17.704    | 68.000   |

All variables defined in Appendix A.

Given the predictions of H1 to H5, I expect the estimated coefficients on *BRD\_ID*, *CEO\_R*, *BLK*, *INS\_O*, and *BRD\_S* to be statistically insignificant.

### 5.3.2. Corporate governance, political connections and information asymmetry

Following [Shen et al. \(2015\)](#), I used the following regression equation to test the joint influence of corporate governance and political connections on the level of information asymmetry (*H6*):

$$\begin{aligned}
 Y_{j,i,t} = & \beta_0 + \beta_1 \text{POL\_C}_{j,i,t} + \beta_2 \text{BRD\_ID}_{j,i,t} + \beta_3 \text{CEO\_R}_{j,i,t} + \beta_4 \text{BLK}_{j,i,t} + \beta_5 \text{INS\_O}_{j,i,t} + \beta_6 \text{BRD\_S}_{j,i,t} + \beta_7 \text{BRD\_ID}_{j,i,t} \\
 & * \text{POL\_C}_{j,i,t} + \beta_8 \text{CEO\_R}_{j,i,t} * \text{POL\_C}_{j,i,t} + \beta_9 \text{BLK}_{j,i,t} * \text{POL\_C}_{j,i,t} + \beta_{10} \text{INS\_O}_{j,i,t} * \text{POL\_C}_{j,i,t} + \beta_{11} \text{BRD\_S}_{j,i,t} * \text{POL\_C}_{j,i,t} \\
 & + \beta_{12} \text{LEV}_{j,i,t} + \beta_{13} \text{ROA}_{j,i,t} + \beta_{14} \text{MTB}_{j,i,t} + \beta_{15} \text{SIZE}_{j,i,t} + \beta_{16} \text{SQMKTVOL}_{j,i,t} + \beta_{17} \text{MKTVALUE}_{j,i,t} + \beta_{18} \text{AGE}_{j,i,t} + \varepsilon_{j,i,t} \quad (2)
 \end{aligned}$$

The coefficients of interest are the interaction terms between each of the five proxies of corporate governance mechanisms and the measure of political connections. Given the prediction of *H6*, I expected the estimated coefficients on the interaction terms to be statistically insignificant.

I employed year fixed effects by including year dummies in the regressions.<sup>4</sup> This allows me to control for unobserved time effects (year fixed effects) on information asymmetry that are assumed to be constant through firms but vary over time ([Wooldridge, 2002](#)).<sup>5</sup>

## 6. Empirical findings

### 6.1. Descriptive statistics

[Table 2](#) presents the descriptive statistics of the variables used in the regression analyses. The means (medians) for trading volume (*TR\_VOLUME*) and trade value (*TR\_VALUE*) were 5.245 (4.043) and 19.446 (19.645), respectively. The small difference between the means and the medians and the small values of the standard deviation of the variables indicate that the variables are not skewed. With regard to the independent variables, the difference between the mean and the median values for most of the variables was small, indicating that the distributions of the variables are not skewed. For instance, the means (medians) for *BRD\_ID*, *CEO\_R*, *BLK*, *INS\_O*, *BRD\_S*, and *POL\_C* were 0.350 (0.400), 0.042 (0.000), 3.169 (3.000), 0.475 (0.503), 9.131 (9.000), and 0.665 (1.000), respectively.

[Table 3](#) reports the Pearson correlations among the variables used. The preliminary results show that most of the proxies for corporate governance mechanisms are negatively related to the proxies for the level of information asymmetry. For example, *TR\_VOLUME* and *TR\_VALUE* are negatively associated with *BLK* and *INS\_O*, indicating that greater blockholders and institutional ownership may lead to higher information asymmetry. Regarding the control variables, the negative association between *MTB* and the measures of the level of information asymmetry indicates that information asymmetry is greater for firms with greater growth opportunities. In contrast, the positive association between the measures of the level of

<sup>4</sup> I also employed country fixed effects by including country dummies in the regressions. This allowed me to control for unobservable country effects on the degree of information asymmetry that are assumed to be constant through time but vary across countries ([Wooldridge, 2002](#)). Untabulated results for country fixed effects are similar to the main findings.

<sup>5</sup> Due to the multicollinearity problem, I could not employ a firm fixed effects regressions model.



