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Politically connected boards, family and business group affiliations, and cost of capital: Evidence from Indonesia

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ABSTRACT

We investigate the effect of politically connected boards (both supervisory boards [SBs] and boards of directors [BODs]) on cost of debt and equity capital of listed companies in Indonesia which has established a two-tier corporate governance system. The results, based on 250 firms, suggest that companies with politically connected SBs experience lower cost of debt and equity capital, whereas politically connected BODs have no association with cost of either debt or equity. Furthermore, we find that family firms and firms belonging to business groups with politically connected SBs enjoy lower cost of debt and equity capital. Our main results are robust to alternative measures and to tests for endogeneity.

1. Introduction

Government policies have profound effects on corporate performance, and in Indonesia it has become quite common for corporations to develop some forms of connection with top level government bureaucrats and military officers (past and present) to influence policies and extract benefits. Such connections involve, among others, appointing politically connected individuals to serve on corporate boards (Houston, Jiang, Lin, & Ma, 2014). Consequently, the possible effects of corporate political connections on performance and financing costs have attracted much attention from academics, researchers and policy-makers in accounting and finance disciplines (e.g. Bliss & Gul; 2012; Boubakri, Guedhami, Mishra, & Saffar, 2012; Chaney, Faccio, & Parsley, 2011; Faccio, 2006; Fisman, 2001; Fan, Wong, & Zhang, 2007; Goldman, Rocholl, & So, 2009; Houston et al., 2014; Wong & Hooy, 2018). However, such studies are mostly undertaken in the context of a single-tier corporate board system and therefore can't be generalized to countries where a two-tier corporate board system exists to govern and monitor a corporation. There have been some studies on the role of two-tier corporate board systems in China, Germany, Japan[1] and Netherlands (e.g. Firth, Fung, & Rui, 2007; Ran, Fang, Luo, & Chan, 2015; Xiao, Dahya, & Lin, 2004; Schilling, 2001; Tran, 2014; Van Ees, Postma, & Sterken, 2003; among others). However, there is either no or limited information currently available from any countries where a two-tier board system is prescribed on the nature of board composition and its effect on corporate cost of finance.

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[1] Japanese corporations have the option to adopt one-tier or two-tier board systems (Tan, 2011).

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In this study, we redress this lack of knowledge of the role of politically connected corporate boards in relation to cost of financing in Indonesia which has not been considered in any prior research.[2] In particular, we focus on the role of politically connected Supervisory Boards (SB) and Boards of Directors (BOD) in cost of equity and cost of debt financing. The Indonesian two-tier corporate board system is modelled on Dutch and European civil law. *Indonesian Company Law No. 1 (1995)* requires all listed firms to form a Board of Directors (BOD) (also known as a management board) which is entrusted with daily operations, and a Supervisory Board (SB) (also called a Board of Commissioners) to supervise and monitor the BOD.[3] SBs in Indonesia, like in Germany and the Netherlands, have the authority to decide on the development strategies and business plan for the company, investment projects, re-organisation or dissolution of the company, the purchase of shares from other enterprises, and even to negotiate and approve contracts for purchase, sale, borrowing and lending. Commissioners are allowed to own company shares but are not required to by law (International Finance Corporation (IFC), 2014).

The BOD is responsible for the daily operations of the corporation, and the SB has both supervision and monitoring functions. The BOD is responsible for executing decisions made by the SB and reports to it on a regular basis for effective monitoring by the SBs on behalf of the shareholders (IFC, 2014). The Financial Services Authority (FSA) has given SBs the authority to appoint audit committee members to increase the companies' accountability and transparency to their stakeholders by providing more relevant and reliable financial information. In the corporate structure hierarchy in Indonesia, SBs are higher than BODs, and SB members can't sit on the BOD and vice versa, to ensure accountability of the two boards (Hermawan, 2011).

In Indonesia, unlike in Germany and Netherlands, the Company Law (1995) has adopted a shareholder rather than stakeholder orientation of executive and supervisory company boards. As a result of shareholder orientation, employee representatives do not have the right to sit on the SBs in Indonesian companies. Schilling (2001) argues that the involvement of employee representatives in German SBs weaken their monitoring role, because SB members cannot discuss critical and confidential issues in the presence of employee representatives. In the context of China, Dahya, Karbhari and Xiao (2002) argue that Chinese SBs are not entirely independent of BODs and lack legal power and responsibility, because they do not have authority to employ and dismiss directors and executives and are thus less effective than BODs.

Another institutional feature of corporate governance in Indonesia is that corporate board members (both SBs and BODs) are highly connected with politicians, military and senior government officials (Fisman, 2001; Habib, Abdul Haris Muhammadi, & Jiang, 2017; Leuz & Oberholzer-Gee, 2006). Fisman (2001) and Leuz and Oberholzer-Gee (2006), using Indonesia as their sample, examined political connections during the period of Suharto's presidency, finding that 35% of the sample had direct political connections with the president and his family. Chaney et al. (2011), in their international study of earnings quality and political connections, document that 23% of companies have connections with the government in Indonesia. Habib et al. (2017) report that 36% of companies in their sample had political connections.[4]

Prior research also finds that Indonesian corporate ownership is dominated by family and business groups and government ownership (Sato, 1993; Fisman, 2001; Daniel, 2003; Leuz & Oberholzer-Gee, 2006). Claessens, Fan, and Lang (2006) report that 73% firms in Indonesia belong to a business group.[5] The Indonesian setting provides an opportunity to investigate the interplay between the importance of SBs, their high level of political connection, and the dominance of business groups and government ownership in the cost of equity and debt.

The existing evidence on the effect of politically connected boards on cost of debt and equity capital is unclear and conflicting. Bliss and Gul (2012) argue that politically connected firms in the context of Malaysia are more risky than non-politically connected firms, and therefore face higher cost of debt compared to their peers. Boubakri et al. (2012), on the other hand, using an international sample, suggest that politically connected firms are less risky based on investors' perceptions, and find that politically connected firms are associated with lower cost of equity capital (they include only 8 firm year observations from Indonesia). Houston et al. (2014) find that lenders charge lower interest rates to the politically connected S&P 500 firms. Chaney et al. (2011), using cross-country data, find that non-politically connected firms face a significantly higher cost of debt compared with politically connected firms. Thus, the extent and direction of the association between political connection and cost of finance depends on the institutional context of the study.

In this paper, we examine the role of the two-tier board system and investigate how politically connected corporate board members affect the cost of financing in Indonesia. In particular, we focus on whether politically connected SB members have a more significant association with cost of equity and cost of debt than BOD members in Indonesian listed corporations. Furthermore, we assess whether family firms and business groups extract more economic benefits, compared with non-family and stand-alone firms, when they appoint politically connected members on the SBs/BODs, as reflected in lower cost of equity and debt capital.

We hand-collect data for 250 firms (1037 firm-year observations) for publicly listed firms on the Indonesian Stock Exchange (IDX) for the period 2010–2013. We document that firms with politically connected boards extract more benefits than

[2] Habib et al. (2017), Harymawan and Nowland (2016), Hermawan (2011) and Rusmin et al. (2012) have examined, respectively, related party transactions, earnings quality, and informativeness of earnings and firm performance in Indonesia.

[3] The term, board of directors, does not have the same meaning internationally as it does in Indonesia. However, the role of the board of directors in the one-tier system is similar to the role of the board of commissioners in the two-tier system in Indonesia (Hermawan, 2011).

[4] We also find similar levels of politically connected firms (36%) in our sample.

[5] Of the 94 firms in the sample, 37% are listed firms (Claessens et al., 2006).

their non-politically connected counterparts through obtaining lower costs of debt and equity capital. Specifically, our results show that politically connected SBs are negatively related with the costs of debt and equity capital, whereas the association between politically connected BODs and cost of capital is not statistically or economically significant. These results are consistent with prior studies which posit that political connections may reduce cost of finance (Boubakri et al., 2012; Chaney et al., 2011; Houston et al., 2014). We also find that politically connected boards are negatively associated with the cost of debt and equity capital for family firms and firms belonging to business groups.

Overall, the findings lead us to conclude that family firms and firms belonging to business groups extract more economic benefits, in the form of lower cost of debt and equity capital, than do their non-business group counterparts, by appointing politically connected boards, especially politically connected SBs. Our study extends a growing body of literature concerning the relationship between politically connected boards and financing costs (Bliss & Gul, 2012; Boubakri et al., 2012; Chaney et al., 2011; Houston et al., 2014).

The remainder of the paper is structured as follows. In Section 2, we describe the institutional background of the paper. Section 3 reviews the literature and develops the hypotheses; followed by the research design in Section 4. Section 5 presents our empirical results; and Section 6 reports additional tests. In Section 7, we provide concluding comments.

2. Institutional background

2.1. Indonesian two-tier board system

As stated earlier, the two-tier board system corporate governance system in Indonesia is based on the Dutch and European civil law model. The first Indonesian Code of Good Corporate Governance was developed in 1999 by The National Committee on Corporate Governance (NCCG) and has been revised several times with the latest being the 2006 Code (IFC, 2014). The General Meeting of Shareholders (GMS) holds the highest authority in the structure. The BOD is responsible for the daily operations of the corporation and the SB has both supervision and monitoring functions. The executive organ of the company is the BOD. The relevant Act, *Indonesian Company Law No. 1 (1995),* requires companies to have at least one board member; in addition, board members are appointed for a term of up to five years, can be re-elected for a maximum of two periods, and can be dismissed at the GMS. Although there is no specific requirement for who can be a SB/BOD member, the Law states that a board member should have never been declared bankrupt, been a member of a BOD or a SB of a firm that became bankrupt, or been sentenced for crimes that led to financial losses to the government or company. In addition, as a decision-making unit, BODs' primary duties are: 1) undertaking general operations; 2) publishing annual reports; 3) preparing business plans, including specific budget plans; and 4) arranging the GMS and other administrative duties. Although the composition of the BOD depends on company circumstances such as company size, level of development and other characteristics of the company, the IFC (2014) notes that Indonesian corporate BODs mainly include the following executives: the President Director, the Chief Operating Officer/Operations Director, the Chief Financial Officer/Finance Director, Marketing and Sales Director, General Affairs Director, and Human Resources Director, in addition to independent directors.

The SBs play an important role in Indonesian corporate governance mechanisms. SBs affect the performance of firms through management control and strategic supervision. As per the Indonesian Company Law (1995), the SBs are responsible for supervising management's policies and their implementation, and for advising the BODs. Their responsibilities also include examining, reviewing and signing financial reports (financial statements and annual reports) prepared by the BOD, and any other duties granted by the company's Articles of Association (AoA). In circumstances where it is deemed necessary in the interest of the company, the SB may impose sanctions on members of the BOD in the form of a suspension, subject to further determination by the GMS.

For public companies or businesses related to public fund management and/or collection, SBs must consist of at least two members elected by the GMS for a term of up to five years, and members can be re-elected for a maximum of two terms. To be a member of the SB, a candidate must meet criteria which are similar to those applicable for BOD members mentioned earlier.

When a company becomes large and complex, the Indonesian Company Law (1995) suggests that the SB establish committees that might help it to be more effective. Specifically, the presence of committees allows an SB to be more efficient in dealing with complex problems, providing more specific analyses and recommendations to the BOD, and increasing the objectivity and expertise of the SB's judgements.

2.2. The nature of politics and business in Indonesia

Indonesia presents an interesting case for examining the relationship between business and politics because of two political factors that could affect business in Indonesia. Firstly, following the fall of the Suharto regime in 1998, subsequent governments brought fundamental changes in the power base in the Indonesian political arena, from the concentration of power to the decentralisation of power.[6] The second factor is domination of the political arena by the military. Indonesia has been a military-based government since President Soekarno became the first president of the country after independence in

[6] Indonesian presidents have been: Suharto (February 1966–May 1998), BJ Habibie (May 1998–October 1999), Abdurrahman Wahid (October 1999–July 2001), Megawati Soekarnoputri (July 2001–October 2004) and Susilo Bambang Yudhoyono (October 2004–October 2014).

1945. The domination of the army then increased significantly during his period of presidency and it was possible for active military officers to hold political positions.

Together, these two political factors provide more opportunities for many companies, especially larger companies, to approach politicians and lobby them for favourable business policies. During the Suharto period, when the political system was centralised and dominated by the military, most large companies belonging to business groups had direct connections with the president.[7] In the 1990s, Suharto's immediate family, and especially his children, aggressively capitalised on their family name. By 1996, Suharto had become the de facto owner of corporate structures coordinated through a tightly centralised franchise network for distributing rents. During that period, most strategic industries (e.g. trading, manufacturing, estate, transportation, and banking) were controlled by Suharto's family and large business groups with connections to him.

