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**Corporate governance and dividend pay-out policy in UK listed SMEs: The effects of corporate board characteristics**

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## **Corporate governance and dividend pay-out policy in UK listed SMEs: The effects of corporate board characteristics**

### **Abstract**

**Purpose:** This paper examines the extent to which corporate board characteristics influence the level of dividend pay-out ratio using a sample of UK small and medium-sized enterprises (SMEs) from 2010 to 2013 listed on the Alternative Investment Market.

**Design/methodology/approach:** The data is analysed by employing multivariate regression techniques, including estimating fixed effects, lagged effects and two-stage least squares regressions.

**Findings:** The results show that board size, the frequency of board meetings, board gender diversity and audit committee size have a significant relationship with the level of dividend pay-out. Audit committee size and board size have a positive association with the level of dividend pay-out, whilst the frequency of board meetings and board gender diversity has a significant negative relationship with the level of dividend pay-out. By contrast, the findings suggest that board independence and CEO role duality do not have any significant effect on the level of dividend pay-out.

**Originality/value:** This is one of the first attempts at examining the relationship between corporate governance and dividend policy in the UK's Alternative Investment Market, with the analysis distinctively informed by agency theoretical insights drawn from the outcome and substitution hypotheses.

**Keywords:** corporate governance; corporate board characteristics; dividend pay-out policy; UK listed SMEs; outcome versus substitution hypothesis

## 1. Introduction

Small and medium-sized enterprises (SMEs) have played, and are increasingly playing, an important role in most economies around the world, including in the UK. For example, in the UK, SMEs contribute up to 60 percent of total private sector employment. They account for about 99 percent of all private sector businesses and 47 percent of total private sector turnover (White, 2016), with a small number of them listed on the London Stock Exchange's Alternative Investment Market (AIM). Thus, failure of SMEs can lead to significant reputational damage to the sector, as well as the UK economy (Herbane, 2013). In spite of the importance of SMEs to UK and worldwide economy, there seems to be a lack of empirical evidence regarding the impact of board mechanisms on dividend pay-out policies of SMEs (Belghitar & Khan, 2013). Meanwhile the continuous public interest and discussions surrounding board mechanisms supports the idea that corporate board features may affect dividend pay-out (Hu & Kumar, 2004; Ozkan & Mancinelli, 2006; Ghosh & Sirmans, 2006; How et al., 2008; Al-Najjar & Hussainey, 2009; Al-Matari et al., 2012; Karim, Zijl & Mollah, 2013; Mansourinia et al., 2013; Ghasemi et al., 2013; Hao, Hu, Liu & Yao, 2014; Ntim et al., 2015a, b; Khan, Mihret & Muttakin, 2016; Ntim et al., 2017). Specifically, and given the diversity of, and fast-paced changes in, corporate dividend policies in the post-2007/08 period, it has become important to understand the central drivers of corporate dividend policy in the UK. Therefore, in this paper, we seek to contribute to the extant literature by investigating the association between corporate governance and dividend policy of UK listed SMEs in the post-2007/08 global financial crisis era. Specially, we examine the extent to which corporate board characteristics influence dividend pay-out ratio using a sample of UK listed SMEs from 2010 to 2013.

Agency inspired theoretical literature has suggested several monitoring mechanisms (e.g., good governance practices and dividends) that can be used to mitigate potential conflict of interest problems, including reducing the amount of free cash flow available to managers (DeAngelo et al., 2006; Easterbrook, 1984; Jensen, 1986). Meanwhile, prior studies which examined the association between corporate governance quality and dividend pay-out policy have used two agency theoretical perspectives: the outcome and substitution hypotheses (Al-Najjar & Hussainey, 2009; Jiraporn et al., 2011; La-Porta et al., 2000; Sawick, 2009). Briefly, the outcome hypothesis suggests that the payment of dividends is a result of corporate governance regime, where managers in well-governed firms are less likely to retain cash within the firms in the absence of positive net present value (NPV) investments, and hence managers in well-governed firms tend to pay large dividends in order to signal shareholders their

commitment to treat them fairly by improving the returns on their investments (DeAngelo & DeAngelo, 1990; La-Porta et al., 2000; Sawick, 2009). By contrast, the substitution hypothesis assumes that dividends are a substitute for corporate governance quality, where poorly-governed firms are expected to pay larger dividends in order to maintain a good relationship with shareholders (John & Knyazeva, 2006; La-Porta et al., 2000).

Due to the numerous reasons explaining why managers pay dividends to their shareholders, a plethora of studies have investigated the determinants of dividend policy (Litai et al., 2011; Gill & Obradovich, 2012; Mansourinia et al., 2013; Ghasemi et al., 2013), albeit with a number of observable limitations. First, the findings of existing studies relating to the determinants of dividend policy are largely mixed (Osobov & Denis, 2008; Banga & Gupta, 2010; Nnadi et al., 2013; Maldajian & El Khoury, 2014; Brunzell et al., 2014). Second, existing studies have investigated largely how general firm level characteristics, such as cash flow (Travlos et al., 2001; Fama & French, 2001), firm size (Al-Malkawi, 2007; Al-Kuwari, 2009, 2010; Jiraporn et al., 2011), leverage (Al-Shubiri, 2011; Afza & Mirza, 2011; Rafique, 2012; Emamalizadeh et al., 2013) and return on assets (Amidu, 2007; Gill et al., 2010; Adil et al., 2011; Ouma, 2012) affect dividend pay-out. By contrast and despite suggestions that dividend policy is determined by corporate boards and top executives (Borokhovich et al., 2005; Ghosh & Sirmans, 2006; How et al., 2008; Al-Najjar & Hussainey, 2009; Borokhovich et al., 2013; Ghasemi et al., 2013), existing studies examining the effect of corporate governance on dividend pay-out are rare (How et al., 2008; Ghosh & Sirmans, 2006; Zhang, 2008; Al-Najjar & Hussainey, 2009; Harada & Nguyen, 2011; Jiraporn et al., 2011; Litai et al., 2011). Third, the limited prior studies examining the impact of corporate governance on dividend pay-out have also focused almost exclusively on large listed public corporations to the neglect of SMEs (Sharma, 2011; Subramaniam & Devi, 2011; Al-Swidi et al., 2012; Al-Taleb et al., 2012; Gill & Obradovich, 2012; Thanatawee, 2012; Abor & Fiador, 2013; Arshad et al., 2013). Finally, despite increasing evidence that poor corporate governance practices played a role in instigating the 2007/08 global financial crisis (Al-Bassam et al., 2015), there have been limited empirical studies, and inadequate critical reflections on the role of good governance on a number of organisational outcomes, such as dividend policy following the crisis. Together, these limitations considerably restrict current understanding of how and why SMEs pay dividends and crucially, what role corporate governance plays in such corporate decisions.