**Table 3**  
Pearson correlation.

| Variables    | 1        | 2       | 3        | 4        | 5        | 6        | 7        | 8       | 9        | 10      | 11      | 12      | 13      | 14    | 15    | 16    |
|--------------|----------|---------|----------|----------|----------|----------|----------|---------|----------|---------|---------|---------|---------|-------|-------|-------|
| 1 TR_VOLUME  | 1.000    |         |          |          |          |          |          |         |          |         |         |         |         |       |       |       |
| 2 TR_VALUE   | 0.562*   | 1.000   |          |          |          |          |          |         |          |         |         |         |         |       |       |       |
| 3 VOLATILITY | 0.090    | 0.295*  | 1.000    |          |          |          |          |         |          |         |         |         |         |       |       |       |
| 4 BRD_ID     | 0.050    | -0.196* | -0.045   | 1.000    |          |          |          |         |          |         |         |         |         |       |       |       |
| 5 CEO_R      | -0.017   | 0.098   | 0.002    | 0.267*   | 1.000    |          |          |         |          |         |         |         |         |       |       |       |
| 6 BLK        | -0.113** | -0.319* | -0.439*  | 0.269*   | 0.142**  | 1.000    |          |         |          |         |         |         |         |       |       |       |
| 7 INS_O      | -0.362*  | -0.301* | -0.449*  | -0.239*  | -0.075   | 0.250*   | 1.000    |         |          |         |         |         |         |       |       |       |
| 8 BRD_S      | 0.0280   | 0.068   | 0.143**  | -0.045   | -0.005   | 0.018    | -0.204*  | 1.000   |          |         |         |         |         |       |       |       |
| 9 POL_C      | -0.220*  | -0.106  | 0.188*   | -0.224*  | -0.195*  | -0.355*  | -0.001   | -0.118* | 1.000    |         |         |         |         |       |       |       |
| 10 LEV       | 0.033    | 0.271*  | 0.083    | -0.123** | 0.192*   | -0.189*  | -0.021*  | 0.134** | 0.049*   | 1.000   |         |         |         |       |       |       |
| 11 ROA       | -0.042   | 0.255*  | 0.118**  | -0.124** | 0.127**  | -0.114** | -0.056   | 0.113** | -0.053   | 0.222*  | 1.000   |         |         |       |       |       |
| 12 MTB       | 0.288*   | -0.235* | -0.161** | 0.321*   | -0.133** | 0.350*   | -0.043   | -0.013  | -0.154** | -0.295* | -0.504* | 1.0000  |         |       |       |       |
| 13 SIZE      | 0.312*   | 0.877*  | 0.229*   | -0.160** | 0.124**  | -0.230** | -0.159** | 0.119** | -0.090   | 0.276*  | 0.294*  | -0.257* | 1.000   |       |       |       |
| 14 SQMKTVOL  | -0.078   | -0.035  | 0.079    | 0.000    | 0.076    | -0.012   | -0.229*  | -0.084  | -0.090** | -0.089  | 0.227*  | -0.096  | -0.015  | 1.000 |       |       |
| 15 MKTVALUE  | 0.013    | 0.381*  | 0.128**  | -0.083   | 0.063    | -0.117*  | -0.098   | 0.107   | 0.026    | 0.144** | 0.192*  | -0.191* | -0.489* | 0.099 | 1.000 |       |
| 16 AGE       | -0.184*  | 0.040   | 0.045    | -0.115** | 0.048    | -0.197*  | 0.082    | 0.030   | -0.163** | 0.185*  | 0.282*  | -0.508* | 0.030   | 0.040 | 0.433 | 1.000 |

All variables defined in Appendix A. \* and \*\* indicate statistical significance at the 1% and 5% levels, respectively.

**Table 4**  
Corporate governance mechanisms and information asymmetry.

| Variables          | Dependent Variable   |                       |                       |                       |
|--------------------|----------------------|-----------------------|-----------------------|-----------------------|
|                    | TR.VOLUME            | TR.VALUE              | VOLATILITY            | COMP                  |
| BRD_ID             | -2.050***<br>(-6.13) | -1.342***<br>(-9.12)  | -1.220<br>(-0.41)     | -0.284**<br>(-2.83)   |
| CEO_R              | 0.321<br>(0.10)      | 1.218<br>(0.90)       | 3.303<br>(0.27)       | -0.273<br>(-0.31)     |
| BLK                | -0.229***<br>(-5.80) | -0.089<br>(-1.39)     | -3.999***<br>(-7.88)  | -0.151***<br>(-5.74)  |
| INS.O              | -9.730***<br>(-9.30) | -3.292***<br>(-22.84) | -33.698***<br>(-5.35) | -2.381***<br>(-15.55) |
| BRD.S              | -0.378***<br>(-7.28) | -0.186***<br>(-7.57)  | 0.885<br>(1.50)       | -0.030*<br>(-2.50)    |
| LEV                | 1.261<br>(1.26)      | 0.525<br>(0.88)       | -4.103*<br>(-2.52)    | 0.283<br>(1.61)       |
| ROA                | 38.374***<br>(3.07)  | 5.778*<br>(2.43)      | 3.073<br>(0.10)       | 3.055*<br>(2.36)      |
| MTB                | 9.133***<br>(13.15)  | 0.455<br>(1.86)       | -4.064<br>(-1.44)     | 0.904***<br>(6.31)    |
| SIZE               | 1.215***<br>(11.89)  | 1.320***<br>(27.20)   | 1.223<br>(0.87)       | 0.372***<br>(11.77)   |
| SQMKTVOL           | -2.060***<br>(-9.15) | -0.731***<br>(-7.47)  | -1.664***<br>(-4.02)  | -0.616*<br>(-12.44)   |
| MKTVALUE           | -0.001***<br>(-3.22) | -0.000<br>(-1.09)     | -0.002<br>(-0.42)     | -0.000***<br>(-3.05)  |
| AGE                | 0.007<br>(0.74)      | 0.005***<br>(0.65)    | -0.024<br>(-0.94)     | 0.001<br>(0.42)       |
| CONSTANT           | 2.493<br>(1.53)      | 13.977***<br>(23.35)  | 32.027***<br>(13.35)  | 0.001**<br>(-2.19)    |
| year fixed effects | yes                  | yes                   | yes                   | yes                   |
| Observations       | 236                  | 236                   | 236                   | 236                   |
| R <sup>2</sup>     | 38%                  | 83%                   | 34%                   | 61%                   |