Another form of connection to the government is through military officers. Indonesian companies establish connections with military officers in an apparent effort to deal with government bureaucracy and capital providers, because army leaders have power in the Indonesian political system. In addition to the benefit of access to political power, the domination of the military has appeared to create opportunities for army leaders to be involved in business and to derive benefit from their power and connections with businessmen. For example, Ibnu Sutowo was a military general who became head of the largest state-owned enterprise in the country.[8] Robison (2009) notes that, by virtue of being a senior military leader, Mr. Sutowo acquired significant stakes in many business entities including shipping, travel, property, manufacturing and trading. Thus, many companies have a strong interest in approaching the government through military officers, and military officers have a similar interest in connecting with business entities. Following the Asian Financial Crisis which severely affected Indonesia (Iriana & Sjöholm, 2002) and the fall of Suharto regime, the power system was decentralised and the role of the military was reduced as a result of public pressure on the government to establish a democratic system, to allow many parties to be involved in elections, to ensure the freedom of the press, and to implement a good corporate governance system (Habib et al., 2017). These changes in the political setting have affected the relationship between business and politics in the country. Hamilton-Hart (2007) observes that business groups in the reform period have maintained some influence on government policy decisions through the Kadin (Indonesian Chamber of Commerce and Industry) compared to in the New Order period (1966–98). Hamilton-Hart (2007) suggests that transactional patterns between business and government have persisted beyond the Suharto New Order era, and that companies seek all possible opportunities to gain access to bureaucrats and undertake rent-seeking activities for their own benefits.

3. Literature review and hypotheses development

Political connections are external dimensions of corporate governance mechanisms that affect the behaviour of an organisation. These governance mechanisms can influence organisational behaviour in many ways, such as in how an organisation determines profit, how it raises capital, who has the controlling ownership, and how financial statements are prepared (Roe, 2003). Through the lens of the agency theory, there are two competing arguments on the consequences of political connections. One argument is that political connections might result in poor corporate governance and increase the agency costs due to rent-seeking behaviour (Chen, Li, Luo, & Zhang, 2017; Fisman, 2001). Furthermore, connected companies may obtain political benefits to expropriate firm resources at the expense of other parties (Qian, Pan, & Yeung, 2011). A contrasting view is that politically connected firms can extract benefits for themselves, making their shareholders better off (Chaney et al., 2011; Chen et al., 2017). For instance, Bunkanwanicha and Wiwattanakantang (2009) show that large businesses in Thailand derive benefits from their political connections by having higher market valuations than non-connected firms. However, such benefits depend on government effectiveness and political stability (Harymawan & Nowland, 2016). They find that the earnings quality of politically connected firms in Indonesia increases as government effectiveness improves but decreases as the political environment becomes more stable.

Two complementary theories to agency theory are Resource Dependency Theory (RDT) and Social Capital Theory (SCT) which are important in our context to understand the consequences of politically connected boards. Under RDT, an organization experiencing environmental uncertainty and other constraints can act to reduce environmental constraints and obtain and maintain needed external resources by connecting with resourceful people on the decision-making bodies (Hillman, Withers, & Collins, 2009; Ulrich & Barney, 1984). Pfeffer and Salancik (1978) also document that organisations appoint political board members who have the ability to manage this environmental dependency.

Similarly, the SCT (internal and external social capital) focuses on an individual's capacity to obtain resources through their connections (Lin, Cook, & Burt, 2001). In the corporate board context, Kor and Sundaramurthy (2009) suggest that both internal and external social capital are reflected in a board's personal connections with other members within the organisation (internal social capital) and external individuals/organisations (external social capital), and in the board's social standing (this includes both internal and external social capital, such as reputation, status and prestige).

[7] The Salim group is one of the biggest conglomerates in Indonesia. The group was established in October 1972 by Sudono Salim and owns many major oil palm plantations, properties and leisure facilities, such as PT Indofood Sukses Makmur and PT Bogasari.

[8] He was appointed as an army officer in 1945 and became head of Pertamina (the Indonesian oil and gas producer) in 1967.

3.1. Politically connected boards, cost of equity and cost of debt capital under the two-tier board system

The link between politically connected boards and firm value has been extensively examined in the corporate governance literature (e.g., Faccio, 2006). Chaney et al. (2011) suggests that, through the corporate governance mechanism, political connections can create value to politically dependent firms through systematic value exchanges between companies and politicians. Empirical studies provide evidence that firms with politically connected boards experience more benefits than non-politically dependent firms. Faccio (2006), for instance, examines the relationship between firms with politically connected top directors and firm value in 47 countries. She concludes that having politically connected top directors is positively associated with firm value. Goldman, Rochol, and So (2009) argue that political connections of the BOD may create benefits to connected firms by providing information on how to deal with government bureaucracies. Based on a US sample from 1990 to 1998, they find a positive abnormal stock return when firms announce the nomination of a politically connected BOD member. Goldman, Rocholl, and So (2013) further investigate the effect of politically connected directors on government procurement contracts. They find that firms with politically connected directors are more likely to see an increase in the value of their government procurement contracts. Houston et al. (2014) explored two possible channels to explain why banks may take political connections into account when structuring and pricing loans: the *Borrower Channel* and *Bank Channel*. The *Borrower Channel* suggests that bankers recognise that political connections influence a borrower's profitability and/or risk and factor these effects when setting loan terms as part of their overall credit risk analysis. The *Bank Channel* instead suggests that banks are more inclined to grant favourable terms to firms with political connections, because bankers are themselves seeking to obtain favour with politically connected individuals. Houston et al. (2014) suggest that the *Bank Channel* is more relevant in countries such as Indonesia that have weak regulations and where political leaders exert their power to persuade lenders to provide capital to connected firms on favourable terms and conditions. Consistent with the *Bank Channel*, empirical evidence suggests that political connections are particularly valuable when bank lending is subject to direct government intervention, which occurs in many developing countries (Dinç, 2005). Similarly, Khwaja and Mian (2005) find that politically connected firms in Pakistan receive substantial preferential treatment from government banks in the form of softer terms and larger size of loans, and that firms with "stronger" politicians on their boards[9] obtain even greater preferential access to credit from government banks.

Politically connected boards could also enjoy benefits in equity financing. Although the issue has received increasing attention from a large number of parties, including managers, regulators and researchers, very limited empirical evidence is currently available on how political connections affect the cost of equity other than a study by Boubakri et al. (2012). They document a negative association between political connections and cost of equity capital based on cross-country data from 1997 to 2001. This indicates that firms with political connections are positively perceived by investors. Boubakri et al. (2012) also find that the effect of political connections is stronger in countries where less transparency, larger and older companies, and limited stock market development, are prevalent. By contrast, it has been argued that politically connected firms may be associated with weak corporate governance mechanisms and high agency costs which can reduce firm value through rent-seeking behaviour (e.g., Chaney, et al., 2011; Fisman, 2001; Leuz & Oberholzer-Gee, 2006). However, the evidence on cost of capital and corporate board members (SBs and BODs) with political connections is lacking in countries that have a dual board system.

Brown, Anderson, Salas, and Ward (2017) provide a mapping of how the individual value (such as connections) of board members improves their strategic role from the perspective of social capital theory. In terms of monitoring of BODs in Indonesia, SB members' external connections (such as political connections) help organisations to access external resources. When SB members begin to comprehend the organisation's need, they can identify which resources would contribute to the potential growth of the organisation and use their external connections to facilitate growth (Westphal & Zajac, 1995). With respect to their monitoring function, SB members with external connections bring relevant and high-quality information to an organisation, which allows other board members to learn from best practice in other organisations and to have comparable information on how to monitor the performance of management (Kor & Sundaramurthy, 2009). In addition, when SB members become more familiar with other board members and key management, this internal connection will help them to identify and filter information biases disclosed by management. Finally, internal SB member connections also accommodate shared networking experiences, promoting better cost-effective monitoring based on normative pressures (Sauerwald, Lin, & Peng, 2016).

There have been few studies on the association between political connections and cost of debt capital, which provide conflicting results. Bliss and Gul (2012) find that politically connected firms in Malaysia experience a higher cost of debt capital. Their study is motivated by Johnson and Mitton (2003), suggesting that politically connected firms are not efficient and the market perceived that government could not effectively support connected firms during the Asian Financial Crisis in 1997. Bliss and Gul (2012) show that politically connected firms with CEO duality are perceived to be riskier, but that the presence of independent directors in these firms decreases that perceived risk. Earlier, Gul (2006) documents that politically connected firms in Malaysia were riskier than non-politically connected firms during the Asian Financial crisis period; and that consequently, audit fees for politically connected firms were higher. By contrast, Tee (2018) shows that political connections are associated with a lower cost of debt in Malaysia, but finds that CEO duality increases and audit committee independence decreases the cost of debt.

[9] Measured by votes obtained, and electoral success of the politician or political party.

Chaney et al. (2011) examine the association between political connections and quality of accounting information for firms using cross-county data. Furthermore, they test whether politically connected firms that report a higher/lower quality of accounting information experience a lower/higher cost of debt capital. After controlling for firm and country characteristics, Chaney, et al. (2011) find that politically connected firms report a lower earnings quality but still experience a lower cost of debt. It thus appears that connected firms receive protection from politicians, so that politically connected firms with low earnings quality are not penalised by creditors. In addition, Claessens, Feijen, and Laeven (2008) examine whether politically connected firms increase their bank financing. To investigate this association, they use campaign contributions in Brazil from 1998 to 2002 as a political connection measure. They find that the association between political connection and bank leverage is positive and significant. Shidiq (2016) shows evidence of credit-market imperfections in Indonesia as measured by sensitiveness of a firm's investment spending to its cash flow. These imperfections are stronger for firm cash flows that are not politically connected to former president Suharto. The removal of Suharto from power in 1998 did not substantially reduce the value of a Suharto connection. This result also underscores the importance of political connections in providing firms with preferential access to the external financing commonly found in emerging economies. Al-Hadi, Habib, Al Yahyaee, and Eulaiwi (2017) examine whether political connections with royal families influence the association between joint audit[10] and cost of debt capital for firms in the Gulf Cooperation Council (GCC) countries. They find that the negative association between joint audit and cost of debt capital is stronger when firms have political connections with royal families. This suggests that royal family-connected firms face lower cost of debt when they are joint audited.

Houston et al. (2014) find that firms with politically connected boards experience smaller loan spread than non-politically connected firms in the US. This finding suggests that borrowers use their political connections to increase their creditworthiness. Furthermore, they find that banks include fewer restrictions in credit agreements with firms that have politically connected boards. Thus, the evidence shows that, for US firms, there is a negative association between politically connected boards and cost of debt.

As stated earlier, under the two-tier board system in Indonesia, the BOD is responsible for daily operations, and the SB has authority to monitor and supervise the BOD, makes long-term strategic planning, determines remuneration packages of directors, and negotiates with creditors. There is credence to the notion that most elder entrepreneurs and senior retired government officials frequently act as commissioners and impart their wealth of experience and connections in a supervisory role in what can be seen as a "second career" (Centre for Governance, Institutions and Organisations (CGIO), 2012). We have found that most SB members in our sample are retired senior military officers, former ministers or former senior executives with industry specialisation, whereas BOD members do not hold such high levels of political connection. For example, two SB members of Sawit Sumbermas Sarana Tbk (SSMS) are a former Minister of Agriculture and former Minister of Forestry and Ministry of Tourism, Art and Culture. In two other companies (KMI Wire and Cable Tbk), three SB members are a retired Head of Armed Forces, retired Coordinator of Expert Staff of the Commander in Chief of the Armed Forces, and Former Vice Chairman of the Regional Police Department of Central Java.[11] We also find the appointment of industry-specialized politically connected people on the SBs. For example, a former health minister (Farid Anfasa Moeloek) sits on the SB of PT Kalbe Farma Tbk. (KLBF), a pharmaceutical listed company. These data are consistent with Hamilton-Hart (2007), who argues that such high profile people still enjoy high social status and that these types of political connection are more stable than other types of political connection in Indonesia.

On the other hand, politically connected BOD members can also attract creditor and investors through efficient operations, and thus contribute to a lower cost of financing. However, given the higher levels of social status and networking of politically connected SBs in Indonesia compared with politically connected board members, we expect that the effect of SB's political connections will dominate over BODs' political connections in the Indonesian context. Based on the above discussion, we propose the following two hypotheses:

H1. Politically connected boards are associated with a lower cost of equity and debt.