Given this background, this study seeks to address some of the weaknesses of existing studies in a number of ways, and thereby extend, as well as make a number of new contributions

to the extant literature. First, we seek to contribute to the extant literature by examining the effect of board characteristics on dividend policy within the context of listed SMEs. This departs from most past studies that have investigated how general firms' characteristics, such as cash flow, firm size, gearing and profitability impact on dividend policy in large publicly listed corporations. Second, given the variety of reasons explaining why corporations may develop dividend policy, and consistent with the existing literature (Al-Najjar & Hussainey, 2009; Jiraporn et al., 2011; La-Porta et al., 2000; Sawick, 2009), we inform our analysis with insights drawn from the outcome and substitution hypotheses. Third, we offer new timely empirical evidence on the effect of corporate board characteristics on dividend policy following the 2007/08 global financial crisis, which have been partly attributed widely to poor corporate governance practices.

The remainder of the paper is organised as follows. Section 2 will outline corporate governance developments and dividend policy within the UK corporate context. Section 3 will briefly elaborate on the theories underlying the study. Section 4 will review the literature and develop hypotheses. Section 5 will present the research design. Section 6 will present the empirical results, whilst section 7 will conclude the study.

## **2. Corporate governance and dividend policy in the context of UK**

Since the 1980s, the UK has been at the forefront of pursuing global reforms relating to the way companies are governed (Ntim, 2015). Observably, these corporate governance reforms followed failures of a number of large UK corporations, such as Barings Bank and Bank for Credit and Commerce International in the late 1980s and early 1990s, in which poor corporate governance practices were largely implicated (Ntim et al., 2015a, b). To prevent future corporate failures arising from poor corporate governance practices, the Cadbury Committee was formed in 1991, and consequently the issuance of the Cadbury Report in 1992 (Ntim & Osei, 2011). The Cadbury Report made a number of recommendations aimed at improving corporate governance practices by encouraging greater accountability, responsibility and transparency among corporate boards and executives (Ntim, 2015). For example, Cadbury Report recommended that every board should: (i) have at least 3 independent directors; (ii) separate the roles of CEO and chairperson; (iii) establish an audit committee; and (iv) set up an internal audit and control system (Ntim, 2012a, b).

A major limitation of the Cadbury Report was that it focused mainly on the financial aspects of corporate governance without considering other equally important issues, such as executive remuneration and risk management practices (Ntim et al. 2015a, b). Consequently, a number

of additional reports addressing different aspects of corporate governance were introduced. For example, the Greenbury Report was published in 1995. The Report sought to improve practices relating to executive remuneration by ensuring a stronger link between executive pay and corporate performance. In 1998, the Hampel Report, which consolidated the good corporate governance recommendations contained in the 1992 Cadbury Report and 1995 Greenbury Report to form the first 'UK Combined Code', was launched. In 1999, the Turnbull Report, which focused on making recommendations relating to good risk management practices, was implemented. In 2003, two different reports aimed at improving corporate governance practices were further published: Higgs and Smith Reports. The Higgs Report concentrated on improving board independence by defining and strengthening the involvement and role of independent directors, whilst the Smith Report sought to strengthen board effectiveness by encouraging the establishment of board sub-committees, such as audit, nomination and remuneration committees. The good corporate governance recommendations contained in all these reports were further consolidated to form the second 'UK Combined Code' in 2003. Discernibly, the 2003 Code emphasised the need for more board independence (majority of independent directors), board diversity (on the basis of gender, ethnicity, experience, age, and qualifications, amongst others) and regular board meetings (i.e., at least meet four times in a year), amongst other, good corporate governance practices (Ntim, 2015). The '2003 Combined Code' has been revised almost every two years, including in 2006, 2008, 2010, 2012 and 2014. Additionally, and in order to enhance shareholder activism following the global financial crisis of 2007/08, the Stewardship Code was issued in 2010 and updated in 2012. This code emphasises that shareholders should play an active role in enhancing corporate governance structures in order to protect their wealth.

Although the governance reforms pursued in the UK focused on improving corporate board decisions, including those relating to dividend policy, they did not specify exactly what corporate boards should do when it comes to dividend policy. Similarly, and unlike in other countries, where the payment of dividends is sometimes compulsory for all profit-making firms, according to the 2006 UK Companies Act, the payment of dividends by a corporation is voluntary. Specifically, Section 830 of the Act states two conditions under which dividend may be paid to shareholders as follows: (i) *"A company may only make a distribution out of profits available for the purpose of paying dividends"*; and (ii) *"A company's profits available for distribution are its accumulated, realised profits, so far as not previously utilised by distribution or capitalisation, less its accumulated, realised losses, so far as not previously*

*written off in a reduction or reorganisation of capital duly made*". However, and notwithstanding the voluntary nature of dividend policy in the UK, corporations face a critical dilemma when developing their policies relating to the payment of dividends to their shareholders. On the one hand, paying excessive amounts of corporate profits back to shareholders can stifle future growth potential by increasing cost of financing future investments via borrowing. On the other hand, leaving too much cash flow ('excess cash flow problem') in the hands of company executives can potentially increase agency problems. We, thus, argue that firms with good corporate governance credentials will be better placed to strike a fair balance between the amount of profits that are distributed to shareholders as dividends and those that are retained in the firm for investment than their poorly-governed counterparts. The central objective of this paper, therefore, is to examine the effect of corporate governance on dividend policy within UK listed SMEs.

### **3. Theory**

There are two main theoretical perspectives that have been used by previous studies to explain the relationship between corporate governance mechanisms and dividends pay-outs: the outcome and substitution hypotheses (Al-Najjar & Hussainey, 2009; DeAngelo & DeAngelo, 1990; Jiraporn et al., 2011; La-Porta et al., 2000; Sawick, 2009). The outcome hypothesis assumes that the payment of dividends is a result of the corporate governance regime (La-Porta et al., 2000), where managers in poor-governed firms are often interested in maximising their own personal wealth, by paying no or low dividends to shareholders (Al-Taleb, 2012; La-Porta et al., 2000; Chen & Steiner, 1999). The availability of 'free excess cash flow' will permit such managers to invest and expand the size of the company (e.g., through empire building mergers and acquisitions) even in the absence of positive net present value (NPV) projects (Jensen, 1986, 1993; Shapiro, 2005). In contrast, managers in well-governed firms are expected to act according to the best interest of shareholders, by pursuing wealth maximising policies, such as paying larger dividends (DeAngelo & DeAngelo, 1990). Therefore, and according to the outcome hypothesis, it is expected that corporate governance quality will be positively associated with dividend pay-out policy.

On the other hand, the substitution hypothesis suggests that firms with poor governance structures tend to pay larger dividends in order to establish a positive reputation with shareholders (La-Porta et al., 2000). According to this hypothesis, dividends pay-out is a substitute for corporate governance quality, where managers in poor-governed firms are encouraged to pay larger dividends in order to establish good reputation with shareholders. By

establishing a positive reputation with shareholders, firms with poor governance structures will be able to attract future external funds at low costs than it will normally cost such firms to attract external funds (La-Porta et al., 2000). Based on this view, dividends pay-out can be used by poorly-governed firms as alternative governance mechanism to mitigate potential conflict of interest between managers and shareholders (Sawicki, 2009). Thus, according to the substitution hypothesis, it is expected that firms with poor corporate governance structures have a greater need to establish a positive reputation by paying large dividends. Therefore and in contrast to the predictions of the outcome hypothesis, the substitution hypothesis expects that corporate governance quality will be negatively associated with dividend pay-out policy.