The table reports regression coefficient estimates and (in parentheses) t-statistics for the regression Eq. 1. All variables defined in Appendix A. \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

information asymmetry and *SIZE* and *LEV* indicate that the level of information asymmetry is lower for larger firms and firms with greater leverage.

## 6.2. Multivariate regression analyses

Table 4 presents the results of the year fixed effects regression analysis of the impact of the five proxies for corporate governance mechanisms (board independence, CEO serving on the Board, blockholders, institutional ownership, and board size) on various proxies for the level of information asymmetry. See Table 4 for all results discussed in this section.

### 6.2.1. Board independence and information asymmetry

The results show that the higher the proportion of independent directors to total members on the board, the greater the degree of information asymmetry, thus, implying that H1 is not supported. Specifically, the proportion of independent directors to total members on the board (*BRD\_ID*) is inversely related to *TR.VOLUME*, *TR.VALUE*, and *COMP*. Consistent with Eng and Mak (2003), the results indicate that removing insiders from the board may harm the company because outside directors lack the knowledge and experience to steer the company appropriately.

### 6.2.2. CEO role and information asymmetry

The analysis indicates strong support for H2 as the results show that CEO participation as a non-independent board member does not affect the level of information asymmetry. Specifically, CEO participation on the board (*CEO\_R*) is not significantly associated with *TR.VOLUME*, *VOLATILITY*, and *COMP*. The results do not support the findings of Fama and Jensen (1983) and Klein (1998), who document that firms benefit greatly by including CEO serving on the board because CEOs bring in expertise and experience about the firm to the board of directors' decision-making process.

### 6.2.3. Blockholders and information asymmetry

The results show that the measure of the number of block shareholders is positively related to the level of information asymmetry, indicating that H4 is not supported. Specifically, the number of blockholders (*BLK*) is inversely related to *TR.VOLUME*, *VOLATILITY*, and *COMP*. Consistent with the finding of Jung and Kwon (2002), the results suggest that the blockholders have a limited role in information dissemination in the GCC markets.

#### 6.2.4. Institutional ownership and information asymmetry

The results show that the higher the proportion of shares held by institutions, the greater the level of information asymmetry, indicating that H4 is not empirically supported. Specifically, the proportion of shares held by institutions (*INS\_O*) is inversely related to *TR\_VOLUME*, *TR\_VALUE*, *VOLATILITY*, and *COMP*. Consistent with [Schadewitz and Blevins \(1998\)](#) findings, the results indicate that institutional investors are more focused on current earnings than trying to monitor management's long-term focus, which may create incentives for a less transparent information environment.

#### 6.2.5. Board size and information asymmetry

The results also show that the size of the board is positively associated with the level of information asymmetry, indicating that H5 is not empirically supported. Specifically, board size (*BRD\_S*) is inversely related to *TR\_VOLUME*, *TR\_VALUE*, and *COMP*. Like the findings in [Xie, Davidson, and Dadalt \(2003\)](#) and [Yermack \(1996\)](#), this suggests that larger boards are ineffective because communication, coordination, and decision-making problems are greater. Thus, firms with a smaller board of directors are better performers.

The estimated coefficients on the control variables were generally consistent with those reported in prior studies ([Eng & Mak, 2003](#)). For example, the positive coefficients on *SIZE* and *ROA* indicates that information asymmetry is less for larger and more profitable firms.

Taken together, the results suggest that greater board independence, blockholders, institutional ownership and board size may lead to greater information asymmetry as reflected in share trading volume, market value of shares traded and volatility of shares returns, whereas CEO role on the board does not affect the level of information asymmetry.