H2. Politically connected SBs are associated with a greater reduction in cost of equity and debt than politically connected BODs.

3.2. Politically connected boards, cost of capital, business group affiliation, and family firms

A business group is a unique feature of concentrated ownership in emerging markets such as Indonesia. Fan, Wei, and Xu (2011) argue that family-owned firms in emerging markets are highly concentrated even when they are publicly listed. Claessens et al. (2006) investigate the costs and benefits of group affiliation using East Asian countries, and report that more than 70% of firms in Indonesia are controlled by business groups.

Since 1990, business groups have made major contributions to Indonesia's economy (Sato, 2003).[12] He reports that the top 200 business groups firms have contributed about 25% of the Indonesian national economy, which is twice the contribution of SOEs in 1993. As stated earlier, firms belonging to business groups maintain political connections, and they use such connections as a vehicle to extract resources and to reduce uncertainties in conducting their business.[13]

[10] Firms are identified as being JA firms if they are identified as such by annual reports and/or audit reports signed by two auditors.
[11] Obtained from the Indonesian Stock Exchange Website in 2018.
[12] Several of the largest private business groups are Salim, Astra, Sinar Mas, Lippo, and Gudang Garam (Sato, 2003).
[13] Family firm and business group affiliations, such as Salim Group, get access to financial resources easily and pay lower interest rates compared to non-affiliation firms (Sato, 2003).

Prior studies provide evidence on the influence of family firm and business group affiliations on performance and cost of financing, mostly in the context of a unitary board system. For example, Khanna and Palepu (2000) find that the performance of firms affiliated with a diversified business group exceeds that of unaffiliated firms in India. Similar findings have been reported by Perotti and Gelfer (2001) in the context of Russia. Hoque, Ahmed and van Zijl (2017) examine the effect of audit quality on earnings management and cost of equity capital using 7303 company-year observations of listed companies in India. Their results show that companies belonging to business groups (mostly family-owned) have a lower degree of earnings management and lower cost of equity capital than do stand-alone companies. Muttakin, Monem, Khan, and Subramaniam (2015) investigate the effect of political connections on performance of family firms in Bangladesh for the period 2005–09. After controlling for several variables, they find that family firms are associated with better firm performance than non-family firms. Furthermore, they show a positive association between political connections and firm performance for family firms, whereas they find a negative association between non-family firm performance and political connections. Overall, empirical results show that family firms extract more benefits out of political connections compared with stand-alone firms. We thus propose the following two hypotheses for empirical testing:

H3. Politically connected firms belonging to business groups are associated with a lower cost of equity and debt than unaffiliated (stand-alone) firms.

H4. Politically connected firms with family control are associated with a lower cost of equity and debt than non-family firms.

4. Research design

4.1. Sample selection

The initial sample consists of all publicly listed companies on the Indonesian Stock Exchange (IDX) during the period 2010–2013.[14] The time frame of the paper coincides with the second term of Susilo Bambang Yudhoyono (SBY). The first period of SBY was 2004–2009 and the second was 2009–2014.[15] The main reason for choosing 2010–2013 as the time frame is that political connections with the SBY government at that time are expected to have been well established, and updated information regarding corporate political connections could be obtained from government documents and notes to accounts submitted by listed companies. Furthermore, compared to previous regimes, economic and political developments during the terms of SBY were more stable. Kimura (2011) notes that political and economic developments in Indonesia throughout 2010 show impressive improvement and stability. Moreover, the second period of SBY is chosen to avoid the effects of the Global Financial Crisis (GFC) in 2008. The GFC had an important effect and implications for the cost of financing, because it altered the capital market awareness and risk perception that determine a significant increase in the equity premium (Graham & Harvey, 2009; Persakis & Iatridis, 2015). We also exclude the financial industry as it is fundamentally different from other industries with regard to regulations and the nature of its financial operations (Pittman & Fortin, 2004).

After screening the required industries and eliminating those firms with incomplete data from the sample, the final sample is reduced to 1037 firm-year observations for cost of equity analysis and 945 firm-year observations for cost of debt analysis (Table 1, Panel A). Panel B of Table 1 shows the distribution of politically connected boards by industry: there are 36.26% (36.51%) politically connected firms in cost of equity and cost of debt analyses, respectively. The total sample of cost of equity analysis is diversified across industries, with 8.78% of firms being from the energy sector, 19.00% from the materials sector, 18.71% from the industrial sector, 13.89% from the consumer discretionary sector, 16.88% from the consumer staples sector, 3.76% from the health care and real estate sectors, 13.98% from the information technology sector, and 1.25% from the telecommunication services sector. For cost of debt analysis, the most politically connected industry is the discretionary consumer staples sector with 6.77%, followed by the information technology sector with 6.24%, the industrial sector with 6.14%, the energy sector with 5.71%, the consumer sector with 5.50%, the materials sector with 3.17%, the real estate sector with 1.69% and, finally, the health care sector with 1.27%.[16]

In Panel C of Table 1, the number of firms with politically connected board members varies by year in cost of equity analyses, with 84 firms (37.66%) in 2010 and 101 (33.78%) in 2013. For cost of debt, the percentage of firms with politically connected boards are 37.18%, 39.20%, 35.31% and 34.83% for the years 2010, 2011, 2012 and 2013, respectively. Finally, Table 1, Panel D shows that firms belonging to business groups are more likely to appoint politically connected board members than stand-alone firms in both analyses (80.59% in cost of equity and 85.51% in cost of debt). Similarly, the number of family firms with political connections is also significant (85.37% in cost of equity and 88.99% in cost of debt).

[14] For calculating cost of debt, we collected data from one year ahead, which means we extracted relevant data from company annual reports up to 2014.

[15] The current president, Joko Widodo, won the general election on 9 July 2014. He is from a different party (the Indonesian Democratic Party of Struggle-PDIP) than the previous president, SBY (Democratic Party).

[16] Some industries that are included in the consumer staples industry group are food & staples retailing, beverage & tobacco, and household & personal products.

Table 1
Description of the sample.

Panel A: The sample selection (COE: Cost of equity analysis/COD: Cost of debt analysis)					
Calendar year	2010	2011	2012	2013	Total
Number of observations in IDX	424	449	467	494	1834
Number of observations from financial industry	−119	−123	−124	−134	−500
Number of observations with missing data	−82 (-106)	−82 (-99)	−72 (-91)	−61 (-93)	−297 (-389)
Number of observations in the sample	223 (199)	244(227)	271 (252)	299 (267)	1037 (945)

Panel B: Distribution of firms with politically connected boards by industry (COE/COD)							
Two-digit	Industry description	Politically connected firms		Non-politically connected firms		Total sample	
GICS code		N	%	N	%	N	%
10	Energy	65 (54)	6.27 (5.71)	26 (18)	2.51 (1.90)	91 (72)	8.78 (7.62)
15	Materials	37 (30)	3.57 (3.17)	160 (143)	15.43 (15.13)	197 (173)	19.00 (18.31)
20	Industrials	59 (58)	5.69 (6.14)	135 (134)	13.02 (14.18)	194 (192)	18.71 (20.32)
25	Consumer Discretionary	47 (52)	4.53 (5.50)	97 (87)	9.35 (9.21)	144 (139)	13.89 (14.71)
30	Consumer Staples	72 (64)	6.94 (6.77)	103 (96)	9.93 (10.16)	175 (160)	16.88 (16.93)
35	Health Care	16 (12)	1.54 (1.27)	23 (17)	2.22 (1.80)	39 (29)	3.76 (3.07)
40	Real Estate	16 (16)	1.54 (1.69)	23 (22)	2.22 (2.33)	39 (38)	3.76 (4.02)
45	Information Tech.	64 (59)	6.17 (6.24)	81 (74)	7.81 (7.83)	145 (133)	13.98 (14.07)
50	Telecom. Services	0 (0)	0.00 (0.00)	13 (9)	1.25 (0.95)	13 (9)	1.25 (0.95)
		376 (345)	36.26 (36.51)	661 (600)	63.74 (63.49)	1037 (945)	100 (100)

Panel C: Distribution of firms with politically connected boards by year (COE/COD)					
Calendar year	2010	2011	2012	2013	Total
Firms with political boards	84 (74)	97 (89)	94 (89)	101 (93)	376 (345)
Number of firms	223 (199)	244 (227)	271 (252)	299 (267)	1037 (945)
Percentage of firms with political boards	37.66 (37.18)	39.75 (39.20)	34.68 (35.31)	33.78 (34.83)	36.26 (36.51)

Panel D: Distribution of firm-years by ownership type and firms with politically connected boards (COE/COD)						
	Politically connected firms		Non-politically connected firms		Total	
	N	%	N	%	N	%
Affiliated firms	303 (295)	80.59 (85.51)	334 (297)	50.53 (49.50)	637 (592)	61.43 (62.65)
Stand-alone firms	73 (50)	19.41 (14.49)	327 (303)	49.47 (50.50)	400 (353)	38.57 (37.35)
Total firm-years	376 (345)	100 (100)	661 (600)	100 (100)	1037 (945)	100 (100)
Family firms	321(307)	85.37(88.99)	433(396)	60.05(66)	754(703)	72.71(74.39)
Non-family firms	55(38)	14.63(11.01)	288(204)	39.95(34)	283(945)	27.29(25.61)
Total firm-years	376 (345)	100 (100)	721 (600)	100 (100)	1037 (945)	100 (100)

4.2. Measurement of the variables and data sources

4.2.1. Dependent variables

We adopt an expected returns model based on the CAPM to measure cost of equity capital as the main analysis. The CAPM has been used to resolve imprecision in the estimation of the realised return model. Fama and French (1997) argue that there are potential problems with the realised return model that will cause imprecision in cost of equity estimation, and thus suggest the CAPM approach to reduce the potential for this problem. Cost of equity is calculated by the following formula: $E(R_t) = R_f + \beta_i\{E(R_M) - R_f\}$, where $E(R)_t$ indicates the estimated expected return, which is the cost of equity estimate, R_f indicates risk-free risk, and $E(R_M) - R_f$ indicates risk premium. Consistent with Francis, LaFond, Olsson, and Schipper (2004) and Tran (2014), the realised cost of debt is measured as the ratio of a firm's interest expense in year t+1 to its average total liabilities during year t and t+1.

Financial information and market data are extracted from multiple databases, including DataStream databases, the Indonesian government website (http://www.bi.go.id), and Damodaran's website (http://pages.stern.nyu.edu/~adamodar/). Specifically, we use the Indonesian government website to extract risk-free rate information. The DataStream database provides monthly stock price information, beta value and other market data. Equity risk premium data are obtained from Damodaran's website (Damodaran, 2016).

4.2.2. Experimental variables

To measure political connections, we calculate the percentage of SB/BOD members that serve as a current or former minister, member of parliament, other appointed bureaucrat in local or central government, or member of the military (Boubakri, Cosset, & Saffar, 2008; Dinç, 2005; Ding, Jia, Wu, & Zhang, 2014; Fan et al., 2007). We hand-collected politically

connected board data by reviewing the profile sections of each company's annual report and website. When information on a politically connected board member's background is not available in the profile section, we check the board's name on a government website such as http://www.indonesia.go.id. Finally, we checked the background of board members by using company websites and the Google search engine. The data collection for politically connected board members' backgrounds cover both politically connected SB and politically connected BOD members.

In addition, the affiliated firm is an indicator variable that is set to 1 if the firm belongs to a business group as the largest shareholder in the firm, and 0 otherwise (Claessens et al., 2006). The family firm is an indicator variable that is set to 1 if the controlling family is the largest shareholder in the firm, and 0 otherwise (Claessens et al., 2006). We obtain family firm and business group information from company annual reports (ownership structure and the board's family member disclosures) and checked this via the company website and a Google search.

4.2.3. Control variables

Following prior studies (Beedles, Dodd, & Officer, 1988; Bliss & Gul, 2012; Boubakri et al., 2012; Dhaliwal, Heitzman, & Li, 2006; Fama & French, 1992; Hail & Leuz, 2006; Tran, 2014), we employ the following determinants of the cost of debt and equity capital as additional explanatory variables: firm size (FSIZE), leverage (LEV), volatility (VOL), book-to-market value of equity (BTMV), firm age (FAGE), interest coverage (INTCOV), and firms with loss reported (LOSS). Information is available from the Thomson and DataStream databases.