#### **4. Empirical literature review and hypotheses development**

As previous noted, a number of past studies have examined the effect of firm-level characteristics, such as size, cash flow, leverage and profitability on dividend policy (Valipour, Rostami & Salehi 2009; Okpara 2010; Hunjra 2011; Jagannathan & Marakani, 2011; Oladipupo & Ibadin 2013; Mirbagherijam 2014). By contrast, studies examining the extent to which corporate governance mechanisms affect dividend policy are generally scarce, but particularly acute in the case of SMEs (Thanatawee, 2012; Abor & Fiador, 2013; Arshad et al., 2013; Ghasemi et al. 2013; Iqbal 2013; Mansourinia et al. 2013). Therefore, in this section, we seek to contribute to the extant literature by examining how corporate board characteristics (i.e., board size, board independence, CEO role duality, frequency of board meetings, board gender diversity and audit committee size) can affect dividend policy of SMEs. In addition, and following previous studies, we also investigate (control for) how general firm characteristics (including firm size, leverage, cash flow per share and return on assets) affect dividend payment.

##### ***4.1 Board size and dividend policy***

Following the 2012 UK Combined Code, the number of board members should be sufficient such that the business of the corporation can be carried out without any significant challenges. According to the outcome hypothesis, larger boards are more effective in monitoring and controlling the opportunistic behaviours of management (i.e., exploiting free cash flows for themselves), since larger boards are associated with more expertise and experience, which can minimise agency problems and increase firm performance, including dividend pay-out (Ntim, 2011; Ntim et al., 2015a, b). By contrast, and based on the substitution hypothesis, larger boards are less effective in monitoring managerial opportunism, since they are often associated with more communication and co-ordination problems, and thereby poor

governance structures (Lipton & Lorsch 1992; Jensen, 1993). As poor governance is often associated with larger boards, firms with larger boards are expected to pay higher dividends on average in order to compensate for their poor governance structures, such as poor managerial monitoring.

Empirically, studies examining the connection between board size and dividend pay-out policy are rare, and therefore offering good opportunity to contribute to the literature. The findings of past studies relating to the link between board size and dividend pay-out policy are, however, observably mixed (e.g., Kiel & Nicholson, 2003; Ozkan & Mancinelli, 2006; Litai et al., 2011; Ghasemi et al., 2013; Mansourinia et al., 2013). For example, Ozkan and Mancinelli (2006) reported a different result which suggested that firms with larger boards tend to be associated with greater managerial monitoring, and thus lower levels of agency problems. Similarly, the findings of Mansourinia et al. (2013) suggested a positive relationship between board size and dividend pay-out policy. In addition, Kiel and Nicholson (2003) reported a positive impact of board size on dividend pay-out among a sample of Australian companies. Further and using data from 1,056 A-share listed businesses in Shanghai and Shenzhen stock exchange over a period of 7 years (2001-2008), Litai et al (2011) found that the size of a board is positively related to dividend pay-out policy.

By contrast, other studies have reported a negative effect of board size on dividend pay-out policy. For example, the findings of Ghasemi et al. (2013) suggested a negative and significant relationship between board size and dividend pay-out policy among 81 Iranian listed enterprises on the Teheran Stock Exchange from 2005 to 2011. This notwithstanding and given the overwhelming evidence of a positive effect of board size on dividend pay-out policy, our first hypothesis is that:

***H1:** There is a positive relationship between board size and dividend pay-out rate.*

#### **4.2 Board independence and dividend policy**

The outcome hypothesis suggests that the presence of outside directors has an important influence on board effectiveness, since they have more power to protect shareholder wealth in the form of dividend pay-out (Al-Najjar & Hussainey, 2009; Hu & Kumar 2004; Ntim, 2011). Additionally, outside directors are suggested to have strong incentive to monitor and control managers' opportunistic behaviour in order to enhance their reputation and image in the labour market (Borokhovich et al., 2005). By contrast, and based on the substitute hypothesis, dividends help in mitigating agency conflicts, particularly in firms with poor governance

practices, since dividends pay-out reduces the free cash flow available to managers (Easterbrook, 1984).

The empirical evidence of the impact of outside directors on dividend pay-out policy is rare, and thus this study provides an opportunity to make a new contribution to the extant literature. For example, consistent with past studies (Borokhovich et al., 2005; Iqbal, 2013; Mansourinia et al., 2013; La-Porta et al., 2000), Abor and Fiador (2013) find a negative relationship between the presence of outside directors and dividend pay-out policy for a sample of 177 Nigerian firms. Within the UK corporate context, Al-Najjar and Hussainey (2009) report empirical evidence of a statistically negative association between the number of outside directors and dividend pay-out among 400 non-financial firms. From a regulatory perspective, the various UK corporate governance Codes (e.g., Cadbury Report, 1992; and Combined Code, 2010) recommend that the majority of boards' members should be outside directors. This suggests that increasing the proportion of outside directors is considered as an important corporate governance mechanism, which reduce the need to pay larger dividends. Thus, our second hypothesis to be tested is that:

***H2:** There is a negative relationship between board independence and dividend pay-out rate.*

#### **4.3 CEO role duality and dividend policy**

Combining CEO and chairperson roles creates agency problems by concentrating too much executive power in the hands of CEOs and thus, allowing them to pursue their own interests at the expense of shareholders (Jensen, 1993; Karim, Zijl & Mollah, 2013). Combining CEO and chair roles into one individual can also impact negatively on board independence by reducing monitoring over top management activities (Fama & Jensen, 1983; Karim, Zijl & Mollah, 2013). Weak monitoring by corporate boards may grant opportunistic CEOs avenues to expropriate shareholder wealth by, for example, paying no or low dividends to shareholders (Dalton, 2014). By contrast, and based on the view of the substitute hypothesis, firms with combined leadership structure are expected to pay larger dividends in order to substitute for poor governance quality often associated with CEO role duality (Chen et al., 2016).

Prior evidence on the link between CEO duality and dividend pay-out rates is generally mixed (Abor & Fiador, 2013; Hu & Kumar, 2004; Mansourinia et al., 2013; Litai et al., 2011; Zhang, 2008; Subramaniam & Devi, 2011). For example, and consistent with the results of previous studies (Abor & Fiador, 2013; Ghosh & Sirmans, 2006; Litai et al., 2011; Sharma, 2011), Zhang (2008) report a negative association between CEO duality and dividend pay-out

policy using a sample of Chinese firms. By contrast, Hu and Kumar (2004), Mansourinia et al. (2013) and Subramaniam and Devi (2011) find no association between CEO duality and dividend pay-out policy among US, Iranian and Malaysian listed firms, respectively. From UK regulatory perspective, much of the UK corporate governance reforms (i.e., from 1992 Cadbury Report to 2012 Combined Code) suggest that the roles of CEO and chairperson should be separated in order to enhance board independence, and thus, our third hypothesis to be tested is that:

*H3: There is a negative relationship between CEO duality and dividend pay-out rate.*

#### ***4.4 Frequency of board meetings and dividend policy***

Theoretically, there are inconclusive perspectives as to the impact of the frequency of board meetings on dividend pay-out policy. On the one hand, frequent board meetings can help in reducing agency conflicts by conveying information to managers and shareholders in a transparent way, and therefore bolstering the quality of work process (Greco 2011). Additionally, it has been suggested that frequent board meetings can improve board independence and effectiveness by allowing directors more time to monitor/evaluate management performance (Conger et al., 1998). Increased managerial monitoring associated with board meetings can reduce agency problems and increase firm performance, including dividend pay-out (Ntim & Osei, 2011; Ntim, 2013a, b). On the other hand, the substitute hypothesis suggests that frequent board meetings may not be considered as a good governance mechanism, because it can reduce the time outside executives spend effectively in monitoring management (Lipton & Lorsch, 1992), and this may result in increasing agency costs (Vafeas, 1999). To substitute for poor governance associated with frequent board meetings, managers may use dividends to signal to the market that shareholders' interests are protected (Sawicki, 2009).