#### 6.2.6. Corporate governance, political connections and information asymmetry

The results reported in [Table 5](#) show that political connections affect the impact of corporate governance mechanisms on the level of information asymmetry, indicating that H5 is not supported. Specifically, *POL\_C\*CEO\_R*, *POL\_C\*BRD\_S*, and *POL\_C\*INS\_O* are positively associated with *TR\_VOLUME* and *TR\_VALUE*. This indicates that firms with strong corporate governance and political connections may have a lower level of information asymmetry than firms that are politically unconnected. In contrast, *POL\_C\*BLK* is negatively related to *TR\_VOLUME* and *COMP*, indicating that firms with political connections and greater numbers of blockholders may have higher information asymmetry than firms that are politically unconnected.

### 6.3. Robustness tests

I conducted additional analyses to test the robustness of the findings. First, I examined whether the main results are robust to alternative proxy for the level of information asymmetry (i.e., level of voluntary disclosure). Like prior studies, a scoring sheet was developed to assess the level of voluntary disclosure ([Hossain & Hammami, 2009](#); [Petersen & Plenborg, 2006](#)). A total of 44 indicators with five groups was identified (see Appendix B). If a firm disclosed an item of information in the annual report, it received a score of 1, and otherwise 0. Thus, the maximum score is 44.

I estimated the following regression Eqs. 3 and 4 as robustness tests for hypotheses 1–5 and hypothesis 6, respectively.

$$VD_{i,t} = \beta_0 + \beta_1 BRD\_ID_{i,t} + \beta_2 CEO\_R_{i,t} + \beta_3 BLK_{i,t} + \beta_4 INS\_O_{i,t} + \beta_5 BRD\_S_{i,t} + \beta_6 LEV_{i,t} + \beta_7 ROA_{i,t} + \beta_8 MTB_{i,t} + \beta_9 SIZE_{i,t} + \beta_{10} SQMKTVOL_t + \beta_{11} MKTVALUE_{i,t} + \beta_{12} AGE_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$VD_{i,t} = \beta_0 + \beta_1 POL\_C_{i,t} + \beta_2 BRD\_ID_{i,t} + \beta_3 CEO\_R_{i,t} + \beta_4 BLK_{i,t} + \beta_5 INS\_O_{i,t} + \beta_6 BRD\_S_{i,t} + \beta_7 BRD\_ID_{i,t} * POL\_C_{i,t} + \beta_8 CEO\_R_{i,t} * POL\_C_{i,t} + \beta_9 BLK_{i,t} * POL\_C_{i,t} + \beta_{10} INS\_O_{i,t} * POL\_C_{i,t} + \beta_{11} BRD\_S_{i,t} * POL\_C_{i,t} + \beta_{12} LEV_{i,t} + \beta_{13} ROA_{i,t} + \beta_{14} MTB_{i,t} + \beta_{15} SIZE_{i,t} + \beta_{16} SQMKTVOL_t + \beta_{17} MKTVALUE_{i,t} + \beta_{18} AGE_{i,t} + \varepsilon_{i,t} \quad (4)$$

The results reported in [Table 6](#) are generally consistent with the main findings. For example, the results reported in Column I show that greater blockholders and institutional ownership may lead to a lower voluntary disclosure, whereas CEO dual role is not significantly related to the level of voluntary disclosure. The results imply that greater blockholders and institutional ownership have a limited role in information dissemination in the GCC markets, which may lead to greater information asymmetry. However, the results reported in Column II show that the interactions between the proxy for the firm's political connections and proxies for corporate governance mechanisms are positively related to the level of voluntary disclosure. Consistent with the main findings, the results indicate that firms with strong corporate governance and political connections may disseminate more information than firms that are politically unconnected, which in turn may lead to lower information asymmetry.<sup>6</sup>

<sup>6</sup> One notable observation from the results presented in [Table 6](#) is that some coefficients are statistically insignificant. However, the directions (signs) of the coefficients are consistent with the main findings. One possible explanation for insignificant coefficients could be the proxy for the amount voluntary disclosure may not capture all relevant information disclosed by a firm. However, the results are important as there is no agree-upon metric in the literature for the quality and quantity of voluntary disclosure.