Claessens, Djankov, Fan, and Lang (2003) argue that firms with larger size are expected to have better disclosure, more diversified activities and more liquid trading; and consequently, these companies have lower risk of financial distress than smaller firms. On the other hand, firms with smaller size may be able to show more growth opportunities and provide higher firm value than larger firms. Beedles et al. (1988) show that smaller firms consistently have better performance than larger firms; and that larger firms show fewer growth opportunities (Morck, Shleifer, & Vishny, 1988) and more coordination problems (Williamson, 1967). Thereby, the coefficient on FSIZE could be either positive or negative. Diamond (1989) indicates that firms improve their performance and creditworthiness over time, which reduces the risk perceptions of creditors and investors, thus we expect a negative sign for the coefficient on FAGE.

Firms with higher value of LEV, VOL, BTMV and LOSS are associated with higher risk to investors and thus cause higher cost of equity capital (Boubakri et al., 2012). Consequently, we expect that cost of equity capital is positively associated with LEV, VOL, BTMV and LOSS. Similarly, the association between cost of debt and LEV is expected to be positive. Francis et al. (2004) demonstrate that a higher value of INTCOV is associated with smaller default risk and a lower cost of debt. Following this study, we expect a negative sign in the relation between cost of debt and interest coverage.

In addition, we also control for other internal corporate governance mechanisms, including the percentage of SB (SB_PCT), the age of SB member (SB_AGE), SB with financial and accounting background (SB_F), audit committee size (AC_SIZE), concentrated ownership (BH), and government ownership (SOE). Based on prior studies (e.g., Anderson, Mansi, & Reeb, 2004; Ashbaugh-Skaife, Collins, & LaFond, 2006), the coefficient on internal corporate governance variables could be negative (positive). We obtain corporate governance information from company annual reports, company/government websites, and the Google search engine.

4.3. Regression model

We initially estimate the following models to examine the effect of firms with politically connected boards, particularly politically connected SBs, on cost of equity and cost of debt in Hypotheses 1 and 2:

$$COE_{it} = \alpha_1 PC_{TOTit} + \alpha_2 SB_{PCTit} + \alpha_3 SB_{AGEit} + \alpha_4 SB_{Fit} + \alpha_5 AC_{SIZEit} + \alpha_6 \mathrm{BH}_{it} + \alpha_7 SOE_{it} + \alpha_8 LEV_{it} + \alpha_9 FSIZE_{it} + \alpha_{10} LOSS_{it} + \alpha_{11} FAGE_{it} + \alpha_{12} VOL_{it} + \alpha_{13} BTMV_{it} + \alpha_{14} INDUSTRY_{it} + \alpha_{15} YEAR_{it} + \varepsilon_{it} \quad (1)$$

$$COD_{it} = \alpha_1 PC_{TOTit} + \alpha_2 SB_{PCTit} + \alpha_3 SB_{AGEit} + \alpha_4 SB_{Fit} + \alpha_5 AC_{SIZEit} + \alpha_6 BH_{it} + \alpha_7 SOE_{it} + \alpha_8 LEV_{it} + \alpha_9 FSIZE_{it} + \alpha_{10} INTCOV + \alpha_{11} FAGE_{it} + \alpha_{12} INDUSTRY_{it} + \alpha_{13} YEAR_{it} + \varepsilon_{it} \quad (1)$$

$$COE_{it} = \alpha_1 PC_{SBit} + \alpha_2 PC_{BODit} + \alpha_3 SB_{PCTit} + \alpha_4 SB_{AGEit} + \alpha_5 SB_{Fit} + \alpha_6 \mathrm{AC}_{SIZEit} + \alpha_7 \mathrm{BH}_{it} + \alpha_8 SOE_{it} + \alpha_9 LEV_{it} + \alpha_{10} FSIZE_{it} + \alpha_{11} LOSS_{it} + \alpha_{12} FAGE_{it} + \alpha_{13} VOL_{it} + \alpha_{14} \mathrm{BTMV}_{\mathrm{it}} + \alpha_{15} INDUSTRY_{it} + \alpha_{16} YEAR_{it} + \varepsilon_{it} \quad (2)$$

$$COD_{it} = \alpha_1 PC_{SBit} + \alpha_2 PC_{BODit} + \alpha_3 SB_{PCTit} + \alpha_4 SB_{AGEit} + \alpha_5 SB_{Fit} + \alpha_6 AC_{SIZEit} + \alpha_7 BH_{it} + \alpha_8 SOE_{it} + \alpha_9 LEV_{it} + \alpha_{10} FSIZE_{it} + \alpha_{11} INTCOV_{it} + \alpha_{12} FAGE_{it} + \alpha_{13} INDUSTRY_{it} + \alpha_{14} YEAR_{it} + \varepsilon_{it} \quad (2)$$

Table 2
Definition of variables.

Variable	Definition
COE_{it}	the cost of equity capital measured by the CAPM for firm i in year t (Fama & French, 1997; Fu et al., 2012)
COD_{it}	the ratio of interest expense for firm i in year t+1 to average total liabilities for firm i in years t and t+1 (Francis et al., 2004; Tran, 2014)
$PC_{TOT\,it}$	the percentage of politically connected board members for firm i in year t (Boubakri et al., 2008; Dinç, 2005; Ding et al., 2014; Fan et al., 2007)
$PC_{SB\,it}$	the percentage of politically connected SB members for firm i in year t (Boubakri et al., 2008; Dinç, 2005; Ding et al., 2014; Fan et al., 2007)
$PC_{BOD\,it}$	the percentage of politically connected BOD members for firm i in year t (Boubakri et al., 2008; Dinç, 2005; Ding et al., 2014; Fan et al., 2007)
Control variables—corporate governance mechanisms	
$SB_{PCT\,it}$	the percentage of SB members for firm to total board members and supervisory board members i in year t (Bradbury, Mak, & Tan, 2006)
$SB_{AGE\,it}$	the average age of SB members for firm i in year t (Ran, Fang, Luo, & Chan, 2015)
$SB_{F\,it}$	the proportion of SB members with a financial and accounting background for firm i in year t (Xie, Davidson, & DaDalt, 2003)
$AC_{SIZE\,it}$	the number of audit committee members for firm i in year t (Davidson, Goodwin-Stewart, & Kent, 2005; Krishnan, 2005; Vafeas, 2005; Xie et al., 2003)
BH_{it}	the percentage of large shareholders who own at least 10% of outstanding shares for firm i in year t (Claessens, Djankov, & Lang, 2000; Heflin & Shaw, 2000; Thomsen & Pedersen, 2000)
SOE_{it}	indicator variable set to 1 if the shareholder is a central or local government for firm i in year t and 0 otherwise (Dewenter & Malatesta, 2001; Eng & Mak, 2003)
BG_{it}	indicator variable set to 1 if the firm belongs to business groups is the largest shareholder in firm i in year t and 0 otherwise (Claessens et al., 2006)
FAM_{it}	indicator variable set to 1 if the controlling family is the largest shareholder in firm i in year t and 0 otherwise (Claessens et al., 2006)
Control variables—firm characteristics	
LEV_{it}	the natural log of the ratio of total long-term debt divided by the total assets at the end of the year for firm i in year t (Dhaliwal et al., 2006)
$FSIZE_{it}$	the natural log of sales of the company at the end of the year for firm i in year t (Beedles et al., 1988; Fama & French, 1992; Hail & Leuz, 2006)
$LOSS_{it}$	indicator variable, 1 if loss reported for firm i in year t, and 0 otherwise (Bliss & Gul, 2012)
$FAGE_{it}$	the number of years since established of firm i in year t (Bliss & Gul, 2012; Boubakri et al., 2012)
VOL_{it}	the natural log of the standard deviation of monthly stock returns over the previous 12 months for firm i in year t (Boubakri et al., 2012; Hail & Leuz, 2006)
$BTMV_{it}$	the ratio of book value of equity to market value of equity for firm i in year t (Fama & French, 1992; Hail & Leuz, 2006)
$INTCOV_{it}$	the ratio of operating income to interest expense firm i in year t (Francis et al., 2004; Tran, 2014)
Control variables—fixed effects	
$INDUSTRY_{it}$	a vector of industry indicator variables classified based on two-digit GICS
$YEAR_{it}$	a vector of year indicator variables: 2010; 2011; 2012; 2013

Next, we conduct a stratified analysis to investigate whether firms belonging to business groups with politically connected SBs/BODs experience lower cost of financing than stand-alone firms.[17] In addition, this examines whether family firms are associated with lower cost of capital than non-family firms. We expect more significantly negative coefficients on the PC_TOT and PC_SB variables in the sample of firms belonging to business groups and in the sample of family firms, than for stand-alone firms and non-family firms. A detailed definition of variables and references are outlined in Table 2.

5. Empirical results

5.1. Descriptive statistics

Table 3 presents descriptive statistics of the variables based on the full sample of 1037 firm-years in the cost of equity analysis and 945 firm-years in the cost of debt analysis. Except for the dummy variables, continuous variables are winsorised at the 1st and 99th percentiles. Among the key variables, COE (COD) has a mean value of 0.134 (0.037) with a maximum value of 0.350 (0.121) and a minimum value of 0.020 (0.000). Consistent with other studies, the magnitude of the cost of equity and cost of debt estimates in the sample are considered reasonable.[18] The mean of PC_TOT, PC_SB and PC_BOD for cost of equity (cost of debt) samples suggests that the proportions of politically connected boards/SBs/BODs in the observations are 5.8% (5.9%), 11.8% (12.1%), and 0.4% (0.4%), respectively. These summary statistics indicate that the proportion of politically connected SBs is higher than that of politically connected BODs. Within the PC firm sub-sample, the proportion of PC SBs is 26.5%

[17] A stratified analysis refers to the process of dividing the sample into two subgroups: family firms (business group) and non-family firms (non-business group).

[18] For instance, the mean of the implied cost of equity estimates is 11.93% in Boubakri et al. (2012) and 12.46% in Hail and Leuz (2006). Specifically, and consistent with Fu, Kraft, and Zhang (2012), they use the CAPM to estimate cost of equity and find that the average of the cost of equity is 8.66% for the full sample and 9.92% for the matched control sample.

Table 3
Summary statistics of main variables.

Variable	N	Mean	St. Dev	Min	Max	Variable	N	Mean	St. Dev	Min	Max
COE	1037	0.134	0.063	0.020	0.350	COD	945	0.037	0.026	0.000	0.121
PC_SB	1037	0.118	0.186	0.000	1.000	PC_SB	945	0.121	0.192	0.000	1.000
PC_SB_DUM	1037	0.358	0.479	0.000	1.000	PC_SB_DUM	945	0.360	0.480	0.000	1.000
PC_BOD	1037	0.004	0.032	0.000	0.330	PC_BOD	945	0.004	0.031	0.000	0.330
PC_BOD_DUM	1037	0.024	0.153	0.000	1.000	PC_BOD_DUM	945	0.023	0.150	0.000	1.000
PC_TOT	1037	0.058	0.092	0.000	0.540	PC_TOT	945	0.059	0.093	0.000	0.540
PC_TOT_DUM	1037	0.362	0.480	0.000	1.000	PC_TOT_DUM	945	0.365	0.481	0.000	1.000
SB_PCT	1037	0.469	0.091	0.222	0.814	SB_PCT	945	0.469	0.093	0.250	0.814
SB_AGE	1037	57.472	6.595	25.750	78.000	SB_AGE	945	57.710	6.750	25.750	78.000
SB_F	1037	0.270	0.234	0.000	1.000	SB_F	945	0.270	0.238	0.000	1.000
AC_SIZE	1037	3.113	0.507	2.000	7.000	AC_SIZE	945	3.115	0.521	2.000	7.000
BH	1037	0.644	0.208	0.000	1.000	BH	945	0.640	0.211	0.000	1.000
SOE	1037	0.060	0.238	0.000	1.000	SOE	945	0.073	0.260	0.000	1.000
BG	1037	0.614	0.487	0.000	1.000	BG	945	0.626	0.484	0.000	1.000
FAM	1037	0.727	0.445	0.000	1.000	FAM	945	0.743	0.436	0.000	1.000
LEV	1037	0.114	0.143	0.000	0.728	LEV	945	0.133	0.160	0.000	0.800
FSIZE	1037	4.899	1.799	0.131	8.670	FSIZE	945	4.983	1.782	0.131	8.827
LOSS	1037	0.157	0.363	0.000	1.000	INTCOV	945	28.589	109.014	−158.723	785.319
FAGE	1037	31.243	16.826	2.000	107.000	FAGE	945	31.425	16.623	2.000	102.000
VOL	1037	0.547	0.218	0.010	2.290						
BTMV	1037	−0.222	0.421	−1.460	0.640						