Empirically, although a number of past studies suggest that board meetings impacts significantly on performance (Chen & Chen, 2012; Hao, Hu, Liu and Yao, 2014; Hu et al., 2010; Karamanou & Vafeas, 2005; Ntim & Osei, 2011), there seems to be a lack of studies examining the effect of board meetings on dividend pay-out policy. This offers opportunity to make original contribution to the literature. Therefore, and to the extent that the frequency of board meetings impacts negatively on firm performance (Taghizadeh & Saremi, 2013), we expect that firms with frequent board meetings will be associated with good governance practices and dividends play a substitute role in mitigating agency problems when governance practices are poor and, hence, our fourth hypothesis to be tested is that:

***H4:** There is a negative relationship between the frequency of board meetings and dividend pay-out rate.*

#### **4.5 Board gender diversity and dividend policy**

Although, board diversity can be defined based on different attributes (e.g., education background, age, ethnicity and gender), this study focuses only on gender diversity aspect of the board for two reasons: (i) gender diversity aspect has been widely investigated (Chapple & Humphrey, 2014; Nguyen & Faff 2007; Julizaerma & Sori 2012; Ntim, 2015); and (ii) this aspect can be measured easily (Ntim, 2015). The outcome hypothesis suggests that board diversity can improve board independence and effectiveness by bringing diverse ideas, perspectives and experience to the board (Asher et al., 2005; Carter et al., 2003; Tsuji, 2012). Therefore, board gender diversity can increase firm performance and dividend pay-out. By contrast, and in line with the predictions of the substitute hypothesis, board gender diversity may not be considered as effective governance mechanism because it can increase conflict among board members (Baranchuk & Dybvig, 2009). As poor governance can be associated with gender-diverse boards, firms with more women on their boards are expected to pay larger dividends in order to substitute for weaker governance.

Empirically, and although several past studies suggest that board gender diversity impacts positively on performance (Carter et al., 2003; Julizaerma & Sori, 2012; Ntim, 2015; Smith et al., 2006; Taghizadeh & Saremi, 2013), there seems to be a lack of studies examining the influence of board gender diversity on dividend pay-out policy. Thus, this study offers a timely contribution to the extant literature. For example, Carter et al. (2003) and Erhardt et al. (2003) report empirical evidence of a statistically positive association between board gender diversity and the performance of US firms. Within the UK context, the various corporate governance Codes (e.g., 2010 and 2012 Combined Codes) recommend that corporate boards should be sufficiently diverse in many aspects (e.g., gender, age, skills, and qualifications) in order to improve board effectiveness. Hence, this study hypothesises that firms with gender-diverse boards are associated with good governance practices and dividends play a substitute role in mitigating agency problems when governance practices are poor. Therefore, our fifth hypothesis to be tested is that:

***H5:** There is a negative relationship between board gender diversity and dividend pay-out rate.*

#### ***4.6 Audit committee size and dividend policy***

Firms are required to establish independent audit committees in order to monitor and improve the quality of financial reporting that management provide to shareholders (Rezaee 2009). According to the outcome hypothesis (Kyereboah-Coleman & Biekpe 2006; Kajol & Sunday 2008), larger audit committees are suggested to be more effective in monitoring and controlling managerial opportunistic behaviours (paying no or low dividends to shareholders), because they are associated with more skills, experience and expertise. By contrast, the substitute hypothesis assumes that dividends can play a significant role in mitigating agency problems in firms with poor governance practices (Donaldson, 1991; Fox & Hamilton, 1994; Davis et al., 1997).

There seems to be a lack of empirical evidence relating to the effect of audit committee size on dividend pay-out policy and therefore, a fertile area for further research. A number of past studies (Al-Swidi et al., 2012; Kajol & Sunday, 2008; Kyereboah-Coleman, 2008) report empirical evidence that audit committee size impacts positively on firm performance. Therefore, and to the extent that firms with larger audit committees generate higher performance than firms with smaller audit committees, this study predicts that firms with large audit committees will pay high dividends to shareholders and, hence our final hypothesis to be tested is that:

***H6: There is a positive relationship between audit committee size and dividend pay-out rate.***

### **5. Research Design**

#### ***5.1 Data considerations***

Our sample is drawn from all 1,096 Alternative Investment Market (AIM) listed firms on the London Stock Exchange as at May 2013. Firms included in our final sample need to meet three criteria: (i) availability of a firm's annual report throughout the period from 2010-2013; (ii) availability of a firm's corporate governance and financial data from 2010 to 2013; and (iii) availability of dividend pay-out data from 2010 to 2013. These criteria were used for several reasons. First, and consistent with past studies (Al-Najjar & Hussainey, 2009; Litai et al., 2011; Mansourinia et al., 2013), these criteria allowed us to meet the conditions for balanced panel data analysis. Second, using both cross-sectional and time series of a 4-year data may allow us to detect whether the observed cross-sectional association between board characteristics and dividend pay-out policy holds over time. Third, due to the extensive nature of corporate

governance, financial and dividend pay-out data coupled with the labour intensive nature of manual collection, we limited our final sample to 50 firms from 2010 to 2013 (i.e., a total of 200 firm year observations). Finally, the sample begins in 2010 in order to eliminate the impact of 2007/08 global financial crisis on corporate governance structures and dividend pay-out policies. The sample ends in 2013 because it is the most recent year for which data was available at the time data collection began. We collected board characteristics data from firms' annual reports, which were downloaded from the *Perfect Information* database and company websites. We also collected data on accounting and financial variables from *DataStream*.

## ***5.2 Definition of variables and model specification***

All the main types of variables used in conducting our empirical analyses are summarised in Table 1. To test *H1* to *H6* (i.e., answer study's central research question: the effect of board characteristics on dividend pay-out policy), we classify our variables into three main types. First, and following previous studies (Gill & Obradovich, 2012; Mansourinia et al., 2013; Arshad et al., 2013), dividend per share was used to represent the dividend behaviour by UK SMEs and it is defined as the aggregate declared dividends of a company paid out per year divided by the number of common shares issued. The current study used dividend per share because it is considered as a reliable measure of firms' dividend payment policy (Charalambidis & Papadopoulos, 2007). Additionally, and consistent with previous studies (e.g., Esqueda, 2016; Jiraporn et al., 2011; John & Knyazeva, 2006), this study employs the ratio of dividends to total assets as alternative proxy to check the robustness of our findings.