**Table 5**  
Political connections, corporate governance, and information asymmetry.

| Variables          | Dependent Variable    |                       |                      |                      |
|--------------------|-----------------------|-----------------------|----------------------|----------------------|
|                    | TR_VOLUME             | TR_VALUE              | VOLATILITY           | COMP                 |
| POL_C              | -37.625***<br>(-8.02) | -9.759***<br>(-10.75) | 35.890<br>(1.84)     | -0.848<br>(-0.80)    |
| BRD_ID             | -4.571**<br>(-2.69)   | -2.449***<br>(-10.12) | -2.758<br>(-0.46)    | -1.504<br>(-0.52)    |
| POL_C*BRD_ID       | 4.329<br>(1.63)       | 1.251<br>(1.65)       | 3.407<br>(1.44)      | -0.297<br>(-0.63)    |
| CEO_R              | -24.341**<br>(-4.27)  | -0.770<br>(-0.58)     | 21.330<br>(1.82)     | -21.786<br>(-1.74)   |
| POL_C*CEO_R        | 28.821***<br>(6.96)   | 0.997<br>(0.34)       | -21.100<br>(-0.64)   | 0.680<br>(0.55)      |
| BLK                | 0.282<br>(1.91)       | -0.128*<br>(-2.45)    | -0.100<br>(-0.44)    | -0.035<br>(-1.35)    |
| POL_C*BLK          | -0.577*<br>(-2.69)    | 0.037<br>(0.37)       | -4.762***<br>(-4.69) | -0.176*<br>(-2.56)   |
| INS_O              | -34.315***<br>(-6.55) | -5.074***<br>(-11.42) | -23.140<br>(-1.46)   | -4.949***<br>(-6.07) |
| POL_C*INS_O        | 32.915***<br>(5.65)   | 2.960**<br>(4.04)     | -14.147<br>(-1.16)   | 3.223**<br>(3.43)    |
| BRD_S              | -1.862***<br>(-15.01) | -0.8222***<br>(-8.12) | 1.412<br>(1.04)      | 0.039***<br>(0.62)   |
| POL_C*BRD_S        | 2.064***<br>(11.96)   | 0.776***<br>(8.79)    | -0.788<br>(-0.61)    | -0.032<br>(-0.47)    |
| LEV                | -0.711<br>(-0.56)     | -0.286<br>(-0.58)     | -5.210<br>(-1.19)    | 0.323<br>(1.95)      |
| ROA                | 35.557***<br>(6.61)   | 5.557<br>(1.54)       | 51.265<br>(1.92)     | 1.590<br>(1.19)      |
| MTB                | 7.659***<br>(10.42)   | 0.045<br>(0.22)       | -0.0386<br>(-0.02)   | 0.831***<br>(5.05)   |
| SIZE               | 1.603***<br>(16.66)   | 1.400***<br>(34.78)   | 1.257<br>(0.75)      | 0.368***<br>(10.94)  |
| SQMKTVOL           | -1.346***<br>(-4.78)  | -0.650***<br>(-7.67)  | -2.151***<br>(-6.36) | -0.443***<br>(-6.61) |
| MKTVALUE           | -0.000<br>(-1.68)     | -0.000<br>(-0.59)     | -0.001<br>(-0.51)    | -0.000<br>(-1.56)    |
| AGE                | -0.007<br>(-0.64)     | 0.001<br>(0.30)       | -0.018<br>(-0.49)    | -0.003<br>(-1.10)    |
| CONSTANT           | 29.011***<br>(6.36)   | 22.093<br>(21.26)     | 2.044<br>(0.15)      | -0.365<br>(-0.44)    |
| year fixed effects | yes                   | yes                   | yes                  | yes                  |
| Observations       | 236                   | 236                   | 236                  | 236                  |
| R <sup>2</sup>     | 60%                   | 86%                   | 38%                  | 66%                  |

The table reports regression coefficient estimates and (in parentheses) t-statistics for the regression Eq. 2. All variables defined in Appendix A. \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

To ascertain the sensitivity of the results to the corporate governance measure, an alternative composite measure of corporate governance (*COMP.CG*) is constructed using a principal component analysis of *BRD\_ID*, *CEO\_R*, *BKL*, *INS\_O*, and *BRD\_S*. The first principal component of these five variables has an eigenvalue greater than one and explains approximately 50 percent of the total variation of these data. As a result, the first principal component was used as a measure of corporate governance mechanisms. *COMP.CG* is positively associated with *BRD\_ID*, *CEO\_R*, *BKL*, *INS\_O*, and *BRD\_S*. I estimated the following regression Eqs. 5 and 6 to test hypotheses 1–5 and hypothesis 6, respectively.

$$Y_{j,i,t} = \beta_0 + \beta_1 \text{COMP.CG}_{j,i,t} + \beta_2 \text{LEV}_{j,i,t} + \beta_3 \text{ROA}_{j,i,t} + \beta_4 \text{MTB}_{j,i,t} + \beta_5 \text{SIZE}_{j,i,t} + \beta_6 \text{SQMKTVOL}_{j,t} + \beta_7 \text{MKTVALUE}_{j,i,t} + \beta_8 \text{AGE}_{j,i,t} + \varepsilon_{j,i,t} \quad (5)$$

$$Y_{j,i,t} = \beta_0 + \beta_1 \text{COMP.CG}_{j,i,t} + \beta_2 \text{POL}_C_{j,i,t} + \beta_3 \text{POL}_C_{j,i,t} * \text{COMP.CG}_{j,i,t} + \beta_4 \text{LEV}_{j,i,t} + \beta_5 \text{ROA}_{j,i,t} + \beta_6 \text{MTB}_{j,i,t} + \beta_7 \text{SIZE}_{j,i,t} + \beta_8 \text{SQMKTVOL}_{j,t} + \beta_9 \text{MKTVALUE}_{j,i,t} + \beta_{10} \text{AGE}_{j,i,t} + \varepsilon_{j,i,t} \quad (6)$$

where:

The results reported in Tables 7 and 8 show that the findings of this study are generally robust to the composite measure of corporate governance mechanisms.

**Table 6**  
Political connections, corporate governance, and voluntary disclosure.

| Variables          | Dependent Variable: Level of Voluntary Disclosure |           |
|--------------------|---|-----------|
|                    | I   | II        |
| POL_C              |   | 11.755    |
| BRD_ID             | –1.017  | 4.653     |
| POL_C*BRD_ID       |   | –6.735    |
| CEO_R              | 5.971   | –23.223   |
| POL_C*CEO_R        |   | 35.635*** |
| BLK                | –0.622**  | 0.099     |
| POL_C*BLK          |   | –1.021    |
| INS_O              | –6.652***   | 1.076     |
| POL_C*INS_O        |   | 6.650*    |
| BRD_S              | –0.022  | 1.021     |
| POL_C*BRD_S        |   | –1.217**  |
| LEV                | –1.984  | 0.918     |
| ROA                | –69.845*  | –85.459** |
| MTB                | 0.914   | 1.772     |
| SIZE               | –0.513*   | –0.631**  |
| SQMKTVOL           | 2.194**   | 3.046**   |
| MKTVALUE           | –0.003  | –0.000    |
| AGE                | –0.007  | –0.020**  |
| CONSTANT           | 22.120***   | 9.441     |
| year fixed effects | yes   | yes       |
| Observations       | 236   | 236       |
| R <sup>2</sup>     | 63%   | 44%       |

The table reports regression coefficient estimates and (in parentheses) t-statistics for the regression Eqs. 3 and 4. All variables defined in Appendix A. \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

**Table 7**  
Corporate governance mechanisms and information asymmetry – Alternative measures.

| Variables          | Dependent Variable |          |            |          |
|--------------------|--------------------|----------|------------|----------|
|                    | TR_VOLUME          | TR_VALUE | VOLATILITY | COMP     |
| COMP_CG            | 0.257              | –0.008*  | 2.087***   | 0.096*   |
| LEV                | 1.309              | 0.659    | 0.031      | 0.381    |
| ROA                | 23.532**           | –0.155   | –70.270    | –1.247   |
| MTB                | 8.171***           | –0.057   | –11.322**  | 0.573*   |
| SIZE               | 1.429***           | 1.407*** | 2.380      | 0.435*** |
| SQMKTVOL           | –0.662             | –0.205   | 2.256      | –0.303** |
| MKTVALUE           | –0.001**           | –0.000   | –0.002     | –0.000   |
| AGE                | –0.000             | 0.002    | –0.023     | 0.000    |
| CONSTANT           | –8.654***          | 9.357*** | 1.120      | –3.222** |
| year fixed effects | yes                | yes      | yes        | yes      |
| Observations       | 236                | 236      | 236        | 236      |
| R <sup>2</sup>     | 27%                | 78%      | 8%         | 41%      |

The table reports regression coefficient estimates and (in parentheses) t-statistics for the regression Eq. 5. All variables defined in Appendix A. \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

**Table 8**  
Corporate governance mechanisms, political connections, and information asymmetry – Alternative measures.

| Variables          | Dependent Variable |           |            |           |
|--------------------|--------------------|-----------|------------|-----------|
|                    | TR_VOLUME          | TR_VALUE  | VOLATILITY | COMP      |
| COMP_CG            | –0.245             | –0.210*** | –0.457     | 0.008     |
| POL_C              | –1.542***          | –0.244*   | 10.267***  | –0.052    |
| COMP_CG*POL_C      | 0.492*             | 0.257**   | 5.270***   | 0.120*    |
| LEV                | 1.866              | 0.736     | –4.202**   | 0.393     |
| ROA                | 15.452             | –1.196    | –5.122     | –1.383    |
| MTB                | –0.382***          | –0.216    | –5.945     | 0.533     |
| SIZE               | 1.429***           | 1.405***  | 3.027      | 0.437***  |
| SQMKTVOL           | –0.662             | –0.197    | –1.374     | –0.315**  |
| MKTVALUE           | –0.001**           | –0.000    | –0.002     | –0.000    |
| AGE                | –0.011             | 0.000     | 0.102**    | 0.000     |
| CONSTANT           | –6.985**           | 9.615     | –10.265    | –3.168*** |
| year fixed effects | yes                | yes       | yes        | yes       |
| Observations       | 236                | 236       | 236        | 236       |
| R <sup>2</sup>     | 28%                | 78%       | 17%        | 41%       |