Notes: The table presents the summary statistics of the main variables. The sample includes 1037 firm-year observations for the period 2010–2013. All variables are based on calendar year. Variable definitions: COE is the cost of equity based on CAPM model. COD is realised cost of debt. PC_SB is the percentage of the SB who is or was a minister, parliament member, other appointed bureaucrat in the local and central government, military. PC_BOD is the percentage of the Board of Director who is or was a minister, parliament member, other appointed bureaucrat in the local and central government, military. PC_TOT is the percentage of the SB and Board of Director who is or was a minister, parliament member, other appointed bureaucrat in the local and central government, military. PC_SB/BOD/TOT_DUM is indicator variable that equal one if the firm is politically connected and zero otherwise. SB_PCT is the percentage of the SB member. SB_AGE is the age of the SB member. SB_F is the proportion of SB member with financial and accounting background. AC_SIZE is the number of audit committee member. BH is the percentage of a large shareholder who owns at least 10% of outstanding shares. SOE is the indicator variable that equals one if the shareholder is central or local government and zero otherwise. BG is the indicator variable that equals one if the firm belongs to business group and zero otherwise. FAM is the indicator variable that equals one if the firm belongs to family and zero otherwise LEV is the natural log of the ratio of total long-term debt divided by the total assets at the end of the year. FSIZE is the natural logarithm of total sales. LOSS is the indicator variable that equals one if the firm is loss and zero otherwise. INTCOV is the ratio of operating income to interest expense. FAGE is the number of years since the firm was established and zero otherwise. VOL is the natural log of the standard deviation of stock returns over the previous twelve months. BTMV is the ratio of book value of equity to the market value of equity. The year dummy variables indicate the calendar year from 2010 to 2013. The industry dummy identifies two-digit GICS (Global Industry Classification Standard) code.

while for PC BODs it is 20.3%. Furthermore, 72.7% (74.3%) of the total sample involves family firms in cost of equity and cost of debt analyses, respectively. Most of the family firms have affiliations with business groups. These statistical data show that firms are mostly still controlled by families even after they are publicly listed.

We also compute pairwise Pearson correlations to test the correlations among key variables in the model, except for the industry and year dummies in the two analyses.[19] The highest correlation exists between SOE and AC_SIZE in both cost of equity ($r = 0.436$) and cost of debt, significant ($r = 0.437$) at the 1% level. Overall, the correlations reported are below 0.50. In addition, Table 4 and Table 5 show that the highest variance inflation factor (VIF) for the cost of equity analysis (cost of debt analysis) is 2.36 (2.27), suggesting that the results do not suffer from multicollinearity.

5.2. Politically connected boards and cost of equity

Table 4 presents the OLS estimates for two models in which the effect of boards with political connection and with cost of equity (COE) forms of capital are addressed. In Model 1, the relationship between politically connected boards (without classifying as SBs and BODs) and COE is significantly negative at the 1% level (coefficient = −0.069, $t = -3.31$), and it is also economically significant that this will reduce COE by 63 basis points (−0.069*0.092 = −0.0063)[20]. Model 2 incorporates both SBs with political connection (PC_SB) and BODs with political connection (PC_BOD) to examine the effects of both board types on cost of equity capital. As shown in Table 4, Model 2 has a significantly negative coefficient at the 1% level (coefficient = −0.034, $t = -3.33$) for the association between SBs with political connection and COE, whereas politically connected BODs are not significantly (coefficient = −0.010, $t = -0.20$) associated with COE. The coefficient estimates of −0.034 imply that, for the politically connected SBs, a one standard deviation increase in politically connected SB leads to a decrease in COE by 63 basis points (−0.034 * 0.186 = −0.0063), while the politically connected BOD test is not significant.

[19] The results are not tabulated due to space constraint and will be provided upon request.
[20] 0.092 is the standard deviation of the regression estimates corresponding to PC of total board.

Table 4
Politically connected boards and cost of equity capital results-pooled OLS.

Variables	Estimated Coefficients					
	All firms		Affiliated firms (Business group		Stand-alone firms	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
INTERCEPT	0.099[a] (3.63)	0.102[a] (3.76)	0.076[b] (2.16)	0.081[b] (2.29)	0.156[a] (3.57)	0.136[a] (3.13)
PC_TOT	−0.069[a] (−3.31)	–	−0.105[a] (−4.37)	–	0.039 (0.86)	–
PC_SB	–	−0.034[a] (−3.33)	–	−0.044[a] (−3.74)	–	−0.009 (−0.40)
PC_BOD	–	−0.010 (−0.20)	–	−0.120[c] (−1.79)	–	0.259[a] (2.89)
SB_PCT	−0.010 (−0.54)	−0.019 (−1.02)	0.040 (1.65)	0.024 (1.01)	−0.089[a] (−2.82)	−0.082[a] (−2.65)
SB_AGE	−0.000 (−0.72)	−0.000 (−0.66)	0.000 (0.59)	0.000 (0.68)	−0.000[c] (−1.67)	−0.000[c] (−1.70)
SB_F	−0.014[c] (−1.82)	−0.013[c] (−1.78)	0.001 (0.14)	0.000 (0.07)	−0.030[b] (−2.49)	−0.033[a] (−2.72)
AC_SIZE	−0.001 (−0.34)	−0.001 (−0.38)	−0.002 (−0.37)	−0.002 (−0.36)	0.001 (0.25)	0.003 (0.61)
BH	−0.055[a] (−6.30)	−0.055[a] (−6.29)	−0.074[a] (−6.43)	−0.073[a] (−6.37)	−0.039[a] (−2.80)	−0.030[b] (−2.18)
SOE	0.034[a] (3.85)	0.034[a] (3.87)	–	–	0.039[a] (3.43)	0.034[a] (3.01)
LEV	0.047[a] (3.48)	0.047[a] (3.47)	0.046[a] (2.82)	0.046[a] (2.84)	0.048[c] (1.77)	0.046[c] (1.71)
FSIZE	0.009[a] (7.71)	0.009[a] (7.73)	0.007[a] (4.37)	0.007[a] (4.30)	0.012[a] (5.64)	0.012[a] (5.83)
LOSS	0.009[b] (1.96)	0.009[c] (1.97)	0.016[b] (2.45)	0.015[b] (2.38)	0.001 (0.17)	−0.000 (−0.10)
FAGE	−0.000 (−0.67)	−0.000 (−0.66)	0.000 (1.18)	0.000 (1.11)	−0.000[a] (−2.76)	−0.000[b] (−2.52)
VOL	0.085[a] (10.12)	0.085[a] (10.10)	0.063[a] (5.46)	0.062[a] (5.36)	0.094[a] (7.33)	0.094[a] (7.39)
BTMV	0.005 (1.13)	0.004 (1.08)	−0.002 (−0.33)	−0.002 (−0.49)	0.013[c] (1.89)	0.010 (1.56)
YEAR	Included	Included	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included	Included	Included
Mean VIF	1.66	1.64	1.59	1.57	2.12	2.10
Adj. R2	0.249	0.248	0.251	0.249	0.327	0.338
F	15.32[a]	14.71[a]	10.28[a]	9.82[a]	9.08[a]	9.18[a]
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000
N	1037	1037	637	637	400	400

Variables	Estimated Coefficients			
	Family firms		Non-family firms	
	Model 7	Model 8	Model 9	Model 10
INTERCEPT	0.084[b] (2.52)	0.088[a] (2.65)	0.148[a] (2.94)	0.123[b] (2.43)
PC_TOT	−0.092[a] (−3.91)	–	0.086[a] (1.64)	–
PC_SB	–	−0.042[a] (−3.65)	–	0.015 (0.57)
PC_BOD	–	−0.099 (−1.47)	–	0.274[a] (2.72)
SB_PCT	0.004 (0.20)	−0.008 (−0.35)	−0.080[b] (−2.29)	−0.069[b] (−1.99)
SB_AGE	0.000 (0.44)	0.000 (0.56)	−0.000 (−1.63)	−0.000 (−1.63)
SB_F	−0.010 (−1.10)	−0.011 (−1.17)	−0.031[b] (−2.25)	−0.035[b] (−2.56)
AC_SIZE	−0.001 (−0.22)	−0.001 (−0.25)	0.001 (0.17)	0.003 (0.57)
BH	−0.063[a] (−6.11)	−0.063[a] (−6.10)	−0.009[a] (−0.50)	0.005 (0.27)
SOE	–	–	0.043[a] (3.46)	0.039[a] (3.20)
LEV	0.050[a] (3.28)	0.050[a] (3.30)	0.062[c] (1.70)	0.061[c] (1.68)
FSIZE	0.009[a] (6.27)	0.009[a] (6.28)	0.010[a] (3.77)	0.010[a] (4.05)
LOSS	0.011[c] (1.81)	0.011[c] (1.79)	0.002 (0.29)	−0.001 (−0.16)
FAGE	0.000 (0.02)	−0.000 (−0.03)	−0.000 (−1.75)	−0.000[c] (−1.86)
VOL	0.063[a] (5.74)	0.063[a] (5.67)	0.096[a] (6.71)	0.095[a] (6.71)
BTMV	0.000 (0.11)	−0.000 (−0.01)	0.013 (1.60)	0.010 (1.24)
YEAR	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included
Mean VIF	1.58	1.56	2.36	2.35
Adj. R2	0.227	0.227	0.349	0.361
F	10.63[a]	10.25[a]	7.32[a]	7.38[a]
Prob > F	0.000	0.000	0.000	0.000
N	754	754	283	283

The table reports OLS coefficient estimates and dummy variables are included in the regression to control for year and industry differences, however, the results are not provided due to space constraints. Model 1&2 = models in the sample of all firms, Model 3&4 = models in the sample of affiliated firms, and Model 5&6 = models in the sample of stand-alone firms, Model 7&8 = models in the sample of family firms, and Model 9&10 = models in the sample of non-family firms. The superscripts a-c indicate two-sided significance at the 1%, 5%, and 10% levels, respectively. See Table 2 for variable definitions.

The adjusted R^2 of the regression analyses are 24.9% in Model 1 and 24.8% in Model 2, which are consistent with prior studies such as Boubakri et al. (2012).[21] These findings show that political connections through SBs are more dominant and effective than political connections through BODs. These results provide evidence that SBs with political connections are

[21] Boubakri et al. (2012) report that the adjusted R^2 in their model is ~32%.

Table 5
Politically connected boards and cost of debt capital results-pooled OLS.

Variables	Estimated Coefficients					
	All firms		Affiliated firms (Business group)		Stand-alone firms	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
INTERCEPT	0.053[a] (4.66)	0.056[a] (4.85)	0.065[a] (4.64)	0.066[a] (4.74)	0.031 (1.42)	0.034 (1.60)
PC_TOT	−0.038[a] (−4.04)	–	−0.045[a] (−4.48)	–	−0.033 (−1.21)	–
PC_SB	–	−0.017[a] (−3.74)	–	−0.020[a] (−4.26)	–	−0.011 (−0.82)
PC_BOD	–	−0.024 (−0.97)	–	−0.003 (−0.11)	–	−0.097[c] (−1.74)
SB_PCT	0.014[c] (1.70)	0.010 (1.18)	0.007 (0.68)	−0.000[a] (−0.02)	0.039[b] (2.38)	0.037[b] (2.29)
SB_AGE	−0.000 (−0.77)	−0.000 (−0.74)	−0.000 (−0.65)	−0.000 (−0.54)	−0.000 (−0.45)	−0.000 (−0.39)
SB_F	−0.007[b] (−2.03)	−0.007[b] (−1.99)	−0.005 (−1.21)	−0.004 (−1.07)	−0.008 (−1.31)	−0.006 (−1.12)
AC_SIZE	0.000 (0.15)	0.000 (0.11)	−0.002 (−0.10)	−0.000 (−0.06)	−0.015 (−0.20)	−0.000 (−0.20)
BH	−0.003 (−0.99)	−0.003 (−1.01)	−0.007 (−1.62)	−0.007 (−1.61)	0.000 (0.07)	−0.002 (−0.13)
SOE	−0.005 (−1.52)	−0.005 (−1.45)	–	–	−0.002 (−0.35)	−0.000 (−0.16)
LEV	0.048[a] (8.97)	0.048[a] (8.93)	0.048[a] (7.68)	0.048[a] (7.61)	0.042[a] (3.89)	0.041[a] (3.80)
FSIZE	−0.002[a] (−3.75)	−0.002[a] (−3.72)	−0.001[a] (−2.84)	−0.001[a] (−2.79)	−0.002[b] (−2.01)	−0.002[b] (−2.12)
INTCOV	−0.000[a] (−6.16)	−0.000[a] (−6.10)	−0.000[a] (−5.36)	−0.000[a] (−5.32)	−0.000[a] (−2.92)	−0.000[b] (−2.60)
FAGE	−0.000[b] (−2.14)	−0.000[b] (−2.17)	−0.000 (−1.27)	−0.000 (−1.31)	−0.000[b] (−2.09)	−0.000[b] (−2.18)
YEAR	Included	Included	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included	Included	Included
Mean VIF	1.75	1.72	1.68	1.65	2.27	2.23
Adj. R2	0.200	0.198	0.241	0.237	0.159	0.162
F	11.74[a]	11.18[a]	10.40[a]	9.78[a]	4.02[a]	3.96[a]
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000
N	945	945	592	592	353	353