Second, our main independent variables are board size (*BS*), board independence (*BI*), CEO duality (*CEO*), frequency of board meetings (*BM*), board gender diversity (*BG*) and audit committee size (*AS*). Finally, and in order to account for potential omitted variables bias (Gujarati 2003), we added four variables that may impact on dividend pay-out policy, including firm Size (*FS*), financial leverage (*LEV*), cash flow per share (*CFS*) and return on assets (*ROA*). For brevity purposes, we have not developed direct theoretical links between these control variables and dividend policy, but there is extensive evidence which suggest that these variables can influence dividend pay-out policy (Travlos et al., 2001; Fama & French 2001; Aivazian, Booth & Cleary 2003; Al-Malkawi 2007, 2008; Amidu 2007; Al-Kuwari 2009; Afza & Mirza 2011; Jiraporn et al., 2011; Consler & Lepak 2011; Rafique 2012; Al-Taleb, Al-Shubiri & Al-Zoued 2012; Ouma 2012; Eng, Yahya & Hadi 2013). Assuming that all the

hypothesised relationships are linear, our ordinary least square (OLS) regression model to be estimated is specified as follows:

$$DP_{it} = \alpha_0 + \beta_1 BS + \beta_2 BI + \beta_3 CEO + \beta_4 BM + \beta_5 BD + \beta_6 AS + \sum_{i=1}^n \beta_i CONTROLS_{it} + \varepsilon_{it} \quad (1)$$

Where: *DP* is the main dependent variable; *BS*, *BI*, *CEO*, *BM*, *BD* and *AS* are our main independent board characteristics variables; and *CONTROLS* refers to control variables including *FS*, *LEV*, *CFS* and *ROA*.

## 6. Empirical results and discussion

### 6.1 Summary descriptive statistics and bivariate correlation analyses

Panels ‘A’, ‘B’ and ‘C’ of Table 2 presents the summary descriptive statistics of our main dependent, independent and control variables over the period investigated (2010-2013), respectively. Overall, the three panels show wide spread for all variables under examination. For example, and similar to the findings of prior studies (Esqueda, 2016; Jiraporn et al., 2011; John & Knyazeva, 2006), the ratio of dividends to total assets (*DP2*) ranges from 0.00 to 0.12 with a mean of 0.021. Additionally, and consistent with the suggestions of Lipton and Lorsch (1992) and Jensen (1993), the mean value of board size (*BS*) is 8.27 members, ranging from 4 to 15 members. Board independence (*BI*) ranges from 20% to 80% with an average of 53%. The percentage of companies with a CEO who also chairs (*CEO*) the board is significant (mean of 0.92), indicating that, on average, there is a trend among AIM companies to combine the CEO and board chair into one. Frequency of board meetings (*FM*) ranges between a minimum of 4 meetings to a maximum of 16 annual meetings, with a mean of 8.70 annual board meetings and is in line with the similar findings of Ntim and Osei (2011), and Horvath and Spirollari (2012). Board gender diversity (*BG*) is, observably, low ranging between 0.00 and 0.40, with an average of 0.12, indicating that, on average, the boards of AIM companies are dominated by males. With respect to the other remaining variables, including *DP*, *AS*, *FS*, *LEV*, *CFS* and *ROA*, all show wide variation, indicating that there is adequate variation in our variables.

**[Insert table 2 about here]**

Table 3 presents the correlation matrix for all variables included in our regression analysis in order to identify any potential multicollinearity problems. As a robustness check, we report

both the Pearson's parametric and Spearman's non-parametric coefficients. It is noticeable that magnitude and direction of both coefficients are generally similar; indicating that no serious non-normality problem exist. Additionally, both Pearson and Spearman coefficients indicate that the levels of correlation among all variables are somewhat low, suggesting that there are no serious multicollinearity problems among variables included in our study.

**[Insert table 3 about here]**

Table 3 (focusing on Pearson's parametric correlation coefficients) shows statistically strong links among *DPI/DP2*, board characteristics and control variables. For example, and in line with our expectations, board size (*BS*) and audit committee size (*AS*) are positively associated with *DPI/DP2*. The evidence that firms with dual leadership pay low dividends is also consistent with our predictions. Evidence that firms with boards that meet more frequently (*BM*) pay significantly low dividends is in line with our expectations. However, evidence that board independence (*BI*) is positively associated with dividend pay-out policy is not consistent with our predictions. With reference to the control variables, the positive coefficients on firm size (*FS*), leverage (*LEV*), cash flow per share (*CFS*) and return on assets (*ROA*) are consistent with our predictions that these control variables have positive links with dividends pay-out policy.

## **6.2 Multivariate regression analyses**

The empirical findings related to the effect of board characteristics on dividend pay-out rate (*DPI*) are reported in Models 1 to 6 of Table 4. Specifically, and in order to examine the effect of each independent variable on our results, we first regressed board size (*BS*) in addition to the control variables on *DPI* (see Model 1 of Table 4). We then added board independence (*BI*), CEO role duality (*CEO*), board gender diversity (*BG*), frequency of board meetings (*BM*) and audit committee size (*AS*) to the regression models 2, 3, 4, 5 and 6, respectively. Overall, and as shown in Model 6 of Table 4, the results indicate that board characteristics significantly impact *DPI*. First, and with reference to board size, the positive and significant association between *BS* and *DPI* provides support for *H1* (i.e., (There is a positive relationship between dividend payment policy and board size) and the findings of Gill and Obradovich (2012), Mansourinia et al. (2013) and Litai et al. (2011) who report a positive and statistically significant association between board size and dividend payment policy among US, Iranian and Chinese listed firms. Theoretically, the positive and significant finding is consistent with

the prediction that dividends are an outcome of good corporate governance (Jiraporn et al., 2011; Sawicki, 2009). As explained earlier, larger boards enjoy several advantages, such as having more experienced and talented directors (Daniel & Coles 2008; Ntim, 2011; Ntim et al., 2015a, b). This can result in enhancing governance practices by increasing managerial monitoring and encouraging managers to follow wealth maximising policies, including paying shareholders larger dividends.

**[Insert table 4 about here]**

Second, the negative coefficient on board independence (*BI*) in Table 4, suggests that *H2* (i.e., there is a negative link between board independence and dividend payment policy) is empirically supported. The evidence of a negative *BI-DPI* nexus provide support for previous studies (Abor & Fiador, 2013; Al-Najjar & Hussainey, 2009; Borokhovich et al., 2005; Iqbal, 2013; Mansourinia et al. 2013; La-Porta et al, 2000), which report a negative relationship between the presence of outside directors and dividend pay-out policy. Theoretically, the evidence is in line with the predictions of the substitute hypothesis that indicate that firms with good governance practices (higher proportion of independent outside directors) are less inclined to pay dividends (La-Porta et al., 2000), and this is because board independence and dividend pay-out are substitutes in mitigating agency costs (Al-Najjar & Hussainey, 2009).