The table reports regression coefficient estimates and (in parentheses) t-statistics for regression Eq. 6. All variables defined in Appendix A. \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

## 7. Summary and conclusion

While prior studies extensively investigated the impact of corporate governance on the level of information asymmetry, the predictions and empirical evidence are mixed. Moreover, the existing literature in this area has mainly focused on data collected from developed countries. Thus, this paper explored the impact of corporate governance on the level of information asymmetry. In addition, I examine whether firms' political connections have a moderating effect on this relationship using a sample of leading local banks listed across the GCC member countries.

In general, proxies for corporate governance mechanisms are negatively associated with proxies for information asymmetry. Specifically, greater board independence, blockholders, institutional ownership, and board size may lead to greater information asymmetry as reflected in the share trading volume, market value of shares traded, and volatility of shares returns, whereas CEO dual role is not significantly related to the level of information asymmetry. Also, removing insiders from the board may harm the company because outside directors lack the knowledge and experience to steer the company appropriately. Blockholders have a limited role in information dissemination in the GCC markets, which may lead to greater information asymmetry. Similarly, institutional investors are more focused on current earnings than trying to monitor management to adopt disclosure policies, which may create incentives for a less transparent information environment. Finally, larger boards are ineffective in disseminating information because communication, coordination, and decision-making problems are greater.

However, I also find that the interactions between the proxy for the firm's political connections and corporate governance mechanisms are negatively related to the level of information asymmetry. This indicates that firms with strong corporate governance and political connections may disseminate more information than firms that are politically unconnected, which may lead to lower information asymmetry. The results also imply that firm-level governance mechanisms and political connections in the GCC are crucial to improve the level of firms' transparency. The findings are robust for alternative specifications.

This study contributes to the literature in several ways. First, this study helps to increase our understanding of the impact of various corporate governance mechanisms on the level of information asymmetry in the GCC, a different setting than the research conducted using data from developed and other emerging countries. Second, this study extends the existing literature linking corporate governance and information asymmetry by examining the impact of corporate governance and firms' political connections on the level of information asymmetry in the GCC market, where institutional infrastructure is weak. The results also suggest that in order to improve managers' decisions to disseminate firms' information in the GCC, policymakers, standards setters, and regulators need to understand how various corporate governance practices and firms' political connections are associated with incentives for firms to disclose information.

This study is limited in that it focuses on banks in GCC member countries, suggesting that it would be interesting to explore the relationship between corporate governance and the level of information asymmetry for the non-financial sector. Additionally, this study is unable to use a bid-ask spread as a proxy for the level of information asymmetry because data for bid-ask spread are unavailable for the GCC market. Therefore, future research could address this issue when the data are available.

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## Appendix A. Variable definition

| Variable   | Definition         | Measurement  | Source   | Exp <sup>a</sup> |
|------------|--------------------|--|--|------------------|
| TR.VOLUME  | Trading volume     | The square root of the number of annual shares traded divided by the number of shares outstanding for each firm. | Linsmeier et al. (2002)<br>Elbadry et al. (2015) |                  |
| TR.VALUE   | Trade value        | The market value of a stock traded in a given year.  | Elbadry et al. (2015)                            |                  |
| VOLATILITY | Volatility         | The annual average of daily stock return volatility.   | Elbadry et al. (2015)                            |                  |
| BRD.ID     | Board independence | The proportion of independent members serving on the board of directors.   | Elbadry et al. (2015)<br>Chen and Jaggi (2000)   | (-/+)            |
| CEO.R      | CEO role           | The proportion of CEOs serving on the board of directors. <sup>b</sup>   | Al-Shammari and Al-Sultan (2010)                 | (-/+)            |
| BLK        | Blockholders       | The number of shareholders who own substantial equity shares (with equity of 5% or more)                         | Eng and Mak (2003)                               | (-/+)            |