Variables	Estimated Coefficients			
	Family firms		Non-family firms	
	Model 7	Model 8	Model 9	Model 10
INTERCEPT	0.058[a] (4.28)	0.060[a] (4.41)	0.044[c] (1.79)	0.043[c] (1.78)
PC_TOT	−0.046[a] (−4.62)	–	0.012 (0.37)	–
PC_SB	–	−0.021[a] (−4.36)	–	0.005 (0.34)
PC_BOD	–	−0.014 (−0.50)	–	−0.017 (−0.28)
SB_PCT	0.007 (0.70)	0.000 (0.03)	0.048[a] (2.73)	0.049[a] (2.82)
SB_AGE	−0.000 (−0.63)	−0.000 (−0.53)	−0.000[c] (−1.73)	−0.000[c] (−1.68)
SB_F	−0.006 (−1.46)	−0.005 (−1.39)	−0.011 (−1.61)	−0.010 (−1.53)
AC_SIZE	0.001 (0.62)	0.001 (0.64)	−0.000 (−0.22)	−0.000 (−0.18)
BH	−0.002 (−0.61)	−0.002 (−0.63)	−0.000 (−0.02)	−0.001 (−0.12)
SOE	–	–	0.009 (1.43)	0.009 (1.41)
LEV	0.045[a] (7.41)	0.044[a] (7.35)	0.046[a] (3.80)	0.046[a] (3.78)
FSIZE	−0.002[a] (−3.63)	−0.002[a] (−3.58)	−0.001 (−1.48)	−0.001 (−1.50)
INTCOV	−0.000[a] (−5.73)	−0.000[a] (−5.70)	−0.000[b] (−2.02)	−0.000[c] (−1.95)
FAGE	−0.000 (−1.01)	−0.000 (−1.05)	−0.000[a] (−2.98)	−0.000[a] (−2.92)
YEAR	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included
Mean VIF	1.71	1.68	2.20	2.20
Adj. R2	0.210	0.207	0.212	0.209
F	9.89[a]	9.33[a]	3.96[a]	3.77[a]
Prob > F	0.000	0.000	0.000	0.000
N	703	703	242	242

The table reports OLS coefficient estimates and dummy variables are included in the regression to control for year and industry differences, however, the results are not provided due to space constraints. Model 1&2 = models in the sample of all firms, Model 3&4 = models in the sample of affiliated firms, and Model 5&6 = models in the sample of stand-alone firms, Model 7&8 = models in the sample of family firms, and Model 9&10 = models in the sample of non-family firms. The superscripts a-c indicate two-sided significance at the 1%, 5%, and 10% levels, respectively. See Table 2 for variable definition.

viewed positively by investors, as reflected in lower COE. Consistent with both RDT and social capital perspectives, a politically connected SB is an effective means to reduce uncertainty and other external constraints (Hillman et al., 2009), and the connections of SB members in the Indonesian two-tier board system support their strategic roles (supervision and monitoring) in the company (Brown et al., 2017). Overall, the findings reported in Table 4 are consistent with Hypotheses 1 and 2.

These significant results are obtained after controlling for several potential control variables such as internal corporate governance mechanisms, firm characteristics, and year and industry fixed effects. Among the internal corporate governance variables, SBs with financial background (SB_F) have a significantly negative association with cost of equity in both models. This suggests that SBs with financial and accounting background are an effective corporate governance mechanism to monitor and supervise management, resulting in a lower cost of equity capital. In addition, we show several interesting findings related to ownership structure. Concentrated ownership (BH) has a negative effect on cost of equity in both models

that is significant at the 1% level. This result is consistent with previous studies (e.g., Attig, Guedhami, & Mishra, 2008) indicating that large shareholders are an effective corporate governance mechanism to reduce financing costs. By contrast, the coefficient on SOEs is significantly positive at the 1% level in the two models, suggesting that investors perceive state-owned enterprises as more risky than other private listed firms, which is consistent with prior studies (e.g., Dewenter & Malatesta, 2001). Also consistent with previous studies (Bliss & Gul, 2012; Boubakri et al., 2012; Claessens et al., 2003; Dhaliwal et al., 2006; Fama & French, 1992; Hail & Leuz, 2006), we also find that leverage (LEV), volatility (VOL), loss (LOSS) have positive and significant coefficients across all models.[22]

In Table 4, we included politically connected SBs and BODs in the same model, which might bias the results due to an interaction effect of the explanatory variables. As a further robustness test, we re-estimated regression models by including SB and BOD separately to show their association with cost of equity. The results show that the coefficient on PC of SB is −0.035 (t = −3.36), while the coefficient on the PC of BOD is −0.028 (t = −0.51), which are consistent with the results presented in Table 4. We also re-estimated the COE models by dropping insignificant variables reported in Table 4. The results do not change since the coefficient on PC of SB is −0.036 (t = −3.57) and the coefficient on PC of BOD is −0.024 (t = −0.45). Finally, to mitigate the complementary effect of PCs of SB and BOD, we formed two samples: one sample of firms in which only the BOD is politically connected (but not the SB); and another sample in which only the SB is politically connected (but not the BOD). We use dummy variables (SB = 1 and Non-PC firms 0) and estimate regressions, and find that SB is still significant (coeff = 0.012, t = 1.96) at the 5% level while the coefficient on PC_BOD in the BOD sample is 0.022 (t = 0.451) which is not significant.[23]

5.3. Politically connected boards and cost of debt

Table 5 reports the results of OLS regression estimation for the association between politically connected boards and cost of debt (COD). The coefficient on PC_TOT (coefficient = −0.038, $t = -4.04$) is significantly negative at the 1% level in Model 1, and this suggests that one standard deviation increase of PC will cause a reduction in COD of 97 basis points = (−0.105*0.092 = −0.0097).

This result supports Hypothesis 1, which predicts that politically connected boards face lower COD compared to non-politically connected boards. It is also consistent with the literature (e.g., Chaney, et al., 2011; Houston et al., 2014). The estimate is significant with adjusted R^2 value of 20%, which is consistent with prior studies (e.g., Tran, 2014).[24] The coefficient on PC_SB is significantly negative (coefficient = −0.017, $t = -3.74$) at the 1% level, and is economically meaningful in that one standard deviation increase of PC will reduce the cost of debt by about 82 basis points (−0.044 * 0.186 = −0.0082). The coefficient on PC_BOD (coefficient = −0.024, $t = -0.97$) is negative but not significant in Model 2. These results support Hypothesis 2, indicating that firms with politically connected SBs enjoy lower COD than non-politically connected firms, whereas there is no association between politically connected BODs and cost of debt. These findings also confirm that political connections through SBs are perceived to be more valuable than such connections through BODs from the perspective of creditors.

Several corporate governance mechanisms are negatively associated with cost of debt, as presented in Table 5. The coefficients on SB_F in Model 1 and Model 2 are significantly negative at the 5% level. By contrast, SB age, audit committee size, concentrated ownership, SOEs are not statistically significant in either model.

Among the firm characteristics control variables, the coefficient on LEV is significantly positive while those on FSIZE, INTCOV, and FAGE are significantly negative at the 1% (5%) level in both models. Overall, the results for the controlling variables are consistent with previous studies (Bliss & Gul, 2012; Houston et al., 2014; Tran, 2014).

We also have run the regression models to estimate the coefficients on SB and BOD individually, and find that SB with a coefficient of −0.017 (t = −3.82) is highly significant ($p \leq .01$) whereas the coefficient on BOD is −0.032 (t = −1.23) and not significant; and both results are consistent with the results presented in Table 4. We also re-estimate the COD models by dropping insignificant variables reported in Table 4. The results do not change, since the coefficient on PC of SB is −0.016 (t = −3.73) and the coefficient on PC of BOD is −0.028 (t = −1.13). Finally, our PC-only BOD and PC-only SB sub-samples show that the results remain the same; SB is significant (coeff = 0.006, t = −3.16) at the 1% level, while in the other regression model with BOD sub-sample, PC of BOD is not significant.

5.4. Politically connected boards, cost of capital, business group affiliation, and family firms

Models 3–6 of Tables 4 and 5 report the results of OLS regression estimations for testing the effect of business groups in the association between politically connected boards and cost of capital. Specifically, we identify whether firms belonging to business groups derive more benefits from having politically connected boards compared with stand-alone firms. In addition,

[22] We also find that the coefficient of FSIZE is positive and significant. To confirm that our results are not derived from FSIZE variable, we re-estimate the models by excluding FSIZE, and the results remain similar. The association between PC_TOT/PC_SB and cost of equity is still negative and significant at the 1% level. The results are not tabulated and will be provided upon request.

[23] We thank an anonymous referee for suggesting these additional tests.

[24] Tran (2014) documents that adjusted R^2 value is 11%–43% for cost of debt analysis.

we divide our sample into two groups: (1) business group versus non-business group; and (2) family versus non-family firms. In Models 3 and 4 of Tables 4 and 5, we test the association between politically connected boards (both SBs and BODs) and cost of finance in the business group sample. Then, in Models 5 and 6 we examined this association in the stand-alone firms.

Table 4 shows that, in Model 3, cost of equity capital is significantly lower (coefficient = −0.105, t = −4.37) at the 1% level for affiliated firms with politically connected boards (PC_TOT). In Model 4 of Table 4, the association between politically connected BODs and cost of equity in firms belonging to business groups is significantly negative at the 10% level (coefficient = −0.120, t = −1.79), and the coefficient on politically connected SBs is significantly negative at the 1% level (coefficient = −0.044, t = −3.74).

For the non-business group (stand-alone) sample in Model 5, Table 4 shows that the association between politically connected boards and cost of equity is not significant. Similarly, in Model 6 there is no association between politically connected SBs and cost of equity in stand-alone firms. Overall, these results are consistent with Muttakin et al. (2015) and Houqe, Ahmed, and van Zijl (2017), who find that firms with business group affiliation derive more benefits from having politically connected boards than do stand-alone firms.[25]

Furthermore, Model 3 of Table 5 shows that the coefficients on the association between politically connected boards (PC_TOT) and the cost of debt are negative and significant at the 1% level (coefficient = −0.045, t = −4.48) in the business group sample, specifically politically connected SBs in Model 4 (coefficient = −0.020, t = −4.26). It appears that firms affiliated with business groups face lower cost of debt when they appoint politically connected board members, especially politically connected SBs.

Models 7–10 of Tables 4 and 5 show the results of OLS regression estimations for investigating the association between politically connected boards and cost of capital in family and non-family firms. In Models 7 and 8 of Tables 4 and 5, we examine the relationship between politically connected boards (both SBs and BODs) and cost of finance in family firms. Then, Models 9 and 10 test this association in the non-family firms. Overall, the results show that cost of equity and debt capital are significantly lower (coefficient = −0.092, t = 3.91 and coefficient = −0.046, t = 4.62) at the 1% level for family firms with politically connected boards, particularly family firms with politically connected SBs (coefficient = −0.042, t = 3.65 and coefficient = −0.021, t = 4.36).

Model 10 in Table 4 shows that the association between politically connected BODs and cost of equity is positively significant (coefficient = 0.274, t = 2.72). Then, Models 9 and 10 of Table 5 report no association between politically connected boards and cost of equity in non-family firms, especially politically connected SBs.

The coefficients for other control variables in Tables 4 and 5 generally support the model specifications, as they have the expected signs. Mostly, they are consistent with previous studies on cost of debt and equity capital (e.g., Bliss & Gul, 2012; Boubakri et al., 2012; Tran, 2014). Taken together, the results in Tables 4 and 5 suggest that firms with business group affiliation and family firms are better off with politically connected boards in terms of reduced cost of debt and equity capital.