Third, the results suggest that CEO role duality (*CEO*) is negatively associated with *DPI*, implying that *H3* (i.e., there is a negative association between CEO role duality and dividend payment policy) is empirically supported. The negative coefficient on *CEO* also provide support to the findings of previous studies (Abor & Fiador, 2013; Ghosh & Sirmans, 2006; Litai et al., 2011; Sharma, 2011; Zhang, 2008), which report a negative association between CEO duality and dividend pay-out policy. Theoretically, the negative finding offers support for the prediction of outcome hypothesis that poor governed firms (in the form of combining CEO and chairperson role) tend to pay lower dividends, and this is because dual leadership may allow opportunistic CEOs to make decisions and pursue strategies that may improve their personal wealth at the expense of shareholders (Dalton, 2014).

Fourth, the frequency of board meetings (*FM*) in Table 4 is negatively and significantly associated with *DPI*. This implies that *H4* (i.e., there is a negative relationship between frequency of board meeting and dividend payment policy) is supported. As explained above, there is a lack of studies investigating the impact of *FM* on dividend payment policy and most previous studies have focused on examining whether *FM* influences firm performance (Chen

& Chen, 2012; Hu et al., 2010; Karamanou & Vafeas, 2005; Ntim & Osei, 2011). This offers opportunity to provide new evidence on *FM*'s impact on *DP*. Theoretically, the result offers support for the substitute hypothesis (La Porta et al., 2000), which suggests that firms with poor governance tend to use dividends to maintain a positive reputation with shareholders. This implies that the payment of dividends can serve as substitute for the need for greater managerial monitoring through frequent board meetings.

Fifth, board gender diversity (*BG*) is negatively and significantly associated with *DPI*, suggesting that *H5* (i.e., there is a negative relationship between board gender diversity and dividend pay-out rate) is empirically supported. The evidence of a negative *BG-DPI* nexus offers support for the findings of past studies (Smith et al., 2006; Nguyen & Faff, 2007; Julizaerma & Sori, 2012; Ntim, 2015), which suggest that gender-diverse boards provide better monitoring over managers and improve firm performance. Additionally, evidence of negative influence of *BG* in UK boardrooms is largely consistent with their extremely low representation (0.12, see Table 2). The negative finding also supports the suggestion of the substitute hypothesis (La Porta et al., 2000) that firms need to establish a positive reputation with shareholders either by pursuing good governance practices or by paying more dividends in order to raise external funds in the future.

Finally, audit committee size (*AS*) is statistically and positively associated with *DPI*, implying that *H6* (i.e., there is a positive relationship between audit committee size and dividend pay-out rate) is supported. The positive finding supports the prediction that larger audit committees are associated with increased managerial monitoring (Al-damen et al., 2012; Al-Swidi et al., 2012). This may help in reducing agency problems (investments in negative NPV projects) by encouraging managers to distribute free excess cash flows to shareholders in the form of dividends in the absence of positive NPV projects.

In addition to board characteristics, we control for a number of variables that have been identified by previous studies as factors affecting *DPI* in order to reduce potential omitted variables bias. As hypothesised and consistent with previous studies (Baker, 2009; Consler & Lepak, 2011; Denninger, 2012; Jiraporn et al., 2011; Osman & Mohamed, 2010; Rafique, 2012; Thanatawee, 2013), we find statistically significant and positive association among firm size, leverage, cash flow per share and dividend pay-out rate. However, we find a positive, but insignificant, association between *ROA* and *DPI*, which is not in line with our expectations.

### 6.3 Additional analyses

Four additional tests have been carried out in order to address some concerns associated with alternative dividend pay-out proxy and different endogeneity problems. These tests include the use of ratio of dividends to total assets as alternative proxy, two-stage least squares (2SLS), fixed-effects and lagged-effects models. First, to check the extent to which our main findings are robust to alternative dividend pay-out proxy, we use the ratio of dividends to total assets. This alternative dividend proxy has been employed in the current study because it is considered to be appropriate and also because it has widely been used in prior studies (e.g., Esqueda, 2016; Jiraporn et al., 2011; John & Knyazeva, 2006). Overall, after comparing the results reported in model 1 of Table 5 with the main OLS results, the findings remain relatively the same, and thereby indicating that the results of the current study are largely unaffected by potential problems that may be associated with the use of alternative dividend pay-out proxy.

Second, to address the potential endogeneity problems that may arise from omitted variable bias, 2SLS model has been estimated. Following Beiner et al. (2006), a Durbin-Wu-Hausman test (*DWH*) has been conducted to examine whether an endogenous relationship between the dividend pay-out and board mechanisms exists. To conduct Durbin-Wu test, we regressed our six board mechanisms on the four control variables and the resulting residuals from this regression are saved. We then regressed dividend pay-out ratio (*DPI*) on the saved residuals and the same control variables as shown in Model 2 of Table 5. The results indicate the existence of endogeneity problems, because the coefficients on the saved residuals are significant. This implies that 2SLS regression analysis may be more suitable compared to the OLS approach. Therefore, and in line with prior literature (e.g., Beiner et al., 2006), in the first stage, we conjectured that the board mechanisms will be influenced by the four control variables, and thus we regressed the board mechanisms on the four control variables and the predicted values of board mechanisms are saved. In the second stage, the predicted values of the board mechanisms are employed as instruments and used in re-estimating Model 6 of Table 4. However, before replacing the actual values of board mechanisms with their predicted values, it is essential to ensure that the instruments (predicted values) are valid and appropriate to replace the actual values of board mechanisms. Following Beiner et al (2006), we used both Pearson and Spearman correlation matrices and we found that the predicted values of board mechanisms are highly correlated with their actual values. Additionally, the predicted values of the board mechanisms have no correlation with their residual values. This suggests that it is appropriate to use the predicted values of the board mechanisms as instruments to replace their

actual values (Beiner et al., 2006). Overall, the findings reported in Model 3 of Table 5 remain essentially the same as those contained in Model 6 of Table 4, and thus indicating that the findings appear to be robust to possible endogeneity issues that might arise from omitted variables bias.

Third, to address potential endogeneity concerns that might emerge from simultaneous relationship between board characteristics and dividend pay-out rate, a lagged structure model has been estimated, whereby the current year dividend pay-out policy depends on the previous year's board mechanisms. The results reported in Model 4 of Table 5 show some sensitivity. For example, board size and audit committee size, which were significantly positive in Model 6 of Table 4, are now insignificant. Frequency of board meetings, which was significantly negative in Model 6 of Table 4, is now insignificant. However, the direction and the statistical significance level of the coefficients on board independence, CEO role duality and board gender diversity have not changed. Overall, Model 4 of Table 5 suggests that the findings are fairly robust to possible endogeneity issues that might emerge from simultaneous relationship among board characteristics and dividend pay-out policy.