|                 |                                  |  |  |       |
|-----------------|----------------------------------|--|--|-------|
| <i>INS_O</i>    | Institutional investor ownership | The percentage of shares owned by institutions.  | Baek et al. (2009)   | (-/+) |
| <i>BRD_S</i>    | Board size                       | The number of board of directors.  | Yermack (1996)   | (-/+) |
| <i>POL_C</i>    | Political connections            | A dummy variable that takes a value of one if at least one of the firm's largest shareholders or one of its board of directors or the CEO is a member of the royal families, former or current ministers and members of the country's cabinet in general, ambassadors or members of the parliament of the country, and zero otherwise. | Faccio (2006) and Boubakri et al. (2012)                   | (-/+) |
| <i>LEV</i>      | Leverage                         | Total liabilities divided by total assets.   | Eng and Mak (2003)   | (-)   |
| <i>ROA</i>      | Profitability                    | The ratio of net income to total assets.   | Eng and Mak (2003)   | (-)   |
| <i>MTB</i>      | Market to book ratio             | Market value of equity divided by book value of equity.  | Eng and Mak (2003)   | (-)   |
| <i>SIZE</i>     | Firm size                        | The natural logarithm of total assets.   | Al-Shammari and Al-Sultan (2010)                           | (-)   |
| <i>SQMKTVOL</i> | Market volume                    | The square root of the number of shares traded by GCC exchange firms divided by the number of shares outstanding.  | Linsmeier et al. (2002)                                    | (-/+) |
| <i>MKTVALUE</i> | Market value                     | The beginning of year share price multiplied by the number of shares in issue.   | Elbadry et al. (2015)                                      | (-/+) |
| <i>AGE</i>      | Firm age                         | The time in years since the firm was established.  | Lu et al. (2010)   | (-)   |
| <i>VD</i>       | Voluntary Disclosure             | If a firm disclosed an item of information included in the in the annual report, it received a score of 1, and 0 if it is not included. Since one point is assigned for each piece of information in the annual report the maximum score is 44.  | Hossain and Hammami (2009)<br>Petersen and Plenborg (2006) | (-)   |

<sup>a</sup>The expected sign of the impact of the variable on the level of information asymmetry.

<sup>b</sup>I could not use a dummy variable that takes a value of 1 if the CEO is serving as a chairperson of the board because there is no CEO who serves as a chairperson of the board in all banks included in my sample.

## Appendix B. Voluntary disclosure items in annual reports

| No. | List of items  | No. | List of items  |
|-----|--|-----|--|
| A   | <i>Background about the bank/general corporate information (6 items)</i>   | 23  | Dividend per share   |
| 1   | Brief narrative history of the bank  | E   | <i>General risk management (8 items)</i>                               |
| 2   | Basic organization structure/chart/description of corporate structure  | 24  | Discussion of overall risk management philosophy and policy/ framework |
| 3   | General description of business activities   | 25  | Narrative discussions on risk management committee                     |
| 4   | Date of establishment of the company   | 26  | Information on assets-liability management committee                   |
| 5   | Official address/ registered address/ address for correspondence   | 27  | Information on assets-liability management committee                   |
| 6   | Web address of the bank/ email address   | 28  | Information on risk management and reporting system                    |
| B   | <i>Corporate strategy (2 items)</i>  | 29  | Disclosure of credit rating system/ process                            |
| 7   | Management's objectives and strategies/corporate vision/motto/statement of corporate goals or objectives                 | 30  | General descriptions of market risk segments                           |
| 8   | Future strategy- information of future expansion (capital expenditure)/ general development of business                  | 31  | Disclosure of interest rate risk                                       |
| C   | <i>Corporate governance (9 items)</i>  | F   | <i>Accounting policy review (2 items)</i>                              |
| 9   | Detail about the chairman (other than name/ title) background of the chairman/academic/professional/business experiences | 32  | Discussion on accounting policy  |
| 10  | Details about directors (other than name/ title) background of the directors/academic/professional/business experiences  | 33  | Disclosure of accounting standards uses for accounts                   |
| 11  | Number of shares held by directors   | G   | <i>Corporate social disclosure (3 items)</i>                           |
| 12  | List of senior managers (not on the board of directors)/ senior management structure                                     | 34  | Sponsoring public health, supporting of recreational projects          |
| 13  | Director's engagement/ directorship of other companies   | 35  | Information on donations to charitable organizations                   |
| 14  | Picture of all directors/ board of directors   | 36  | Supporting national pride/ government – sponsored campaigns            |
| 15  | Picture of chairperson   | H   | <i>Others (8 items)</i>  |
| 16  | Composition of Board of Directors  | 37  | Age of key employees   |
| 17  | Number of BOD meetings held and date   | 38  | Chairman's/ MD's report/ directors campaigns                           |
| D   | <i>Financial performance (6 items)</i>   | 39  | Information on ISO 9001: 2000 certification                            |
| 18  | Brief discussion and analysis of a financial position  | 40  | Graphical presentation of performance indicators                       |
| 19  | Return on equity   | 41  | Performance at a glance – 3 years                                      |
| 20  | Net interest margin  | 42  | Related party disclosure   |
| 21  | Earnings per share   | 43  | Details of non-compliance, penalties imposed by SE or SEBI             |
| 22  | Debt-to equity share   | 44  | Year of listing at GCC market  |

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