6. Further analysis

6.1. Endogeneity

One potential concern regarding our test specifications is endogeneity. Firms with lower cost of capital are more likely to have political connections. It is possible that political connections could be endogenously determined. We address the potential endogeneity problem of political connections by using a selection model that corrects for self-selection bias. In the first stage, we estimate a multivariate probit model in which the dependent variable is the probability that firms appoint politically connected boards (see Table 6). We also include additional independent variables (BIGCITIES and DISTANCE) as well as other control variables in the first stage, called exclusion restrictions.[26]

We then obtain fitted values from the probit model and calculate the Inverse Mills Ratio-IMR (Heckman, 1979). The IMR is used as an additional explanatory variable in the second stage to correct for potential self-selection bias. Specifically, the statistical significance of the IMR coefficient is used to assess the presence or absence of selection bias. When the IMR coefficient is statistically significant, it is important to explicitly control for self-selection bias (Kim, Chung, & Firth, 2003). As shown in Table 7 and Table 8, the results in the second-stage regression remain similar to the OLS results reported in Tables 4 and 5 after controlling for self-selection bias.

Next, we apply the Generalized Method of Moments (GMM) to address the endogeneity issue. GMM is considered as an efficient estimate in the presence of heteroskedasticity, and is asymptotically normal when there is no heteroskedasticity (Baum, Schaffer, & Stillman, 2003). The results (not presented)[27] of the GMM estimations show no material departure from

[25] Based on 654 firm–year observations for Bangladesh firms, Muttakin et al. (2015) find that family firms with political connections perform better than family firms without political connections. However, independent firms with political connections have lower firm performance than independent firms without political connections.

[26] BIGCITIES is set to 1 if the firm is located in one of two strategic locations—Jakarta and West Java—and 0 otherwise; DISTANCE is the distance between the firm's headquarters and the capital city (in kilometres). Houston et al. (2014) note that, when a firm is located closer to the capital city, it has more chance to connect with politicians. In addition, most politicians (including former politicians) tend to work in locations where they have established social and political networks.

[27] All results are available upon request.

Table 6
IMR – first stage.

Variables	Estimated coefficient (COE)		Variable	Estimated coefficient (COD)	
	Model 1	Model 2		Model 1	Model 2
INTERCEPT	−8.242[a] (−6.02)	−8.569[a] (−6.23)	INTERCEPT	−6.613[a] (−4.23)	−6.854[a] (−4.38)
BIGCITIES	3.456[a] (4.81)	3.502[a] (4.85)	BIGCITIES	1.733[c] (1.65)	1.682[c] (1.60)
DISTANCE	0.002[a] (3.71)	0.002[a] (3.80)	DISTANCE	0.000 (0.31)	0.000 (0.30)
SB_PCT	3.753[a] (4.48)	3.679[a] (4.40)	SB_PCT	4.173[a] (4.79)	4.175[a] (4.80)
SB_AGE	0.061[a] (4.63)	0.061[a] (4.57)	SB_AGE	0.073[a] (5.31)	0.072[a] (5.23)
SB_F	−0.537 (−1.56)	−0.596[a] (−1.72)	SB_F	−0.394 (−1.12)	−0.446 (−1.26)
AC_SIZE	−0.572[a] (−3.43)	−0.555[a] (−3.34)	AC_SIZE	−0.510[a] (−2.86)	−0.503[a] (−2.82)
BH	0.084 (0.23)	0.240 (0.64)	BH	−0.005 (−0.02)	0.155 (0.41)
LEV	1.877[a] (3.21)	1.992[a] (3.41)	LEV	2.598[a] (4.96)	2.657[a] (5.05)
FSIZE	0.344[a] (6.44)	0.353[a] (6.58)	FSIZE	0.267 (4.93)	0.285 (5.22)
LOSS	0.385[c] (1.75)	0.372[c] (1.68)	INTCOV	−0.000 (−0.68)	−0.001 (−1.27)
FAGE	−0.006 (−1.21)	−0.005 (−1.08)	FAGE	−0.004 (−0.77)	−0.003 (−0.61)
VOL	0.171 (0.47)	0.209 (0.56)		–	–
BTMV	−0.511[a] (−2.64)	−0.511[a] (−2.64)		–	–
YEAR	Included	Included		Included	Included
INDUSTRY	Included	Included		Included	Included
Wald chi2	262.82	261.00		246.46	244.68
Pseudo R2	0.193	0.192		0.198	0.198
Log likelihood	−547.70	−546.33		−496.96	−495.59
Prob > F	0.000	0.000		0.000	0.000
N	1037	1037		945	945

The table reports first stage probit model and dummy variables are included in the model to control for year and industry differences, however, the results are not provided due to space constraints. Model 1 = model with total political boards as dependent variable, and Model 2 = model with political SB as dependent variable. The superscripts a-c indicate two-sided significance at the 1%, 5%, and 10% levels, respectively. See Table 2 for variable definitions.

the results presented in Tables 4 and 5 We also employ a two-stage least square (2SLS) regression with instrumental variable to test for endogeneity. Following Houston et al. (2014), we use the location and distance (kilometer) as instrumental variables for political connections. The results for COE are generally consistent with prior results but the significance level has reduced in the case of COD. We further use lagged variables to address the endogeneity concern. Yang, Lu, and Luo (2014) argue that the possibility of endogeneity is not likely to be significant when lagged variables are employed. The results (not tabulated) show that the regression results are generally consistent with all models reported in Tables 4 and 5.

Finally, we employed a difference-in-difference (DID) regression analysis: because the treatment group (PC firms) and the control group (non-PC firms) are not randomly assigned, the two groups could be different in terms of their underlying client characteristics. Our use of a DID research design could mitigate the difference in the COE and COD between the two groups during pre and post PC periods. Following Fung et al. (2017), we generate pre-and post-political connection dummy variables based on the percentage of political connection (political score) of a firm (POSTPC). POSTPC equals 1 if political score is greater than 0, and 0 otherwise; and then we generate an interaction term using the postpc and political score of a firm and include that in the regression. The coefficient of the interaction term captures the DID analysis. The results are consistent with the main analysis. Thus, the difference in cost of capital (COE and COD) for pre and post political connection periods for politically connected firms is significantly different (lower) to the difference in cost of capital for pre and post political connection periods for non-politically connected firms.

6.2. Propensity matching score

Since we selected non-PC firms using a matched-pair design, it is possible that self-selection bias remains. To mitigate this concern, we applied propensity score matching (PSM). This approach addresses the concern that several nonlinear terms of the control variables (such as firm size, leverage) influence the likelihood of constructing political connections and cost of capital (Houston et al., 2014). Consequently, we drop non-politically connected observations that are systematically different from politically connected observations to make sure that politically connected and non-politically connected firms fall into similar characteristics. Following Lennox, Lisowsky, and Pittman (2013), we first estimate the political connection propensity score for every observation in the sample by using a probit model. The dependent variable is a dummy variable for politically connected firms, and the independent variables are leverage, volatility, book to market value, firm size, loss, interest coverage, firm age, and year and industry fixed effects. Then, we re-estimated the political connection models by using PSM samples using a reduced sample of 752 observations. The results (not reported) are consistent with those reported earlier, in that the coefficient on PC_TOT is −0.079 (t = −3.57), PC_SB is −0.034 (t = 3.15) and PC_BOD is −0.045 (t = −0.85) for the cost of equity models. For cost of debt models, the coefficients on PC_TOT is −0.079 (t = −2.54), PC_SB is −0.011 (t = 2.57) and PC_BOD is −0.014 (−0.60). There have been no material differences in relation to affiliated and non-affiliated businesses.

Table 7
The effect of politically connected boards and cost of equity-IMR-Second Stage.

Variables	Estimated Coefficients					
	All firms		Affiliated firms		Stand-alone firms	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
INTERCEPT	0.021 (0.61)	0.023 (0.67)	0.009 (0.22)	0.014 (0.33)	0.050 (0.84)	0.030 (0.49)
PC_TOT	−0.057[a] (−2.75)	–	−0.095[a] (−3.89)	–	0.041 (0.90)	–
PC_SB	–	−0.028[a] (−2.70)	–	−0.038[a] (−3.22)	–	−0.007 (−0.33)
PC_BOD	–	−0.005 (−0.10)	–	−0.112[c] (−1.67)	–	0.253[a] (2.88)
SB_PCT	0.030 (1.31)	0.021 (0.93)	0.074[b] (2.54)	0.057[b] (1.99)	−0.029[a] (−0.76)	−0.025 (−0.67)
SB_AGE	0.000 (1.56)	0.000 (1.52)	0.000[c] (1.90)	0.000[c] (1.91)	0.000 (0.53)	0.000 (0.45)
SB_F	−0.017[b] (−2.26)	−0.018[b] (−2.27)	0.000 (0.06)	−0.000 (−0.04)	−0.040[a] (−3.14)	−0.043[a] (−3.38)
AC_SIZE	−0.006 (−1.40)	−0.005 (−1.36)	−0.005 (−0.94)	−0.005 (−0.88)	−0.004 (−0.79)	−0.002 (−0.41)
BH	−0.052[a] (−5.99)	−0.051[a] (−5.80)	−0.072[a] (−6.24)	−0.070[a] (−6.08)	−0.036[a] (−2.62)	−0.026[c] (−1.87)
SOE	0.034[a] (3.86)	0.034[a] (3.89)	–	–	0.037[a] (3.25)	0.031[a] (2.81)
LEV	0.064[a] (4.53)	0.064[a] (4.54)	0.059[a] (3.46)	0.060[a] (3.46)	0.073[a] (2.57)	0.071[b] (2.52)
FSIZE	0.012[a] (7.79)	0.012[a] (7.68)	0.009[a] (4.49)	0.009[a] (4.35)	0.016[a] (5.98)	0.017[a] (6.09)
LOSS	0.013[b] (2.54)	0.012[b] (2.49)	0.017[b] (2.45)	0.016[b] (2.50)	0.008 (1.01)	0.005 (0.73)
FAGE	−0.000 (−1.25)	−0.000 (−1.17)	0.000 (0.75)	0.000 (0.75)	−0.000[a] (−3.10)	−0.000[a] (−2.82)
VOL	0.085[a] (10.20)	0.085[a] (10.21)	0.067[a] (5.85)	0.066[a] (5.77)	0.098[a] (7.64)	0.099[a] (7.74)
BTMV	−0.000 (−0.05)	−0.000 (−0.05)	−0.004 (−0.65)	−0.004 (−0.77)	0.004 (0.63)	0.002 (0.39)
IMR	0.013[a] (3.29)	0.013[a] (3.17)	0.010[b] (2.08)	0.010[b] (1.97)	0.018[b] (2.51)	0.018[b] (2.45)
YEAR	Included	Included	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included	Included	Included
Mean VIF	2.06	2.02	1.93	1.91	2.70	2.66
Adj. R2	0.252	0.251	0.247	0.245	0.337	0.348
F	15.58[a]	14.92[a]	10.11[a]	9.64[a]	9.47[a]	9.55[a]
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000
N	1037	1037	637	637	400	400

Variables	Estimated Coefficients			
	Family firms		Non-family firms	
	Model 7	Model 8	Model 9	Model 10
INTERCEPT	0.010 (0.24)	0.014 (0.34)	0.054 (0.81)	0.030 (0.45)
PC_TOT	−0.078[a] (−3.29)	–	0.070 (1.35)	–
PC_SB	–	−0.034[a] (−3.00)	–	0.014 (0.53)
PC_BOD	–	−0.092 (−1.37)	–	0.215[b] (2.24)
SB_PCT	0.041 (1.49)	0.028 (1.03)	−0.019 (−0.45)	−0.010 (−0.25)
SB_AGE	0.000[b] (2.18)	0.000[b] (2.19)	−0.000 (−0.00)	−0.000 (−0.01)
SB_F	−0.009 (−1.00)	−0.010 (−1.11)	−0.040[a] (−2.73)	−0.043[a] (−2.95)
AC_SIZE	−0.005 (−0.89)	−0.005 (−0.86)	−0.004 (−0.77)	−0.002 (−0.44)
BH	−0.063[a] (−6.16)	−0.062[a] (−6.01)	−0.018 (−1.04)	−0.008 (−0.46)
SOE	–	–	0.036[a] (2.89)	0.032[a] (2.59)
LEV	0.066[a] (4.15)	0.067[a] (4.15)	0.083[b] (2.19)	0.084[c] (2.21)
FSIZE	0.011[a] (5.96)	0.011[a] (5.84)	0.014[a] (4.49)	0.015[a] (4.71)
LOSS	0.012[c] (1.94)	0.011[c] (1.88)	0.011 (1.15)	0.008 (0.82)
FAGE	−0.000 (−0.41)	−0.000 (−0.39)	−0.000[c] (−1.68)	−0.000 (−1.64)
VOL	0.066[a] (5.97)	0.066[a] (5.93)	0.104[a] (7.50)	0.106[a] (7.63)
BTMV	−0.004 (−0.84)	−0.005 (−0.91)	0.006 (0.80)	0.004 (0.52)
IMR	0.012[b] (2.47)	0.012[b] (2.34)	0.016[b] (2.13)	0.016[b] (2.14)
YEAR	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included
Mean VIF	1.94	1.92	2.88	2.82
Adj. R2	0.224	0.224	0.358	0.365
F	10.48[a]	10.07[a]	7.55[a]	7.49[a]
Prob > F	0.000	0.000	0.000	0.000
N	754	754	283	283

The table reports OLS coefficient estimates and dummy variables are included in the regression to control for year and industry differences, however, the results are not provided due to space constraints. Model 1&2 = models in the sample of all firms, Model 3&4 = models in the sample of affiliated firms, and Model 5&6 = models in the sample of stand-alone firms, Model 7&8 = models in the sample of family firms, and Model 9&10 = models in the sample of non-family firms. The superscripts a-c indicate two-sided significance at the 1%, 5%, and 10% levels, respectively. See Table 2 for variable definitions.