Finally, fixed-effect model has been estimated in order to address possible endogeneity problems that may arise from the presence of firm-level heterogeneities. This model has been estimated because it has been suggested that there may be other unobserved firm-specific factors (e.g., managerial talent and organisational culture), which can impact on *DPI* that our OLS approach may be unable to determine (Ntim, 2012a, b, 2015). Therefore and to control for unobserved firm-level heterogeneities, Model 6 of Table 4 has been re-estimated by including 49 dummies to represent 50 sampled firms. The findings shown in Model 5 of Table 5 remain generally the same, indicating that the findings of the study are fairly robust to the presence of any possible endogeneity problems that may emerge from the presence of firm-specific heterogeneities.

## **7. Summary and conclusion**

This paper investigates the effect of corporate governance on dividend policy (DP) using a sample of UK small and medium-sized enterprises (SMEs) listed on the London Stock Exchange's Alternative Investment Market (AIM) from 2010 to 2013. Our study extends, as well as contributes to the extant literature in a number of ways. First, despite the importance of good corporate governance practices and the considerable amount of corporate governance reforms which have been pursued around the world, previous studies have examined only the impact of general firm characteristics (e.g., firm size, cash flow, and gearing) on dividend

policy among large publicly listed firms to the neglect of SMEs. This arguably limits current understanding of why and how corporate governance practices may affect dividend pay-out policies of SMEs. Therefore, this study contributes to the extant literature by examining the link between board characteristics (board size, board independence, CEO role duality, frequency of board meetings, board gender diversity and audit committee size) on *DP* in a major European country. Overall, the results indicate that board characteristics have a significant impact on *DP* among publicly listed UK SMEs. Additionally, our findings support the view that dividends can act as substitute for corporate governance mechanisms (such as board characteristics) in poorly governed firms.

Second, we offer a timely new empirical insights relating to board characteristics and dividend policy following the recent global financial crisis. Third, our findings have a number of implications for companies and shareholders, policymakers, regulatory authorities and other countries. The evidence implies that managers in poorly-governed SMEs may be compelled to pay larger dividends if they are to maintain a positive relationship with shareholders. In contrast, managers in better-governed SMEs may be able to raise funds in future at lower costs by building positive reputation with shareholders via the maintenance of good governance mechanisms. In doing so, well-governed SMEs may be able to pay relatively less dividends in order to retain profits for future expansion and growth without the need to raise funds from external sources at higher costs. Fourth, the evidence provided in this paper offers potential theoretical and empirical insight for future studies. In terms of theoretical expansions, the evidence suggests that future studies may improve their theoretical grounds by using other theories, such as stakeholder and resource dependence theories, when examining factors influencing dividend pay-out policy. With respect to the empirical expansions, this paper focuses only on listed SMEs in the UK; however, future studies can extend the current study by examining the impact of corporate governance mechanisms on dividend policy in different international governance environments (i.e., developed or developing countries).

Finally, our study has a number of limitations, including restricting our analysis to only board characteristics in listed SMEs. Future studies may consider the impact of other corporate governance and ownership mechanisms on dividend pay-out policy in listed and non-listed SMEs. In addition, and as data becomes available in the future, future studies may consider other factors (e.g., capital structure, tax policy, macro-economic conditions, inflation rate, and political situation or corporate political connections (e.g. Khan, Mihret & Muttakin, 2016)) that can influence dividend policy in SMEs . Similarly, and due to labour intensive nature of

manually collecting the required data, we restricted our final sample to 50 firms over the period from 2010-2013 (i.e., resulting in a total of 200 firm-year observations). Thus, future studies can extend our study by increasing the sample size and covering longer period of time (i.e., before and after 2007/08 global financial crisis). Additionally, data used in this study is primarily collected from secondary archival databases, and thus future studies can improve our understanding by conducting in-depth face-to-face interviews and qualitative analysis of primary data to gain further insights relating to the drivers of dividend pay-out policy in SMEs.

#### **Note**

1. There were 1,096 Alternative Investment Market (AIM) listed firms on the London Stock Exchange as at May 2013. Approximately 430 of the firms met our sample selection criteria. However, due to the extensive nature of corporate governance, financial and dividend pay-out data coupled with the labour intensive nature of manual collection, we limited our final sample to 50 firms from 2010 to 2013 (i.e., a total of 200 firm year observations), consisting of the top 25 (largest) and bottom 25 (smallest) firms, ranked by market capitalisation.

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**Table 1.**  
Variables Definition and Measurement.

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*Dividend pay-out rate*

- DP1      The aggregate declared dividends of a company paid out per year divided by the number of common shares issued.
- DP2      Ratio of aggregate dividends declared to total assets

*Corporate governance*

- BS      Total number of inside and outside directors on a company's board in a financial year.
- BI      Number of independent outside directors divided by the total number of directors on a company's board in a financial year.
- CEO      1 if the roles CEO and chairperson are held by separate individuals, 0 otherwise.
- BM      Total number of meetings held by a company's board in a financial year.
- BG      Total number of female directors to the total number of directors on a company's board in a financial year.
- AS      Total number of directors that serve on the audit committee.

*Control Variables*

- FS      Natural log of total assets.
- LEV      Ratio of total debt to total assets.
- CFS      Cash flow divided by total common share.
- ROA      Operating profits divided by total asset.
-

**Table 2.**  
Summary descriptive statistics

Variables	Mean	Median	Std. Dev.	Min	Max
<i>Panel A: Dividend pay-out rate</i>					
DP1	0.31	0.15	0.38	0.004	1.96
DP2	0.021	0.01	0.024	0.00	0.12
<i>Panel B: Corporate governance</i>					
BS	8.27	8.00	2.65	4.00	15.00
BI (%)	0.53	0.55	0.11	0.20	0.80
CEO	0.92	1.00	0.27	0.00	1.00
BM	8.70	9.00	2.29	4.00	16.00
BG (%)	0.12	0.11	0.11	0.00	0.40
AS	3.22	3.00	1.48	0.00	9.00
<i>Panel C: Control Variables</i>					
FS	14.41	14.29	2.16	9.78	19.34
LEV (%)	2.67	2.20	1.86	0.96	16.43
CFS (%)	0.006	-0.006	0.21	-0.94	1.24
ROA (%)	8.72	7.54	17.06	-190.33	39.12

**Notes:** *BS* denotes board size; *BI* denotes board independence; *CEO* denotes CEO role duality; *BM* denotes frequency of board meetings; *BG* denotes board gender diversity; *AS* denotes audit committee size; *FS* denotes firm size; *LEV* denotes leverage; *CFS* denotes cash flow per share and *ROA* denotes return on assets. Table 1 fully defines all the variables used.

**Table 3.**  
Correlation Matrix.

Variable	DP1	DP2	BS	BI	CEO	BM	BG	AS	FS	LEV	CFS	ROA
DP1		.993***	.690***	.133*	-.078	-.427***	.041	.491***	.569***	.136*	.036	.159**
DP2	0.989***		.657***	.126*	-.084	-.424***	.044	.465***	.485***	.125*	.042	.170**
BS	.447***	.449***		.244***	-.039	-.283***	.085	.616***	.634***	.217***	.000	.034
BI	.095	.088	.277***		-.016	-.053	.083	.302***	.136*	.063	-.052	.035
CEO	-.102	-.089	-.033	.021		.089	.044	.065	-.059	-.054	-.022	-.064
BM	-.369***	-.371***	-.222***	-.088	.106		.053	-.109	-.201***	.163**	.055	-.036
BG	-.037	-.025	.104	.092	.042	.050		.175**	.022	-.013	.077	.005
AS	.398***	.381***	.610***	.401***	.080	-.055	.212***		.490***	.204***	.057	-.028
FS	.433***	.355***	.602***	.195***	-.051	-.168**	.039	.453***		.257***	-.034	-.037
LEV	.172**	.159**	.067	.051	.002	.093	.021	.104	.105		.017	-.045
CFS	.262***	.250***	-.007	-.052	.037	.014	.068	.083	.031	.139**		.075
ROA	.169**	.173**	.074	-.067	-.032	-.100	.021	.067	.049	.104	.053	

**Notes:** The bottom left half of the table contains Pearson's correlation coefficient, whereas the upper right half of the table shows Spearman's correlation coefficients. Variables are definite as follows: *BS* denotes board size; *BI* denotes board independence; *CEO* denotes CEO role duality; *BM* denotes frequency of board meetings; *BG* denotes board gender diversity; *AS* denotes audit committee size; *FS* denotes firm size; *LEV* denotes leverage; *CFS* denotes cash flow per share and *ROA* denotes return on assets. \*\*\*, \*\* and \* indicate that correlations among variables are significant at the 0.01, 0.05 and 0.10 levels (2-tailed) respectively.

**Table 4**  
Effect of corporate governance on dividend pay-out policy

Dep. Variable (Model)	DP1 (1)	DP1 (2)	DP1 (3)	DP1 (4)	DP1 (5)	DP1 (6)	VIF
<i>Corporate governance:</i>							
BS	0.049(.000)***	0.050(.000)***	0.050(.000)***	0.043(.000)***	0.044(.000)***	0.031(.007)***	2.115
BI	-	-0.087(.668)	-0.078(.702)	-0.118(.539)	-0.098(.611)	-0.266(.181)	1.226
CEO	-	-	-0.119(.142)	-0.083(.282)	-0.080(.302)	-0.103(.177)	1.030
BG	-	-	-	-0.045(.000)***	-0.044(.000)***	-0.047(.000)***	1.109
BM	-	-	-	-	-0.271(.157)	-0.357(.062)*	1.058
AS	-	-	-	-	-	0.052(.007)***	1.932
<i>Controls:</i>							
FS	0.036(.005)**	0.036(.000)**	0.035(.006)**	0.033(.008)**	0.032(.009)**	0.027(.023)**	1.623
LEV	0.017(.165)	0.017(.161)	0.017(.158)	0.024(.038)**	0.024(.039)**	0.023(.043)**	1.059
CFS	0.428(.000)***	0.425(.000)***	0.432(.000)***	0.430(.000)***	0.440(.000)***	0.412(.000)***	1.044
ROA	0.003(.055)*	0.002(.062)*	0.002(.068)*	0.002(.148)	0.002(.138)	0.002(.180)	1.042
Constant	-0.678***	-0.643***	-0.526***	-0.060	-0.054	0.106	-
Durbin-W. Stat.	2.061	2.061	2.059	2.109	2.111	2.050	-
F- value	20.740***	17.241***	15.179***	17.668***	16.012***	15.657***	-
Adj. R <sup>2</sup>	0.332	0.329	0.333	0.401	0.404	0.424	-
No. of observations	200	200	200	200	200	200	-

**Notes:** *BS* denotes board size; *BI* denotes board independence; *CEO* denotes CEO role duality; *BM* denotes frequency of board meetings; *BG* denotes board gender diversity; *AS* denotes audit committee size; *FS* denotes firm size; *LEV* denotes leverage; *CFS* denotes cash flow per share and *ROA* denotes return on assets. *P*-values are between brackets. \*\*\*, \*\*, and \* indicate significance at the 1, 5 and 10 levels, respectively.

**Table 5.**  
Robustness analysis of the effect of corporate governance on dividend pay-out policy

<i>(Model)</i>	2SLS				Fixed-Effects (5)
	DP2 (1)	First Stage (Residuals) (2)	Second Stage (Predicted) (3)	Lagged-Effects (4)	
<i>Corporate governance:</i>					
BS	0.002(.005) <sup>***</sup>	0.152(.000) <sup>***</sup>	0.265(.056) <sup>*</sup>	0.002(.915)	0.115(.252)
BI	-0.017(.191)	2.590(.000) <sup>***</sup>	-8.709(.010) <sup>**</sup>	-0.077(.773)	-0.443(.048) <sup>**</sup>
CEO	-0.006(.255)	-0.690(.000) <sup>***</sup>	-7.031(.000) <sup>***</sup>	-0.042(.668)	-0.097(.248)
BG	-0.020(.111)	-2.647(.000) <sup>***</sup>	-16.418(.001) <sup>***</sup>	-0.026(.039) <sup>**</sup>	-0.059(.000) <sup>***</sup>
BM	-0.003(.000) <sup>***</sup>	-0.069(.000) <sup>***</sup>	-0.226(.037) <sup>**</sup>	-0.142(.582)	-0.592(.005) <sup>***</sup>
AS	0.004(.005) <sup>***</sup>	-0.217(.004) <sup>***</sup>	0.113(.076) <sup>*</sup>	0.010(.718)	0.077(.001) <sup>***</sup>
<i>Controls:</i>					
FS	0.001(.393)	0.045(.000) <sup>***</sup>	0.121(.090) <sup>*</sup>	0.080(.000) <sup>***</sup>	0.522(.088) <sup>*</sup>
LEV	0.001(.060) <sup>*</sup>	-0.261(.000) <sup>***</sup>	0.016(.425)	0.033(.017) <sup>**</sup>	0.018(.153)
CFS	0.025(.000) <sup>***</sup>	18.624(.000) <sup>***</sup>	4.175(.010) <sup>**</sup>	-0.100(.432)	0.371(.001) <sup>***</sup>
ROA	0.000(.167)	-0.006(.017) <sup>**</sup>	0.014(.000) <sup>***</sup>	-0.001(.677)	0.002(.117)
Constant	0.021	0.305	11.376 <sup>***</sup>	-1.069 <sup>***</sup>	-4.392
Durbin-W. Stat.	2.071	2.050	2.050	1.947	2.078
F- value	12.964 <sup>***</sup>	15.657 <sup>***</sup>	15.657 <sup>***</sup>	5.023 <sup>***</sup>	3.928 <sup>***</sup>
Adj. R2	0.375	0.424	0.424	0.213	0.465
No. of observations	200	200	200	150	200

**Notes:** *BS* denotes board size; *BI* denotes board independence; *CEO* denotes CEO role duality; *BM* denotes frequency of board meetings; *BG* denotes board gender diversity; *AS* denotes audit committee size; *FS* denotes firm size; *LEV* denotes leverage; *CFS* denotes cash flow per share and *ROA* denotes return on assets. *P*-values are between brackets. \*\*\*, \*\*, and \* indicate significance at the 1, 5 and 10 levels, respectively.