6.3. Alternative measure of political connections

Following previous studies (e.g., Boubakri, et al., 2008), we rerun both cost of equity and cost of debt models using a dummy variable of political connections to ensure that our findings are not specific to the political connection measures

Table 8
The effect of politically connected boards and cost of debt-IMR-Second Stage.

Variables	Estimated Coefficients					
	All firms		Affiliated firms		Stand-alone firms	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
INTERCEPT	0.043[a] (2.76)	0.047[a] (2.87)	0.041[b] (2.25)	0.044[b] (2.30)	0.066[b] (2.21)	0.074[b] (2.39)
PC_TOT	−0.037[a] (−4.00)	–	−0.042[a] (−4.23)	–	−0.033 (−1.23)	–
PC_SB	–	−0.016[a] (−3.69)	–	−0.019[a] (−3.97)	–	−0.011 (−0.85)
PC_BOD	–	−0.024 (−0.95)	–	−0.000 (−0.03)	–	−0.098[c] (−1.78)
SB_PCT	0.021[c] (1.95)	0.015 (1.43)	0.021 (1.63)	0.013 (1.00)	0.016 (0.78)	0.012 (0.61)
SB_AGE	−0.000 (−0.02)	−0.000 (−0.09)	0.000 (0.55)	0.000 (0.53)	−0.000 (−1.59)	−0.000 (−1.61)
SB_F	−0.007[b] (−2.14)	−0.007[b] (−2.10)	−0.005 (−1.25)	−0.005 (−1.14)	−0.005 (−0.89)	−0.003 (−0.61)
AC_SIZE	−0.000 (−0.20)	−0.000 (−0.20)	−0.001 (−0.69)	−0.001 (−0.61)	0.001 (0.58)	0.001 (0.59)
BH	−0.003 (−0.92)	−0.003 (−0.88)	−0.006 (−1.46)	−0.006 (−1.37)	−0.000 (−0.01)	−0.002 (−0.35)
SOE	−0.005 (−1.54)	−0.005 (−1.47)	–	–	−0.001 (−0.26)	−0.000 (−0.05)
LEV	0.051[a] (8.10)	0.051[a] (7.90)	0.055[a] (7.49)	0.054[a] (7.28)	0.030[b] (2.31)	0.027[b] (2.10)
FSIZE	−0.001[b] (−2.39)	−0.001[a] (−2.34)	−0.000 (−1.11)	−0.000 (−1.08)	−0.003[a] (−2.67)	−0.003[a] (−2.89)
INTCOV	−0.000[a] (−6.28)	−0.000[a] (−6.11)	−0.000[a] (−5.58)	−0.000[a] (−5.56)	−0.000[b] (−2.40)	−0.000[c] (−1.73)
FAGE	−0.000[b] (−2.28)	−0.000[b] (−2.28)	−0.000[c] (−1.65)	−0.000 (−1.62)	−0.000[b] (−2.08)	−0.000[b] (−2.20)
IMR	0.001 (0.96)	0.001 (0.81)	0.004[c] (1.84)	0.003[c] (1.65)	−0.006[c] (1.69)	−0.007[c] (−1.77)
YEAR	Included	Included	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included	Included	Included
Mean VIF	2.33	2.31	2.14	2.12	3.33	3.33
Adj. R2	0.200	0.199	0.244	0.240	0.166	0.170
F	11.78[a]	11.20[a]	10.11[a]	9.49[a]	4.19[a]	4.13[a]
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000
N	945	945	592	592	353	353

Variables	Estimated Coefficients			
	Family firms		Non-family firms	
	Model 7	Model 8	Model 9	Model 10
INTERCEPT	0.044[b] (2.40)	0.046[b] (2.48)	0.076[b] (2.21)	0.083[b] (2.36)
PC_TOT	−0.044[a] (−4.45)	–	0.005 (0.16)	–
PC_SB	–	−0.020[a] (−4.17)	–	0.006 (0.41)
PC_BOD	–	−0.012 (−0.44)	–	−0.072 (−1.16)
SB_PCT	0.015 (1.21)	0.007 (0.61)	0.030[a] (1.28)	0.028 (1.21)
SB_AGE	0.000 (0.29)	0.000 (0.27)	−0.000[b] (−2.14)	−0.000[b] (−2.22)
SB_F	−0.005 (−1.40)	−0.005 (−1.35)	−0.005 (−0.69)	−0.003 (−0.42)
AC_SIZE	0.000 (0.27)	0.000 (0.32)	0.001 (0.44)	0.001 (0.56)
BH	−0.002 (−0.61)	−0.002 (−0.58)	−0.008 (−0.92)	−0.011 (−1.24)
SOE	–	–	0.007 (1.17)	0.008 (1.32)
LEV	0.049[a] (6.89)	0.048[a] (6.68)	0.034[b] (2.31)	0.031[b] (2.07)
FSIZE	−0.001[b] (−2.30)	−0.001[b] (−2.23)	−0.002[c] (−1.66)	−0.003[c] (−1.93)
INTCOV	−0.000[a] (−5.80)	−0.000[a] (−5.75)	−0.000[c] (−1.85)	−0.000 (−1.23)
FAGE	−0.000 (−1.23)	−0.000 (−1.22)	−0.000[a] (−2.64)	−0.000[a] (−2.73)
IMR	0.002 (1.10)	0.002 (0.96)	−0.006 (−1.41)	−0.007 (−1.55)
YEAR	Included	Included	Included	Included
INDUSTRY	Included	Included	Included	Included
Mean VIF	2.24	2.22	3.27	3.29
Adj. R2	0.211	0.207	0.189	0.191
F	9.94[a]	9.36[a]	3.56[a]	3.49[a]
Prob > F	0.000	0.000	0.000	0.000
N	703	703	242	242

The table reports OLS coefficient estimates and dummy variables are included in the regression to control for year and industry differences, however, the results are not provided due to space constraints. Model 1&2 = models in the sample of all firms, Model 3&4 = models in the sample of affiliated firms, and Model 5&6 = models in the sample of stand-alone firms, Model 7&8 = models in the sample of family firms, and Model 9&10 = models in the sample of non-family firms. The superscripts a-c indicate two-sided significance at the 1%, 5%, and 10% levels, respectively. See Table 2 for variable definitions.

employed. For COE analysis, the t-values are − 2.27 in model 1 and − 2.20 in model 2. The t-values in Model 1 and Model 2 of COD analysis are − 3.56 and − 3.38, respectively. We also estimate regressions separately for family (business group affiliation) and non-family (stand-alone) sub-groups. We find that the results of the COD models are very much similar to our main models but there are slight variations in the COE models, where the significant level for PC_TOT and PC_SB are weakened and only significant at 5%. Thus, we find that the results (not tabulated) are not sensitive to measurement of political connections.

6.4. Alternative measure of cost of capital

To evaluate the sensitivity of the main results in the cost of equity analysis, we re-estimate Models 1–6 by using the Easton model (PEG - price earnings growth model). Botosan and Plumlee (2005) indicate that the modified PEG model results in the most powerful measure of the cost of equity in the US setting. Furthermore, Tran (2014) argues that this model is useful for German listed firms, because it relates to common risk factors at firms. Following Chen, Chen, Lobo, and Wang (2011), the modified PEG model is applied using realised eps_{t+1} and eps_{t+2}, because forecast EPS information is not widely available for Indonesian listed companies. In addition, the modified PEG model requires $eps_{t+2} > eps_{t+1} > 0$. Consequently, we need to delete a large number of observations. To address this issue, we also applied the CAPM with a similar reduced sample to compare with the modified PEG model. The results (not tabulated) remain unchanged.

Some prior studies calculate COD using the current interest expense rather than one-year-ahead interest rate (e.g. Bliss & Gul, 2012). We thus rerun all models using the current interest rate. The results show no departure from those reported in Tables 4 and 5 The coefficients on PC_TOT are −0.034 (t = −3.34), PC_SB is −0.015 (t = −3.11) and PC_BOD is −0.048 (t = −1.74). For family owned firms (business group affiliation) and non-family firms (stand-alone), similar results have been obtained as reported earlier.

7. Conclusions

In this paper, we examined the effect of politically connected SBs/BODs on the cost of debt and equity capital in the context of Indonesia. In addition, we extended the research question by identifying whether firms belonging to family and business groups extract more benefits by enjoying a lower cost of debt and equity capital when firms appoint politically connected SBs/BODs. We chose Indonesia as our research setting because both politically connected SBs and family and business groups affiliation are prevalent. Moreover, the presence of politically connected SBs is important in the Indonesian two-tier board system. Indonesian Company Law (1995) documents that the SBs have several strategic authorities, such as to approve business plans and other strategic contracts, to appoint and dismiss the BODs, and to supervise the BODs. We report that around 36.26% (36.51%) of the firm-year in our sample of cost of equity (cost of debt) analysis has politically connected SBs. We also show that 80.59% (85.51%) of politically connected firms and 50.53% (49.50%) of non-politically connected firms are affiliated with business groups. Similarly, 85.37% (88.99%) of family firms in cost of equity (cost of debt) sample have political connections.

We document that firms with politically connected boards obtain more benefits by experiencing a lower cost of debt and equity capital. These negative associations are mostly driven by politically connected SBs, because the coefficients on SB are highly significant, whereas the relation between politically connected BODs and cost of capital and cost of debt are not statistically significant. These findings suggest that investors and creditors perceive that firms with politically connected boards are less risky, particularly firms with politically connected SBs, than non-politically connected firms. In relation to politically connected firms belonging to family and business groups, our results show that these firms are negatively associated with the cost of debt and equity capital. Taken together, it appears that firms belonging to family and business groups pay lower cost of debt and equity capital than non-family and stand-alone firms when they appoint politically connected boards, especially politically connected SBs.

In summary, these results imply that the politically connected SBs are more highly valued by investors and creditors than the politically connected BODs in the Indonesian two-tier board system. We shed light on the strategic roles of politically connected SBs to mitigate external interdependency and uncertainty of the organization. This evidence also shows that the presence of family firms and business groups is still dominant in Indonesia's economy. Mostly, firms belonging to family and business groups have more political connections than the non-family and stand-alone firms.

However, the results of this paper should be interpreted in light of the following limitations. Firstly, as noted earlier, we use realised earnings per share data to calculate implied cost of equity capital (the modified Easton Model) for our additional test. Furthermore, the requirements of the modified Easton model result in loss of many observations. Hence, use of this measure may sacrifice the power of the tests. Secondly, the results regarding cost of debt are only derived by using realised cost of debt. We could not apply an alternative measurement of cost of debt, such as credit ratings, due to the non-availability of data. Thirdly, the sample used in this paper is taken during the presidency of SBY; it does not consider the effect of politically connected boards in other regimes. Finally, the presence of family firms and business groups are based on publicly available data. We do not examine the other detailed characteristics of family firms and business groups, including the impact of politically connected boards across generations in the family and business group. Given these limitations, further research is needed on the emerging countries where politically connected boards, and family firms and business groups, are prevalent.

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